Appendix Tables 1. Land characteristic (LC) of each Land Mapping Unit (LMU)

LMU	characteristic values
4	***Rb(Ratchaburi)***
aK-A	1 (low) [78.2-117.3]
aK-B	vl (very low) [0-78.2]
aP-X	l (3-6) [3-6]
aP-Y	l (3-6) [3-6]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	h (75-100) [75-100]
cec-X	h (25-45) [25-45]
cec-Y	vh (>45) [45-10000]
dep-A	vd (very deep) [150-10000]
dra	pd (poorly drained)
dry	6 month
flo	2 (1-3 months) [1-3]
flood	1 (flooded area) [0-2]
gp	204 day
om-X	mh (2.5-3.5) [2.5-3.5]
pH-A	medc (medium acid) [5.5-6]
pH-B	n (neutral) [6.5-7.3]
perm	s (slow) [0-.5]
pws	5 (3-4) [3-4]
roc	0 %
run	s (slow)
sl	0 %
sto	0 %
tN-A	l (low) [.1-.2]
tN-OM	mh [.125-.175]
text-A	ic (silty clay)
5	***Hd(Hangdong)***
aK-A	vl (very low) [0-78.2]
aK-B	vl (very low) [0-78.2]
aP-X	l (3-6) [3-6]
aP-Y	ml (6-10) [6-10]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	m (35-75) [35-75]
cec-X	m (10-15) [10-15]
cec-Y	m (10-15) [10-15]
dep-A	vd (very deep) [150-10000]
dra	pd (poorly drained)
dry	6 month
flo	2 (1-3 months) [1-3]
flood	1 (flooded area) [0-2]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	n (neutral) [6.5-7.3]
pH-B	n (neutral) [6.5-7.3]
perm	s (slow) [0-.5]

Appendix Tables 1. (continued)

LMU	characteristic values
roc	0 %
run	s (slow)
sl	1 %
sto	0 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	cl (clay loam) (p=.5), ic (silty clay) (p=.5)
6	*Cr(Chiang Rai)*
aK-A	vl (very low) [0-78.2]
aK-B	vl (very low) [0-78.2]
aP-X	l (3-6) [3-6]
aP-Y	l (3-6) [3-6]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	m (35-75) [35-75]
cec-X	m (10-15) [10-15]
cec-Y	m (10-15) [10-15]
dep-A	vd (very deep) [150-10000]
dra	pd (poorly drained)
dry	6 month
flo	2 (1-3 months) [1-3]
flood	1 (flooded area) [0-2]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	medc (medium acid) [5.5-6]
pH-B	medc (medium acid) [5.5-6]
perm	s (slow) [0-.5]
pws	6 (4-5) [4-5]
roc	0 %
run	s (slow)
sl	2 %
sto	0 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	icl (silty clay loam)
7	*Ut(Uttaradit), Np(Nakhon Pathom)*
aK-A	m (medium) [117.3-195.5]
aK-B	h (high) [195.5-391]
aP-X	m (10-15) [10-15]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	h (75-100) [75-100]
cec-X	mh (15-25) [15-25]
cec-Y	h (25-45) [25-45]
dep-A	vd (very deep) [150-10000]
dra	spd (somewhat poorly drained)
dry	6 month
flo	2 (1-3 months) [1-3]
flood	1 (flooded area) [0-2]
gp	204 day

Appendix Tables 1. (continued)

LMU	characteristic values
pH-A	mcdc (medium acid) [5.5-6]
perm	s (slow) [0-.5]
pws	5 (3-4) [3-4]
roc	0 %
run	s (slow)
sl	2 %
sto	0 %
ston-C	1 [0-1]
tN-A	l (low) [.1-.2]
tN-OM	mh [.125-.175]
text-A	icl (silty clay loam) (p=.5), cl (clay loam) (p=.5)
15	***Ms(Mac Sai)***
aK-A	l (low) [78.2-117.3]
aK-B	l (low) [78.2-117.3]
aP-X	l (3-6) [3-6]
aP-Y	l (3-6) [3-6]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	m (35-75) [35-75]
cec-X	m (10-15) [10-15]
cec-Y	mh (15-25) [15-25]
dep-A	vd (very deep) [150-10000]
dra	spd (somewhat poorly drained)
dry	6 month
flo	2 (1-3 months) [1-3]
flood	1 (flooded area) [0-2]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	slc (slightly acid) [6-6.5]
pH-B	n (neutral) [6.5-7.3]
perm	s (slow) [0-.5]
pws	5 (3-4) [3-4]
roc	0 %
run	s (slow)
sl	2 %
sto	0 %
tN-A	vl (very low) [0-.1]
tN-OM	ml [.05-.075]
text-A	icl (silty clay loam) (p=.5), cl (clay loam) (p=.5)
21	***Sa(Sanphaya)***
aK-A	m (medium) [117.3-195.5]
aK-B	vl (very low) [0-78.2]
aP-X	m (10-15) [10-15]
aP-Y	m (10-15) [10-15]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	m (35-75) [35-75]
cec-X	m (10-15) [10-15]
cec-Y	m (10-15) [10-15]
dep-A	vd (very deep) [150-10000]
dra	mwd (moderately well drained)

Appendix Tables 1. (continued)

LMU	characteristic values
flo	2 (1-3 months) [1-3]
flood	1 (flooded area) [0-2]
om-X	h (3.5-4.5) [3.5-4.5]
pH-A	n (neutral) [6.5-7.3]
pH-B	slc (slightly acid) [6-6.5]
perm	m (moderate) [.5-16]
pws	1 (0-0.5) [0-.5]
roc	0 %
run	s (slow)
sl	1 %
sto	0 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	il (silty loam)
22	***Sai(San Sai)***
aK-A	vl (very low) [0-78.2]
aK-B	vl (very low) [0-78.2]
aP-X	l (3-6) [3-6]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	h (75-100) [75-100]
cec-X	vl (0-3) [0-3]
cec-Y	l (3-5) [3-5]
dep-A	d (deep) [100-150]
dra	pd (poorly drained)
dry	6 month
flo	2 (1-3 months) [1-3]
flood	1 (flooded area) [0-2]
gp	204 day
om-X	l (0.5-1.0) [.5-1]
pH-A	n (neutral) [6.5-7.3]
pH-B	n (neutral) [6.5-7.3]
perm	m (moderate) [.5-16]
pws	1 (0-0.5) [0-.5]
roc	0 %
run	s (slow)
sl	2 %
sto	0 %
tN-A	vl (very low) [0-.1]
tN-OM	l [.025-.05]
text-A	sl (sandy loam)
59	***AL-P(Alluvial soil poorly drained), Tm***
aK-A	l (low) [78.2-117.3]
aK-B	vl (very low) [0-78.2]
aar	1198.65 mm
aat	25.3 'C
base-A	h (high) [50-75]
base-B	h (high) [50-75]
dep-A	vd (very deep) [150-10000]
dra	spd (somewhat poorly drained)
dry	6 month

Appendix Tables 1. (continued)

LMU	characteristic values
flood	1 (flooded area) [0-2]
om-A	l (low) [2-3.5]
om-X	vl (0-0.5) [0-.5]
pH-A	slc (slightly acid) [6-6.5]
pH-B	slc (slightly acid) [6-6.5]
perm	m (moderate) [.5-16]
pws	6 (4-5) [4-5]
roc	0 %
run	s (slow)
sl	0 %
sto	0 %
tN-A	vl (very low) [0-.1]
tN-OM	vl [0-.025]
text-A	sl (sandy loam)
29B	***Pc(Pak Chong), Bg(Ban chong) slope 2-5%***
aK-A	l (low) [78.2-117.3]
aK-B	vl (very low) [0-78.2]
aP-X	vl (0-3) [0-3]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	l (0-35) [0-35]
cec-X	ml (5-10) [5-10]
cec-Y	ml (5-10) [5-10]
dep-A	vd (very deep) [150-10000]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	n (neutral) [6.5-7.3]
pH-B	n (neutral) [6.5-7.3]
perm	m (moderate) [.5-16]
roc	0 %
run	m (medium)
sl	4 %
sto	0 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	cl (clay loam) (p=.5), ic (silty clay) (p=.5)
29C	***Pc(Pak Chong), Bg(Ban Chong) slope 5-12%***
aK-A	l (low) [78.2-117.3]
aK-B	vl (very low) [0-78.2]
aP-X	vl (0-3) [0-3]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	l (0-35) [0-35]
cec-X	ml (5-10) [5-10]

Appendix Tables 1. (continued)

LMU	characteristic values
dep-A	d (deep) [100-150]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	n (neutral) [6.5-7.3]
pH-B	n (neutral) [6.5-7.3]
perm	m (moderate) [.5-16]
roc	0 %
run	m (medium)
sl	8 %
sto	0 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	cl (clay loam) (p=.5), ic (silty clay) (p=.5)
29D	***Pc(Pak Chong), Bg(Ban Chong)slope 12-20%***
aK-A	l (low) [78.2-117.3]
aK-B	vl (very low) [0-78.2]
aP-X	vl (0-3) [0-3]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.6 'C
base-X	m (35-75) [35-75]
base-Y	l (0-35) [0-35]
cec-X	ml (5-10) [5-10]
cec-Y	ml (5-10) [5-10]
dep-A	md (moderately deep) [50-100]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-B	n (neutral) [6.5-7.3]
perm	m (moderate) [.5-16]
roc	0 %
run	m (medium)
sl	15 %
sto	1 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	cl (clay loam) (p=.5), ic (silty clay) (p=.5)
29E	***Pc(Pak Chong), Bg(Ban Chong)slope 20-35%***
aK-A	l (low) [78.2-117.3]
aK-B	vl (very low) [0-78.2]
aP-X	vl (0-3) [0-3]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	l (0-35) [0-35]

Appendix Tables 1. (continued)

LMU	characteristic values
cec-Y	ml (5-10) [5-10]
dep-A	md (moderately deep) [50-100]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	n (neutral) [6.5-7.3]
pH-B	n (neutral) [6.5-7.3]
perm	m (moderate) [.5-16]
roc	0 %
run	r (rapid)
sl	25 %
sto	1 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	cl (clay loam) (p=.5), ic (silty clay) (p=.5)
35B	***Kt(Korat) slope 2-5 %***
aK-A	vl (very low) [0-78.2]
aK-B	vl (very low) [0-78.2]
aP-X	ml (6-10) [6-10]
aP-Y	l (3-6) [3-6]
aar	1198.65 mm
aat	25.3 'C
base-A	m (medium) [35-50]
base-B	vl (very low) [0-20]
base-X	l (0-35) [0-35]
base-Y	l (0-35) [0-35]
cec-X	vl (0-3) [0-3]
cec-Y	l (3-5) [3-5]
dep-A	vd (very deep) [150-10000]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-X	l (0.5-1.0) [.5-1]
pH-A	slc (slightly acid) [6-6.5]
pH-B	stc (strongly acid) [5-5.5]
perm	m (moderate) [.5-16]
pws	2 (0.5-1) [.5-1]
roc	0 %
run	r (rapid)
sl	4 %
sto	0 %
tN-A	vl (very low) [0-.1]
tN-OM	l [.025-.05]
text-A	sl (sandy loam) (p=.5), scl (sandy clay loam) (p=.5)
35C	***Kt(Korat) slope 5-12 %***
aK-A	vl (very low) [0-78.2]
aK-B	vl (very low) [0-78.2]
aP-X	ml (6-10) [6-10]

Appendix Tables 1. (continued)

LMU	characteristic values
aar	1198.65 mm
aat	25.3 'C
base-X	l (0-35) [0-35]
base-Y	l (0-35) [0-35]
cec-X	vl (0-3) [0-3]
cec-Y	l (3-5) [3-5]
dep-A	d (deep) [100-150]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-A	vl (very low) [0-2]
om-X	l (0.5-1.0) [.5-1]
pH-A	slc (slightly acid) [6-6.5]
pH-B	stc (strongly acid) [5-5.5]
perm	m (moderate) [.5-16]
pws	2 (0.5-1) [.5-1]
roc	0 %
sto	0 %
tN-A	vl (very low) [0-.1]
tN-OM	l [.025-.05]
text-A	sl (sandy loam) (p=.5), scl (sandy clay loam) (p=.5)
47B	***Li(Li) slope 2-5 %***
aK-A	m (medium) [117.3-195.5]
aK-B	m (medium) [117.3-195.5]
aP-X	ml (6-10) [6-10]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	l (0-35) [0-35]
base-Y	l (0-35) [0-35]
cec-X	m (10-15) [10-15]
cec-Y	ml (5-10) [5-10]
dep-A	md (moderately deep) [50-100]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-A	m (medium) [3.5-5]
om-X	mh (2.5-3.5) [2.5-3.5]
pH-A	medc (medium acid) [5.5-6]
pH-B	stc (strongly acid) [5-5.5]
perm	m (moderate) [.5-16]
roc	0 %
run	r (rapid)
sl	4 %
sto	1 %
tN-A	l (low) [.1-.2]
tN-OM	mh [.125-.175]
text-A	ic (silty clay)

Appendix Tables 1. (continued)

LMU	characteristic values
aK-A	m (medium) [117.3-195.5]
aK-B	m (medium) [117.3-195.5]
aP-X	ml (6-10) [6-10]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	l (0-35) [0-35]
base-Y	l (0-35) [0-35]
cec-X	m (10-15) [10-15]
cec-Y	ml (5-10) [5-10]
dep-A	s (shallow) [25-50]
dra	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-A	m (medium) [3.5-5]
om-X	mh (2.5-3.5) [2.5-3.5]
pH-A	medc (medium acid) [5.5-6]
pH-B	stc (strongly acid) [5-5.5]
perm	m (moderate) [.5-16]
roc	0 %
run	r (rapid)
sl	15 %
sto	2 %
tN-A	l (low) [.1-.2]
tN-OM	mh [.125-.175]
text-A	ic (silty clay)
48B	Ty(Tha Yang) slope 2-5%
aK-A	m (medium) [117.3-195.5]
aK-B	m (medium) [117.3-195.5]
aP-A	vh (very high) [35-10000]
aP-B	vh (very high) [35-10000]
aar	1198.65 mm
aat	25.3 'C
base-A	m (medium) [35-50]
base-B	l (low) [20-35]
cec-A	l (low) [5-16]
cec-B	l (low) [5-16]
dep-A	d (deep) [100-150]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	n (neutral) [6.5-7.3]
pH-B	medc (medium acid) [5.5-6]
perm	m (moderate) [.5-16]
roc	0 %
run	r (rapid)
sl	4 %
sto	1 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]

Appendix Tables 1. (continued)

LMU	characteristic values
48C	***Ty(Tha Yang) slope 5-12%***
aK-A	m (medium) [117.3-195.5]
aK-B	m (medium) [117.3-195.5]
aP-X	ml (6-10) [6-10]
aP-Y	l (3-6) [3-6]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	m (35-75) [35-75]
cec-X	l (3-5) [3-5]
cec-Y	ml (5-10) [5-10]
dep-A	d (deep) [100-150]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-A	m (medium) [3.5-5]
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	n (neutral) [6.5-7.3]
pH-B	medc (medium acid) [5.5-6]
perm	m (moderate) [.5-16]
roc	0 %
run	r (rapid)
sl	8 %
sto	1 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	scl (sandy clay loam) (p=.5), sl (sandy loam) (p=.5)
48D	***Ty(Tha Yang) slope 12-20%***
aK-A	m (medium) [117.3-195.5]
aK-B	m (medium) [117.3-195.5]
aP-X	ml (6-10) [6-10]
aP-Y	l (3-6) [3-6]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	m (35-75) [35-75]
cec-X	l (3-5) [3-5]
cec-Y	ml (5-10) [5-10]
dep-A	md (moderately deep) [50-100]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	n (neutral) [6.5-7.3]
pH-B	medc (medium acid) [5.5-6]
perm	m (moderate) [.5-16]
roc	0 %
run	r (rapid)
sl	15 %

Appendix Tables 1. (continued)

LMU	characteristic values
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	scl (sandy clay loam) (p=.5), sl (sandy loam) (p=.5)
48E	***Ty(Tha Yang) slope 20-35%***
aK-A	m (medium) [117.3-195.5]
aK-B	m (medium) [117.3-195.5]
aP-X	ml (6-10) [6-10]
aP-Y	l (3-6) [3-6]
aar	1198.65 mm
aat	25.3 'C
base-X	m (35-75) [35-75]
base-Y	m (35-75) [35-75]
cec-X	l (3-5) [3-5]
cec-Y	ml (5-10) [5-10]
dep-A	md (moderately deep) [50-100]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-A	m (medium) [3.5-5]
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	n (neutral) [6.5-7.3]
pH-B	medc (medium acid) [5.5-6]
perm	m (moderate) [.5-16]
roc	0 %
run	r (rapid)
sl	25 %
sto	2 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	scl (sandy clay loam) (p=.5), sl (sandy loam) (p=.5)
56C	***Ly(Lat Ya) slope 5-12%***
aK-A	l (low) [78.2-117.3]
aK-B	l (low) [78.2-117.3]
aP-X	vl (0-3) [0-3]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	l (0-35) [0-35]
base-Y	l (0-35) [0-35]
cec-X	ml (5-10) [5-10]
cec-Y	ml (5-10) [5-10]
dep-A	d (deep) [100-150]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	medc (medium acid) [5.5-6]
pH-B	stc (strongly acid) [5-5.5]
perm	m (moderate) [.5-16]

Appendix Tables 1. (continued)

LMU	characteristic values
run	r (rapid)
sl	8 %
sto	0 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	l (loam) (p=.5), cl (clay loam) (p=.5)
56D	***Ly(Lat Ya) slope 12-20 %***
aK-A	l (low) [78.2-117.3]
aK-B	l (low) [78.2-117.3]
aP-X	vl (0-3) [0-3]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	l (0-35) [0-35]
base-Y	l (0-35) [0-35]
cec-X	ml (5-10) [5-10]
cec-Y	ml (5-10) [5-10]
dep-A	md (moderately deep) [50-100]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-X	m (1.5-2.5) [1.5-2.5]
pH-A	medc (medium acid) [5.5-6]
pH-B	stc (strongly acid) [5-5.5]
perm	m (moderate) [.5-16]
roc	0 %
run	r (rapid)
sl	15 %
sto	1 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	l (loam) (p=.5), cl (clay loam) (p=.5)
56E	***Ly(Lat Ya) slope 20-35 %***
aK-A	l (low) [78.2-117.3]
aK-B	l (low) [78.2-117.3]
aP-X	vl (0-3) [0-3]
aP-Y	vl (0-3) [0-3]
aar	1198.65 mm
aat	25.3 'C
base-X	l (0-35) [0-35]
base-Y	l (0-35) [0-35]
cec-X	ml (5-10) [5-10]
cec-Y	ml (5-10) [5-10]
dep-A	md (moderately deep) [50-100]
dra	wd (well drained)
dry	6 month
flo	1 (no flooding hazard) [0-1]
flood	2 (slope area) [2-100]
gp	204 day
om-A	l (low) [2-3.5]
om-X	m (1.5-2.5) [1.5-2.5]

Appendix Tables 1. (continued)

LMU	characteristic values
pH-B	stc (strongly acid) [5-5.5]
perm	m (moderate) [.5-16]
roc	0 %
run	r (rapid)
sl	25 %
sto	2 %
tN-A	vl (very low) [0-.1] (p=.5), l (low) [.1-.2] (p=.5)
tN-OM	me [.075-.125]
text-A	l (loam) (p=.5), cl (clay loam) (p=.5)

Description of Land Characteristics (LC)

LC Id		LC Name	Classes Units
Class Code		Class Name	Upper limit
aK-A		available potassium (0-30 cm)	ppm
1	vl	very low	78.2
2	l	low	117.3
3	m	medium	195.5
4	h	high	391.0
5	vh	very high	10000
aK-B		available potassium (>30 cm)	ppm
1	vl	very low	78.2
2	l	low	117.3
3	m	medium	195.5
4	h	high	391.0
5	vh	very high	10000
aP-A		available phosphorus (0-30 cm)	ppm
1	vl	very low	10
2	l	low	15
3	m	medium	25
4	h	high	35
5	vh	very high	10000
aP-B		available phosphorus (>30 cm)	ppm
1	vl	very low	10
2	l	low	15
3	m	medium	25
4	h	high	35
5	vh	very high	10000
aP-X		available phosphorus for soil	ppm
1	vl	0-3	3
2	l	3-6	6
3	ml	6-10	10
4	m	10-15	15
5	mh	15-25	25
6	h	25-45	45
7	vh	>45	10000

LC Id		LC Name	Classes	Units
	Class Code	Class Name	Upper limit	
aP-Y		available phosphorus for soil		ppm
1	vl	0-3	3	
2	l	3-6	6	
3	ml	6-10	10	
4	m	10-15	15	
5	mh	15-25	25	
6	h	25-45	45	
7	vh	>45	10000	
aar		average annual rainfall		mm
aat		average annual temperature		'C
base		base saturation		%
base-A		base saturation (0-30 cm)		%
1	vl	very low	20	
2	l	low	35	
3	m	medium	50	
4	h	high	75	
5	vh	very high	10000	
base-B		base saturation (>30 cm)		%
1	vl	very low	20	
2	l	low	35	
3	m	medium	50	
4	h	high	75	
5	vh	very high	10000	
base-X		base saturation for soil unit		%
1	l	0-35	35	
2	m	35-75	75	
3	h	75-100	100	
base-Y		base saturation for soil unit		%
1	l	0-35	35	
2	m	35-75	75	
3	h	75-100	100	
cec		continuous cation exchange capacity		CEC
cec-A		cation exchange capacity (0-30 cm)		CEC
1	vl	very low	5	
2	l	low	16	
3	m	medium	24	
4	h	high	40	
5	vh	very high	10000	
cec-B		cation exchange capacity (>30 cm)		CEC
1	vl	very low	5	
2	l	low	16	
3	m	medium	24	
4	h	high	40	
5	vh	very high	10000	

LC Id	LC Name		Classes Units
Class Code	Class Name	Upper limit	
cec-X	cation exchange capacity for soil		CEC
1 vl	0-3	3	
2 l	3-5	5	
3 ml	5-10	10	
4 m	10-15	15	
5 mh	15-25	25	
6 h	25-45	45	
7 vh	>45	10000	
cec-Y	cation exchange capacity for soil		CEC
1 vl	0-3	3	
2 l	3-5	5	
3 ml	5-10	10	
4 m	10-15	15	
5 mh	15-25	25	
6 h	25-45	45	
7 vh	>45	10000	
dep-A	soil depth (surface)		cm
1 vs	very shallow	25	
2 s	shallow	50	
3 md	moderately deep	100	
4 d	deep	150	
5 vd	very deep	10000	
dra	soil drainage class		
1 vpd	very poorly drained		
2 pd	poorly drained		
3 spd	somewhat poorly drained		
4 mwd	moderately well drained		
5 wd	well drained		
6 sed	somewhat excessively drai		
7 ed	excessively drained		
dry	dry months (<75mm)		month
flo	flood hazard		m/yr
1 1	no flooding hazard	1	
2 2	1-3 months	3	
3 3	4-6 months	6	
4 4	7-9 months	9	
5 5	>10 months	12	
flood	flooded area		%
1 1	flooded area	2	
2 2	slope area	100	
gp	growing period		day
om-X	organic matter for soil unit		%OM
1 vl	0-0.5	.5	
2 l	0.5-1.0	1	
3 ml	1.0-1.5	1.5	
4 m	1.5-2.5	2.5	
5 mh	2.5-3.5	3.5	
6 h	3.5-4.5	4.5	

LC Id	LC Name		Classes Units
Class Code	Class Name	Upper limit	
7 vh	>4.5	10000	

pH-A	reaction of soil (0-30 cm)		pH
1 exc	extremely acid	4.5	
2 vsc	very strongly acid	5	
3 stc	strongly acid	5.5	
4 medc	medium acid	6	
5 slc	slightly acid	6.5	
6 n	neutral	7.3	
7 mil	mildly alkaline	7.8	
8 mol	moderatly alkaline	8.4	
9 stl	strongly alkaline	9	
10 vsl	very strongly alkaline	14	

pH-B	reaction of soil (>30 cm)		pH
1 exc	extremely acid	4.5	
2 vsc	very strongly acid	5	
3 stc	strongly acid	5.5	
4 medc	medium acid	6	
5 slc	slightly acid	6.5	
6 n	neutral	7.3	
7 mil	mildly alkaline	7.8	
8 mol	moderatly alkaline	8.4	
9 stl	strongly alkaline	9	
10 vsl	very strongly alkaline	14	

perm	permeability		cm/hr
1 s	slow	.5	
2 m	moderate	16	
3 r	rapid	10000	

pws	period of water saturation		month
1 1	0-0.5	.5	
2 2	0.5-1	1	
3 3	1-2	2	
4 4	2-3	3	
5 5	3-4	4	
6 6	4-5	5	
7 7	5-6	6	
8 8	>6	12	

roc	rock outcrop range	%

run	surface runoff	
1 s	slow	
2 m	medium	
3 r	rapid	

sl	slope range	%

sto	surface stoniness range	%

tN	continous nitrogen value	%N

LC Id		LC Name	Classes Units
	Class Code	Class Name	Upper limit
tN-A		total nitrogen (0-30 cm)	%N
1	vl	very low	.1
2	l	low	.2
3	m	medium	.5
4	h	high	.75
5	vh	very high	10000
tN-OM		%N by * 0.05 OM for DLD data	%N
1	vl		.025
2	l		.05
3	ml		.075
4	me		.125
5	mh		.175
6	h		.225
7	vh		100
text-A		soil texture (surface)	
1	s	sand	
2	ls	loamy sand	
3	scl	sandy clay loam	
4	sl	sandy loam	
5	l	loam	
6	cl	clay loam	
7	i	silt	
8	il	silty loam	
9	icl	silty clay loam	
10	c	clay	
11	sc	sandy clay	
12	ic	silty clay	

Appendix Table 2. Land use requirements (LUR) for rainfed corn in different suitability ratings

Land Characteristics grouped by Land Qualities	Suitability rating			
	S1	S2	S3	N
t - Temperature Regime				
1. Temperature (°c)	*20-26*	*27-30* *20-18*	*31-32* *<18*	*>32*
w - Water Availability				
1. Growing period (days)	*210-329*	*150-209* *330-365*	*120-149*	*<119*
r - Rooting Conditions				
1. Drainage	*Moderately well, Well*	*Somewhat poor*	*Somewhat excessive, Poor*	*Very poor, Excessive*
2. Texture	*Loam, Sandy clay loam, Silt loam, Silt, Clay loam, Silty clay loam*	*Sandy loam, Sandy clay*	*Loamy sand, Silty clay, Structured clay*	*Gravels, Sands, Massive clay*
3. Rooting depth (cm)	*> 60*	*40-59*	*20-39*	*<20*
f - Nutrient Retention				
1. CEC me/100 g.soil	*>=Medium*	*Low*	*Very low*	
2. pH	*6.0-7.0*	*7.1-7.5* *5.9-5.5*	*7.6-8.5* *5.4-5.0*	*>8.5* *<5.0*
n - Nutrient Availibility				
1. Total N	*>=Medium*	*Low*	*Very low*	
2. Available P_2O_5	*Very high*	*High*	*Medium-Low*	*Very low*
3. Available K_2O	*>=Medium*	*Low*	*Very low*	
s - Terrain				
1. Slope (%)	*0-5*	*5-15*	*15-20*	*>20*
2. Surface stoniness	*0*		*1*	*>=2*
3. Rock outcrops	*0*		*1*	*>=2*
fl - Flood Hazard				
1. Slope (%)	*0-2*			*>2*

Appendix Table 3. Land use requirements (LUR) for rainfed peanut in different suitability ratings

Land Characteristics grouped by Land Qualities	Suitability rating			
	S1	S2	S3	N
t- Temperature Regime				
1. Temperature (°c)	*25-30*	*31-33* *24-20*	*34* *19-18*	*>34* *<18*
w - Water Availability				
1. Growing period (days)	*180-239*	*150-179* *240-299*	*90-149* *300-365*	*<89*
r - Rooting Conditions				
1. Drainage	*Well, Some-what excessive*	*Moderately well, Excessive*	*Somewhat poor*	*Very poor, Poor*
2. Texture	*Loam,Sandy clay loam, Sandy loam*	*Loamy sand, Silt loam, Silt*	*Clay loam, Silty clay loam, Sandy clay, Silty clay, Structured clay*	*Gravels, Sands, Massive clay*
3. Rooting depth (cm)	*> 50*	*30-49*	*15-29*	*<15*
f - Nutrient Retention				
1. CEC me/100 g.soil	*>=Medium*	*Low*	*Very low*	
2. pH	*6.0-7.0*	*7.1-7.5* *5.9-5.5*	*7.6-8.5* *5.4-5.0*	*>8.5* *<5.0*
n - Nutrient Availability				
1. Total N	*>=Medium*	*Low*	*Very low*	
2. Available P_2O_5	*>=Medium*	*Low*	*Very low*	
3. Available K_2O	*>=Very low*			
s - Terrain				
1. Slope (%)	*0-5*	*5-15*	*15-20*	*>20*
2. Surface Stoniness	*0*		*1*	*>=2*
3. Rock outcrops	*0*		*1*	*>=2*
fl - Flood Hazard				
1. Slope (%)	*0-2*			*>2*

Appendix Table 4. Land use requirements (LUR) for rainfed peanut-peanut in different suitability ratings

Land Characteristics grouped by Land Qualities	Suitability rating			
	S1	S2	S3	N
t - Temperature Regime				
1. Temperature ('c)	*25-30*	*31-33* *24-20*	*34* *19-18*	*>34* *<18*
w - Water Availabiity				
1. Growing period (days)	*>207*	*202-206*	*189-202*	*<189*
r - Rooting Conditions				
1. Drainage	*Well, Some-what excessive*	*Moderately well, Excessive*	*Somewhat poor*	*Very poor, Poor*
2. Texture	*Loam,Sandy clay loam, Sandy loam*	*Loamy sand, Silt loam, Silt*	*Clay loam, Silty clay loam, Sandy clay, Silty clay, Structured clay*	*Gravels, Sands, Massive clay*
3. Rooting depth (cm)	*> 50*	*30-49*	*15-29*	*<15*
f - Nutrient Retention				
1. CEC me/100 g.soil	*>=Medium*	*Low*	*Very low*	
2. pH	*6.0-7.0*	*7.1-7.5* *5.9-5.5*	*7.6-8.5* *5.4-5.0*	*>8.5* *<5.0*
n - Nutrient Availability				
1. % total N	*>=Medium*	*Low*	*Very low*	
2. Available P_2O_5	*>=Medium*	*Low*	*Very low*	
3. Available K_2O	*>=Very low*			
s - Terrain				
1. Slope (%)	*0-5*	*5-15*	*15-20*	*>20*
2. Surface stoniness	*0*		*1*	*>=2*
3. Rock outcrop	*0*		*1*	*>=2*
fl - Flood Hazard				
1. Slope (%)	*0-2*			*>2*

Appendix Table 5. Land use requirements (LUR) for rainfed soybean in different suitability ratings

Land Characteristics grouped by Land Qualities	Suitability rating			
	S1	S2	S3	N
t - Temperature Regime				
1. Temperature (°c)	*23-28*	*29-30* *22-20*	*31-32* *19-18*	*>32* *<18*
w - Water Availability				
1.Growing period (days)	*150-239*	*120-149* *240-299*	*90-119* *300-365*	*<89*
r - Rooting Conditions				
1. Drainage	*Moderately well, well*	*Somewhat excessive*	*Poor, Some-what poor*	*Very poor, Excessive*
2. Texture	*Loam, Sandy clay loam, Silt loam, Silt, Clay loam, Silty clay loam*	*Sandy loam, Sandy clay*	*Loamy sand, Silty clay, Structured clay*	*Gravels, Sands, Massive clay*
3. Rooting depth (cm)	*> 50*	*30-49*	*15-29*	*<15*
f - Nutrient Retention				
1. CEC me/100 g.soil	*>=Medium*	*Low*	*Very low*	
2. pH	*6.0-7.0*	*7.1-7.5* *5.9-5.5*	*7.6-8.5* *5.4-5.0*	*>8.5* *<5.0*
n - Nutrient Availability				
1. Total N	*>=Medium*	*Low*	*Very low*	
2. Available P_2O_5	*>=High*	*Medium*	*Low-Very low*	
3. Available K_2O	*>=Very low*			
s - Terrain				
1. Slope (%)	*0-5*	*5-15*	*15-20*	*>20*
2. Surface stoniness	*0*	*1*		*>2*
3. Rock outcrops	*0*	*1*		*>2*
fl - Flood Hazard				
1. Slope (%)	*0-2*			*>2*

Appendix Table 6. Land use requirements (LUR) for rainfed paddy rice in different suitability ratings

Land Characteristics grouped by Land Qualities	Suitability rating			
	S1	S2	S3	N
t - Temperature Regime				
1. Temperature (°c)	*25-29*	*30-32* *24-22*	*33-35* *21-18*	*>35* *<18*
w - Water Availability				
1. Growing period (days)	*300-365*	*180-299*	*150-179*	*<149*
r - Rooting Conditions				
1. Drainage	*Moderately well, Some-what poor*	*Very poor, Poor*	*Well*	*Somewhat excessive, Excessive*
2. Texture	*Sandy clay loam, Silt, Silt loam, Clay loam*	*Sandy loam, Loam, Silty clay loam, Silty clay, Structured clay*	*Loamy sand, Massive clay*	*Gravels, Sands*
3. Rooting depth (cm)	*> 50*	*41-50*	*20-40*	*<20*
f - Nutrient Retention				
1. CEC me/100 g.soil	*>=Medium*	*Low*	*Very low*	
2. pH	*5.5-7.0*	*7.1-8.0* *5.4-4.5*	*8.1-8.5* *4.6-4.0*	*>8.5* *<4.0*
n - Nutrient Availability				
1. Total N	*>=Medium*	*Low*	*Very low*	
2. Available P_2O_5	*Very high*	*High*	*Medium-Low*	*Very low*
3. Available K_2O	*>=Medium*	*Low*	*Very low*	
s - Terrain				
1. Slope (%)	*0-3*	*3-5*	*5 - 8*	*>8*
2. Surface stoniness	*0*			*>=1*
3. Rock outcrops	*0*		*1*	*>=2*

Appendix Table 7. Land use requirements (LUR) for irrigated rice-soybean in different suitability ratings

Land Characteristics grouped by Land Qualities	Suitability rating			
	S1	S2	S3	N
t - Temperature Regime				
1. Temperature (°c)	*25-30*	*31-32* *24-23*	*33-34* *22-21*	*>34* *<21*
r - Rooting conditions				
1. Drainage	*Moderately well*	*Somewhat poor, Well*	*Very poor, Poor, Somewhat Excessive*	*Excessive*
2. Texture	*Sandy clay loam, Clay loam, Silt, Silty loam*	*Sandy loam, Loam, Silty clay loam, Sandy clay*	*Loamy sand, Silty clay, Clay*	*Sands*
3. Rooting depth (cm)	*> 50*	*41-50*	*20-40*	*<20*
f - Nutrient Retention				
1. CEC me/100 g.soil	*>=Medium*	*Low*	*Very low*	
2. pH	*6.0-7.0*	*7.1-7.5* *5.5-5.9*	*7.6-8.5* *5.0-5.4*	*>8.5* *<5.0*
n - Nutrient Availability				
1. % total N	*>=Medium*	*Low*	*Very low*	
2. Available P_2O_5	*Very high*	*high*	*Medium-Low*	*Very low*
3. Available K_2O	*>=Medium*	*Low*	*Very low*	
s - Terrain				
1. Slope (%)	*0-3*	*3-5*	*5-8*	*>8*
2. Surface stoniness	*0*			*>=1*
3. Rock outcrop	*0*		*1*	*>=2*

Appendix Table 8. The severity level of each land quality for particular land utilization type.

28 Severity Level RCorn,t

> aat-C (average annual temperature for corn)
1 [0-18 °C]..... : 4 (severe)
2 [18-20 °C]..... : 3 (moderate)
3 [20-26 °C]..... : 1 (none)
4 [26-30 °C]..... : 2 (slight)
5 [30-32 °C]..... : =2
6 [32-1000 °C]..... : =1
?..... : ?

33 Severity Level RCorn,w

> gp-C (growing periog for corn)
1 [0-119 day]..... : 4 (severe)
2 [119-149 day]..... : 3 (moderate)
3 [149-209 day]..... : 2 (slight)
4 [209-329 day]..... : 1 (none)
5 [329-365 day]..... : 2 (slight)
?..... : ?

38 Severity Level RCorn,r

> dra (soil drainage class)
vpd (very poorly drained) > text-A (soil texture (surface))
s (sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-60 cm]..... : =1
4 [60-10000 cm]..... : =1
?..... : ?
ls (loamy sand)..... : =1
scl (sandy clay loam)... : =1
sl (sandy loam)..... : =1
l (loam)..... : =1
cl (clay loam)..... : =1
i (silt)..... : =1
il (silty loam)..... : =1
icl (silty clay loam)... : =1
c (clay)..... : =1
sc (sandy clay)..... : =1
ic (silty clay)..... : =1
?..... : ?
pd (poorly drained) > text-A (soil texture (surface))
s (sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-60 cm]..... : =1
4 [60-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : =2
4 [60-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam)..... : =2
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =2
c (clay)..... : =1
sc (sandy clay)..... : =2
ic (silty clay)..... : =2
?..... : ?
spd (somewhat poorly drained) > text-A (soil texture (surface))
s (sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-60 cm]..... : =1
4 [60-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : =2
4 [60-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : 2 (slight)
4 [60-10000 cm]..... : =3
?..... : ?
sl (sandy loam)..... : =3
l (loam)..... : =3
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =3
c (clay)..... : =1
sc (sandy clay)..... : =3
ic (silty clay)..... : =2
?..... : ?
mwd (moderately well drained) > text-A (soil texture (surface))
s (sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-60 cm]..... : =1
4 [60-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : =2
4 [60-10000 cm]..... : =2
?..... : ?

scl (sandy clay loam) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : 2 (slight)
4 [60-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : 2 (slight)
4 [60-10000 cm]..... : =3
?..... : ?
l (loam)..... : =3
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =3
c (clay)..... : =1
sc (sandy clay)..... : =4
ic (silty clay)..... : =2
?..... : ?
wd (well drained) > text-A (soil texture (surface))
s (sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-60 cm]..... : =1
4 [60-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : =2
4 [60-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : 2 (slight)
4 [60-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : 2 (slight)
4 [60-10000 cm]..... : =3
?..... : ?
l (loam)..... : =3
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =3
c (clay)..... : =1
sc (sandy clay)..... : =4
ic (silty clay)..... : =2
?..... : ?
sed (somewhat excessively drained) > text-A (soil texture (surface))
s (sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-60 cm]..... : =1
4 [60-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : =2
4 [60-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam)..... : =2
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =2
c (clay)..... : =1
sc (sandy clay)..... : =2
ic (silty clay)..... : =2
?..... : ?
ed (excessively drained) : =1
? > text-A (soil texture (surface))
s (sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-60 cm]..... : =1
4 [60-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : =2
4 [60-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : 2 (slight)
4 [60-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam) > dep-C (surface soil depth for corn)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-60 cm]..... : 2 (slight)
4 [60-10000 cm]..... : =3
?..... : ?
l (loam)..... : =3
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =3
c (clay)..... : =1
sc (sandy clay)..... : =4
ic (silty clay)..... : =2
?..... : ?

42 Severity Level RCorn,f

> cec-B (cation exchange capacity (>30 cm))

vl (very low) [0-5 CEC] > pH-C (pH-A for corn)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : =2
4 [5.9-7 pH]..... : =2
5 [7-7.5 pH]..... : =2
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
l (low) [5-16 CEC] > pH-C (pH-A for corn)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : =3
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
m (medium) [16-24 CEC] > pH-C (pH-A for corn)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
h (high) [24-40 CEC].... : =3
vh (very high) [40-10000 : =3
? > pH-C (pH-A for corn)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?

46 Severity Level RCorn,n

> tN-A (total nitrogen (0-30 cm))
vl (very low) [0-.1 %N] > aP-A (available phosphorus (0-30 cm))
vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 4 (severe)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
m (medium) [15-25 ppm].. : =2
h (high) [25-35 ppm].... : =2
vh (very high) [35-10000 : =2
? > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
l (low) [.1-.2 %N] > aP-A (available phosphorus (0-30 cm))
vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 4 (severe)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
m (medium) [15-25 ppm].. : =2
h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 ppm] : 3 (moderate)
l (low) [78.2-117.3 ppm] : 2 (slight)
m (medium) [117.3-195.5 ppm] : =2
h (high) [195.5-391 ppm] : =2
vh (very high) [391-1000 ppm] : =2
?..... : ?
vh (very high) [35-10000 ppm] : =4
? > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 ppm] : 3 (moderate)
l (low) [78.2-117.3 ppm] : 2 (slight)
m (medium) [117.3-195.5 ppm] : =2
h (high) [195.5-391 ppm] : =2
vh (very high) [391-1000 ppm] : =2
?..... : ?
m (medium) [.2-.5 %N] > aP-A (available phosphorus (0-30 cm))
vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 ppm] : 4 (severe)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 ppm] : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 ppm] : =1
?..... : ?
l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 ppm] : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 ppm] : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 ppm] : =1
?..... : ?
m (medium) [15-25 ppm].. : =2
h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 ppm] : 3 (moderate)
l (low) [78.2-117.3 ppm] : 2 (slight)
m (medium) [117.3-195.5 ppm] : =2

```
      h (high) [195.5-391 ppm] : =2
      vh (very high) [391-1000 ppm] : =2
      ?..... : ?
    vh (very high) [35-10000 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 ppm] : 3 (moderate)
      l (low) [78.2-117.3 ppm] : 2 (slight)
      m (medium) [117.3-195.5 ppm] : 1 (none)
      h (high) [195.5-391 ppm] : =3
      vh (very high) [391-1000 ppm] : =3
      ?..... : ?
    ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 ppm] : 3 (moderate)
      l (low) [78.2-117.3 ppm] : 2 (slight)
      m (medium) [117.3-195.5 ppm] : 1 (none)
      h (high) [195.5-391 ppm] : =3
      vh (very high) [391-1000 ppm] : =3
      ?..... : ?
h (high) [.5-.75 %N].... : =2
vh (very high) [.75-1000 : =2
? > aP-A (available phosphorus (0-30 cm))
  vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 4 (severe)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5  : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 : =1
    ?..... : ?
  l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 ppm] : 3 (moderate)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5 ppm] : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 ppm] : =1
    ?..... : ?
  m (medium) [15-25 ppm].. : =2
  h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 ppm : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5 ppm] : =2
    h (high) [195.5-391 ppm] : =2
    vh (very high) [391-1000 ppm] : =2
    ?..... : ?
  vh (very high) [35-10000 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 ppm] : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5 ppm] : 1 (none)
    h (high) [195.5-391 ppm] : =3
    vh (very high) [391-1000 ppm] : =3
    ?..... : ?
  ? > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 ppm] : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5 ppm] : 1 (none)
    h (high) [195.5-391 ppm] : =3
    vh (very high) [391-1000 ppm] : =3
    ?..... : ?
```

51 Severity Level RCorn,s

```
> slp-C (slope range for corn)
  1 [0-5 %] > ston-C (surface stoniness range for corn)
    1 [0-1 %] > rock-C (rock outcrop range for corn)
      1 [0-1 %]..... : 1 (none)
      2 [1-2 %]..... : 3 (moderate)
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    2 [1-2 %] > rock-C (rock outcrop range for corn)
      1 [0-1 %]..... : 3 (moderate)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    3 [2-100 %] > rock-C (rock outcrop range for corn)
      1 [0-1 %]..... : 4 (severe)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : =1
      ?..... : ?
    ?..... : ?
  2 [5-15 %] > ston-C (surface stoniness range for corn)
    1 [0-1 %] > rock-C (rock outcrop range for corn)
      1 [0-1 %]..... : 2 (slight)
      2 [1-2 %]..... : 3 (moderate)
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    2 [1-2 %] > rock-C (rock outcrop range for corn)
      1 [0-1 %]..... : 3 (moderate)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    3 [2-100 %] > rock-C (rock outcrop range for corn)
      1 [0-1 %]..... : 4 (severe)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : =1
      ?..... : ?
    ?..... : ?
  3 [15-20 %] > ston-C (surface stoniness range for corn)
    1 [0-1 %] > rock-C (rock outcrop range for corn)
      1 [0-1 %]..... : 3 (moderate)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    2 [1-2 %]..... : =1
    3 [2-100 %] > rock-C (rock outcrop range for corn)
      1 [0-1 %]..... : 4 (severe)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : =1
      ?..... : ?
    ?..... : ?
  4 [20-100 %] > ston-C (surface stoniness range for corn)
    1 [0-1 %] > rock-C (rock outcrop range for corn)
      1 [0-1 %]..... : 4 (severe)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : =1
      ?..... : ?
    2 [1-2 %]..... : =1
    3 [2-100 %]..... : =1
    ?..... : ?
  ?..... : ?
```

82 Severity Level RCorn,fl

> flood (flooded area)
1 (flooded area) [0-2 %] : 2 (severe)
2 (slope area) [2-100 %] : 1 (none)
?..... : ?

---

30 Severity Level RPea,t

> aat-P (average annual temperature for peanut)
1 [0-18 °C]..... : 4 (severe)
2 [18-19 °C]..... : 3 (moderate)
3 [19-24 °C]..... : 2 (slight)
4 [24-30 °C]..... : 1 (none)
5 [30-33 °C]..... : =3
6 [33-34 °C]..... : =2
7 [34-1000 °C]..... : =1
?..... : ?

34 Severity Level RPea,w

> gp-P (growing period for peanut)
1 [0-89 day]..... : 4 (severe)
2 [89-149 day]..... : 3 (moderate)
3 [149-179 day]..... : 2 (slight)
4 [179-239 day]..... : 1 (none)
5 [239-299 day]..... : 2 (slight)
6 [299-365 day]..... : 3 (moderate)
?..... : ?

39 Severity Level RPea,r

> dra (soil drainage class)
vpd (very poorly drained) > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand)..... : =1
scl (sandy clay loam)... : =1
sl (sandy loam)..... : =1
l (loam)..... : =1
cl (clay loam)..... : =1
i (silt)..... : =1
il (silty loam)..... : =1
icl (silty clay loam)... : =1
c (clay)..... : =1
sc (sandy clay)..... : =1
ic (silty clay)..... : =1
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
pd (poorly drained)..... : =1
spd (somewhat poorly drained) > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam)..... : =2
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =2
c (clay)..... : =2
sc (sandy clay)..... : =2
ic (silty clay)..... : =2
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
mwd (moderately well drained) > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =6
c (clay)..... : =6
sc (sandy clay)..... : =6
ic (silty clay)..... : =6
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)

2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
wd (well drained) > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
scl (sandy clay loam) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam)..... : =3
l (loam)..... : =3
cl (clay loam) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =6
c (clay)..... : =6
sc (sandy clay)..... : =6
ic (silty clay)..... : =6
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
sed (somewhat excessivel : =5
ed (excessively drained) : =4
? > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =6
c (clay)..... : =6
sc (sandy clay)..... : =6
ic (silty clay)..... : =6
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?

43 Severity Level RPea,f

> cec-B (cation exchange capacity (>30 cm))
vl (very low) [0-5 CEC] > pH-P (pH-A for peanut)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : =2
4 [5.9-7 pH]..... : =2
5 [7-7.5 pH]..... : =2
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
l (low) [5-16 CEC] > pH-P (pH-A for peanut)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : =3
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
m (medium) [16-24 CEC] > pH-P (pH-A for peanut)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
h (high) [24-40 CEC].... : =3
vh (very high) [40-10000 : =3
? > pH-P (pH-A for peanut)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3

```
    6 [7.5-8.5 pH]..... : =2
    7 [8.5-14 pH]..... : =1
    ?..... : ?

49  Severity Level                RPea,n

> tN-A (total nitrogen (0-30 cm))
  vl (very low) [0-.1 %N] > aP-A (available phosphorus (0-30 cm))
    vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    l (low) [10-15 ppm]..... : =1
    m (medium) [15-25 ppm].. : =1
    h (high) [25-35 ppm].... : =1
    vh (very high) [35-10000 : =1
    ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
  l (low) [.1-.2 %N] > aP-A (available phosphorus (0-30 cm))
    vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 2 (slight)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    m (medium) [15-25 ppm].. : =2
    h (high) [25-35 ppm].... : =2
    vh (very high) [35-10000 : =2
    ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 2 (slight)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
  m (medium) [.2-.5 %N] > aP-A (available phosphorus (0-30 cm))
    vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 2 (slight)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    m (medium) [15-25 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 1 (none)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    h (high) [25-35 ppm].... : =3
    vh (very high) [35-10000 : =3
    ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 1 (none)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
  h (high) [.5-.75 %N].... : =3
  vh (very high) [.75-1000 : =3
  ? > aP-A (available phosphorus (0-30 cm))
    vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 2 (slight)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    m (medium) [15-25 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 1 (none)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    h (high) [25-35 ppm].... : =2
    vh (very high) [35-10000 : =2
    ?..... : ?

52  Severity Level                RPea,s

> slp-P (slope range for peanut)
  1 [0-5 %] > ston-P (surface stoniness range for peanut)
    1 [0-1 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 1 (none)
      2 [1-2 %]..... : 3 (moderate)
      3 [2-100 %]..... : 4 (severe)
```

?..... : ?
2 [1-2 %] > rock-P (rock outcrop range for peanut)
1 [0-1 %]..... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
3 [2-100 %] > rock-P (rock outcrop range for peanut)
1 [0-1 %]..... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
?..... : ?
2 [5-15 %] > ston-P (surface stoniness range for peanut)
1 [0-1 %] > rock-P (rock outcrop range for peanut)
1 [0-1 %]..... : 2 (slight)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-2 %] > rock-P (rock outcrop range for peanut)
1 [0-1 %]..... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
3 [2-100 %] > rock-P (rock outcrop range for peanut)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
?..... : ?
3 [15-20 %] > ston-P (surface stoniness range for peanut)
1 [0-1 %] > rock-P (rock outcrop range for peanut)
1 [0-1 %]..... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-2 %] > rock-P (rock outcrop range for peanut)
1 [0-1 %]..... ... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
3 [2-100 %] > rock-P (rock outcrop range for peanut)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
?..... : ?
4 [20-100 %] > ston-P (surface stoniness range for peanut)
1 [0-1 %] > rock-P (rock outcrop range for peanut)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
?..... : ?

84 Severity Level RPea,fl

> flood (flooded area)
1 (flooded area) [0-2 %] : 2 (severe)
2 (slope area) [2-100 %] : 1 (none)
?..... : ?

66 Severity Level RP-P,t

> aat-P (average annual temperature for peanut)
1 [0-18 °C]..... : 4 (severe)
2 [18-19 °C]..... : 3 (moderate)
3 [19-24 °C]..... : 2 (slight)
4 [24-30 °C]..... : 1 (none)
5 [30-33 °C]..... : =3
6 [33-34 °C]..... : =2
7 [34-1000 °C]..... : =1
?..... : ?

67 Severity Level RP-P,w

> gp-PP (growing period for peanut-peanut)
1 (low) [0-189 day]..... : 4 (severe)
2 (moderate) [189-202 da : 3 (moderate)
3 (high) [202-206 day].. : 2 (slight)
4 (very high) [206-365 d : 1 (none)
?..... : ?

64 Severity Level RP-P,r

> dra (soil drainage class)
vpd (very poorly drained) > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-1000 cm]..... : =1
?..... : ?
ls (loamy sand)..... : =1
scl (sandy clay loam)... : =1
sl (sandy loam)..... : =1
l (loam)..... : =1
cl (clay loam)..... : =1
i (silt)..... : =1
il (silty loam)..... : =1
icl (silty clay loam)... : =1
c (clay)..... : =1
sc (sandy clay)..... : =1
ic (silty clay)..... : =1
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
pd (poorly drained)..... : =1
spd (somewhat poorly drained) > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1

3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam)..... : =2
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =2
c (clay)..... : =2
sc (sandy clay)..... : =2
ic (silty clay)..... : =2
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
mwd (moderately well drained) > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =6
c (clay)..... : =6
sc (sandy clay)..... : =6
ic (silty clay)..... : =6
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
wd (well drained) > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
scl (sandy clay loam) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam)..... : =3
l (loam)..... : =3
cl (clay loam) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =6
c (clay)..... : =6
sc (sandy clay)..... : =6
ic (silty clay)..... : =6
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
sed (somewhat excessive) : =5
ed (excessively drained) : =4
? > text-A (soil texture (surface))
s (sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam) > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)

2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =6
c (clay)..... : =6
sc (sandy clay)..... : =6
ic (silty clay)..... : =6
? > dep-P (surface soil depth for peanut)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?

62 Severity Level RP-P,f

> cec-B (cation exchange capacity (>30 cm))
vl (very low) [0-5 CEC] > pH-P (pH-A for peanut)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : =2
4 [5.9-7 pH]..... : =2
5 [7-7.5 pH]..... : =2
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
l (low) [5-16 CEC] > pH-P (pH-A for peanut)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : =3
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
m (medium) [16-24 CEC] > pH-P (pH-A for peanut)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
h (high) [24-40 CEC].... : =3
vh (very high) [40-10000 : =3
? > pH-P (pH-A for peanut)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?

63 Severity Level RP-P,n

> tN-A (total nitrogen (0-30 cm))
vl (very low) [0-.1 %N] > aP-A (available phosphorus (0-30 cm))
vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
l (low) [10-15 ppm]..... : =1
m (medium) [15-25 ppm].. : =1
h (high) [25-35 ppm].... : =1
vh (very high) [35-10000 : =1
? > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
l (low) [.1-.2 %N] > aP-A (available phosphorus (0-30 cm))
vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 2 (slight)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
m (medium) [15-25 ppm].. : =2
h (high) [25-35 ppm].... : =2
vh (very high) [35-10000 : =2
? > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 2 (slight)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
m (medium) [.2-.5 %N] > aP-A (available phosphorus (0-30 cm))
vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 2 (slight)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1

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      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    m (medium) [15-25 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 1 (none)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    h (high) [25-35 ppm].... : =3
    vh (very high) [35-10000 : =3
    ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 1 (none)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
  h (high) [.5-.75 %N].... : =3
  vh (very high) [.75-1000 : =3
  ? > aP-A (available phosphorus (0-30 cm))
    vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 2 (slight)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    m (medium) [15-25 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 1 (none)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    h (high) [25-35 ppm].... : =2
    vh (very high) [35-10000 : =2
    ?..... : ?

65  Severity Level          RP-P,s

> slp-P (slope range for peanut)
  1 [0-5 %] > ston-P (surface stoniness range for peanut)
    1 [0-1 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 1 (none)
      2 [1-2 %]..... : 3 (moderate)
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    2 [1-2 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 3 (moderate)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    3 [2-100 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 4 (severe)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : =1
      ?..... : ?
    ?..... : ?
  2 [5-15 %] > ston-P (surface stoniness range for peanut)
    1 [0-1 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 2 (slight)
      2 [1-2 %]..... : 3 (moderate)
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    2 [1-2 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 3 (moderate)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    3 [2-100 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 4 (severe)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : =1
      ?..... : ?
    ?..... : ?
  3 [15-20 %] > ston-P (surface stoniness range for peanut)
    1 [0-1 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 3 (moderate)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    2 [1-2 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 3 (moderate)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : 4 (severe)
      ?..... : ?
    3 [2-100 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 4 (severe)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : =1
      ?..... : ?
    ?..... : ?
  4 [20-100 %] > ston-P (surface stoniness range for peanut)
    1 [0-1 %] > rock-P (rock outcrop range for peanut)
      1 [0-1 %]..... : 4 (severe)
      2 [1-2 %]..... : =1
      3 [2-100 %]..... : =1
      ?..... : ?
    2 [1-2 %]..... : =1
    3 [2-100 %]..... : =1
    ?..... : ?
  ?..... : ?

83  Severity Level          RP-P,fl

> flood (flooded area)
  1 (flooded area) [0-2 %] : 2 (severe)
  2 (slope area) [2-100 %] : 1 (none)
  ?..... : ?
```

32 Severity Level RSoy,t

> aat-S (average annual temperature for soybean)
1 [0-18 °C]..... : 4 (severe)
2 [18-19 °C]..... : 3 (moderate)
3 [19-22 °C]..... : 2 (slight)
4 [22-28 °C]..... : 1 (none)
5 [28-30 °C]..... : =3
6 [30-32 °C]..... : =2
7 [32-1000 °C]..... : =1
?..... : ?

36 Severity Level RSoy,w

> gp-S (growing period for soybean)
1 [0-89 day]..... : 4 (severe)
2 [89-119 day]..... : 3 (moderate)
3 [119-149 day]..... : 2 (slight)
4 [149-239 day]..... : 1 (none)
5 [239-299 day]..... : 2 (slight)
6 [299-365 day]..... : 3 (moderate)
?..... : ?

41 Severity Level RSoy,r

> dra (soil drainage class)
vpd (very poorly drained) > text-A (soil texture (surface))
s (sand) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand)..... : =1
scl (sandy clay loam)... : =1
sl (sandy loam)..... : =1
l (loam)..... : =1
cl (clay loam)..... : =1
i (silt)..... : =1
il (silty loam)..... : =1
icl (silty clay loam)... : =1
c (clay)..... : =1
sc (sandy clay)..... : =1
ic (silty clay)..... : =1
? > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
pd (poorly drained) > text-A (soil texture (surface))
s (sand) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam)..... : =2
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =2
c (clay)..... : =1
sc (sandy clay)..... : =2
ic (silty clay)..... : =2
?..... : ?
spd (somewhat poorly dra : =2
mwd (moderately well drained) > text-A (soil texture (surface))
s (sand) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
l (loam)..... : =3
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =3
c (clay)..... : =1
sc (sandy clay)..... : =4
ic (silty clay)..... : =2
?..... : ?
wd (well drained)..... : =4
sed (somewhat excessively drained) > text-A (soil texture (surface))
s (sand) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1

?..... : ?
ls (loamy sand) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
sl (sandy loam)..... : =3
l (loam)..... : =3
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =3
c (clay)..... : =1
sc (sandy clay)..... : =3
ic (silty clay)..... : =2
?..... : ?
ed (excessively drained) : =1
? > text-A (soil texture (surface))
s (sand) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : =1
3 [29-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam) > dep-S (surface soil depth for soybean)
1 [0-15 cm]..... : 4 (severe)
2 [15-29 cm]..... : 3 (moderate)
3 [29-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
l (loam)..... : =3
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =3
c (clay)..... : =1
sc (sandy clay)..... : =4
ic (silty clay)..... : =2
?..... : ?

45 Severity Level RSoy,f

> cec-B (cation exchange capacity (>30 cm))
vl (very low) [0-5 CEC] > pH-S (pH-A for soybean)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : =2
4 [5.9-7 pH]..... : =2
5 [7-7.5 pH]..... : =2
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
l (low) [5-16 CEC] > pH-S (pH-A for soybean)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : =3
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
m (medium) [16-24 CEC] > pH-S (pH-A for soybean)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
h (high) [24-40 CEC].... : =3
vh (very high) [40-10000 : =3
? > pH-S (pH-A for soybean)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?

48 Severity Level RSoy,n

> tN-A (total nitrogen (0-30 cm))
vl (very low) [0-.1 %N] > aP-A (available phosphorus (0-30 cm))
vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
l (low) [10-15 ppm]..... : =1
m (medium) [15-25 ppm].. : =1
h (high) [25-35 ppm].... : =1
vh (very high) [35-10000 : =1
?..... : ?
l (low) [.1-.2 %N] > aP-A (available phosphorus (0-30 cm))

```
   vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
   l (low) [10-15 ppm]..... : =1
   m (medium) [15-25 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 2 (slight)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
   h (high) [25-35 ppm].... : =3
   vh (very high) [35-10000 : =3
   ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 2 (slight)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
m (medium) [.2-.5 %N] > aP-A (available phosphorus (0-30 cm))
   vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
   l (low) [10-15 ppm]..... : =1
   m (medium) [15-25 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 2 (slight)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
   h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 1 (none)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
   vh (very high) [35-10000 : =4
   ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 1 (none)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
h (high) [.5-.75 %N].... : =3
vh (very high) [.75-1000 : =3
? > aP-A (available phosphorus (0-30 cm))
   vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
   l (low) [10-15 ppm]..... : =1
   m (medium) [15-25 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 2 (slight)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
   h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 1 (none)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5  : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
   vh (very high) [35-10000 : =4
   ?..... : ?

53  Severity Level                RSoy,s

> slp-S (slope range for soybean)
  1 [0-5 %] > ston-S (surface stoniness range for soybean)
     1 [0-1 %] > rock-S (rock outcrop range for soybean)
        1 [0-1 %]..... : 1 (none)
        2 [1-2 %]..... : 3 (moderate)
        3 [2-100 %]..... : 4 (severe)
        ?..... : ?
     2 [1-2 %] > rock-S (rock outcrop range for soybean)
        1 [0-1 %]..... : 3 (moderate)
        2 [1-2 %]..... : =1
        3 [2-100 %]..... : 4 (severe)
        ?..... : ?
     3 [2-100 %] > rock-S (rock outcrop range for soybean)
        1 [0-1 %]..... : 4 (severe)
        2 [1-2 %]..... : =1
        3 [2-100 %]..... : =1
        ?..... : ?
     ?..... : ?
  2 [5-15 %] > ston-S (surface stoniness range for soybean)
     1 [0-1 %] > rock-S (rock outcrop range for soybean)
        1 [0-1 %]..... : 2 (slight)
        2 [1-2 %]..... : 3 (moderate)
        3 [2-100 %]..... : 4 (severe)
        ?..... : ?
     2 [1-2 %] > rock-S (rock outcrop range for soybean)
        1 [0-1 %]..... : 3 (moderate)
        2 [1-2 %]..... : =1
        3 [2-100 %]..... : 4 (severe)
        ?..... : ?
     3 [2-100 %] > rock-S (rock outcrop range for soybean)
        1 [0-1 %]..... : 4 (severe)
        2 [1-2 %]..... : =1
        3 [2-100 %]..... : =1
```

?..... : ?
?..... : ?
3 [15-20 %] > ston-S (surface stoniness range for soybean)
1 [0-1 %] > rock-S (rock outcrop range for soybean)
1 [0-1 %]..... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-2 %]..... : =1
3 [2-100 %] > rock-S (rock outcrop range for soybean)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
?..... : ?
4 [20-100 %] > ston-S (surface stoniness range for soybean)
1 [0-1 %] > rock-S (rock outcrop range for soybean)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
?..... : ?

85 Severity Level RSoy,fl

> flood (flooded area)
1 (flooded area) [0-2 %] : 2 (severe)
2 (slope area) [2-100 %] : 1 (none)
?..... : ?

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31 Severity Level RRice,t

> aat-R (average annual temperature for rice)
1 [0-18 °C]..... : 4 (severe)
2 [18-21 °C]..... : 3 (moderate)
3 [21-24 °C]..... : 2 (slight)
4 [24-29 °C]..... : 1 (none)
5 [29-32 °C]..... : =3
6 [32-35 °C]..... : =2
7 [35-1000 °C]..... : =1
?..... : ?

35 Severity Level RRice,w

> gp-R (growing period for rice)
1 [0-149 day]..... : 4 (severe)
2 [149-179 day]..... : 3 (moderate)
3 [179-299 day]..... : 2 (slight)
4 [299-365 day]..... : 1 (none)
?..... : ?

40 Severity Level RRice,r

> dra (soil drainage class)
vpd (very poorly drained) > text-A (soil texture (surface))
s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
sl (sandy loam) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
l (loam)..... : =4
cl (clay loam)..... : =3
si (silt)..... : =3
sil (silty loam)..... : =3
icl (silty clay loam)... : =4
c (clay)..... : =4
sc (sandy clay)..... : =4
ic (silty clay)..... : =4
?..... : ?
pd (poorly drained)..... : =1
spd (somewhat poorly drained) > text-A (soil texture (surface))
s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?

l (loam)..... : =4
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =4
c (clay)..... : =2
sc (sandy clay)..... : =2
ic (silty clay)..... : =2
?..... : ?
mwd (moderately well dra : =3
wd (well drained) > text-A (soil texture (surface))
s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm)..... : 4 (severe)
2 [20-40 cm)..... : =1
3 [40-50 cm)..... : =1
4 [50-10000 cm)..... : =1
?..... : ?
ls (loamy sand) > dep-R (surface soil depth for rice)
1 [0-20 cm)..... : 4 (severe)
2 [20-40 cm)..... : 3 (moderate)
3 [40-50 cm)..... : =2
4 [50-10000 cm)..... : =2
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam)..... : =2
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =2
c (clay)..... : =2
sc (sandy clay)..... : =2
ic (silty clay)..... : =2
?..... : ?
sed (somewhat excessively drained) > text-A (soil texture (surface))
s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm)..... : 4 (severe)
2 [20-40 cm)..... : =1
3 [40-50 cm)..... : =1
4 [50-10000 cm)..... : =1
?..... : ?
ls (loamy sand)..... : =1
scl (sandy clay loam)... : =1
sl (sandy loam)..... : =1
l (loam)..... : =1
cl (clay loam)..... : =1
i (silt)..... : =1
il (silty loam)..... : =1
icl (silty clay loam)... : =1
c (clay)..... : =1
sc (sandy clay)..... : =1
ic (silty clay)..... : =1
? > dep-R (surface soil depth for rice)
1 [0-20 cm)..... : 4 (severe)
2 [20-40 cm)..... : =1
3 [40-50 cm)..... : =1
4 [50-10000 cm)..... : =1
?..... : ?
ed (excessively drained) : =6
? > text-A (soil texture (surface))
s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm)..... : 4 (severe)
2 [20-40 cm)..... : =1
3 [40-50 cm)..... : =1
4 [50-10000 cm)..... : =1
?..... : ?
ls (loamy sand) > dep-R (surface soil depth for rice)
1 [0-20 cm)..... : 4 (severe)
2 [20-40 cm)..... : 3 (moderate)
3 [40-50 cm)..... : =2
4 [50-10000 cm)..... : =2
?..... : ?
scl (sandy clay loam) > dep-R (surface soil depth for rice)
1 [0-20 cm)..... : 4 (severe)
2 [20-40 cm)..... : 3 (moderate)
3 [40-50 cm)..... : 2 (slight)
4 [50-10000 cm)..... : 1 (none)
?..... : ?
sl (sandy loam) > dep-R (surface soil depth for rice)
1 [0-20 cm)..... : 4 (severe)
2 [20-40 cm)..... : 3 (moderate)
3 [40-50 cm)..... : 2 (slight)
4 [50-10000 cm)..... : =3
?..... : ?
l (loam)..... : =4
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =4
c (clay)..... : =2
sc (sandy clay)..... : =2
ic (silty clay)..... : =2
? > dep-R (surface soil depth for rice)
1 [0-20 cm)..... : 4 (severe)
2 [20-40 cm)..... : 3 (moderate)
3 [40-50 cm)..... : 2 (slight)
4 [50-10000 cm)..... : 1 (none)
?..... : ?

44 Severity Level RRice,f

> cec-B (cation exchange capacity (>30 cm))
vl (very low) [0-5 CEC] > pH-R (pH-A for rice)
1 [0-4 pH]..... : 4 (severe)
2 [4-4.6 pH]..... : 3 (moderate)
3 [4.6-5.4 pH]..... : =2
4 [5.4-7 pH]..... : =2
5 [7-8 pH]..... : =2
6 [8-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
l (low) [5-16 CEC] > pH-R (pH-A for rice)
1 [0-4 pH]..... : 4 (severe)
2 [4-4.6 pH]..... : 3 (moderate)
3 [4.6-5.4 pH]..... : 2 (slight)
4 [5.4-7 pH]..... : =3
5 [7-8 pH]..... : =3
6 [8-8.5 pH]..... : =2

```
    7 [8.5-14 pH]..... : =1
    ?..... : ?
  m (medium) [16-24 CEC] > pH-R (pH-A for rice)
    1 [0-4 pH]..... : 4 (severe)
    2 [4-4.6 pH]..... : 3 (moderate)
    3 [4.6-5.4 pH]..... : 2 (slight)
    4 [5.4-7 pH]..... : 1 (none)
    5 [7-8 pH]..... : =3
    6 [8-8.5 pH]..... : =2
    7 [8.5-14 pH]..... : =1
    ?..... : ?
  h (high) [24-40 CEC].... : =3
  vh (very high) [40-10000 : =3
  ? > pH-R (pH-A for rice)
    1 [0-4 pH]..... : 4 (severe)
    2 [4-4.6 pH]..... : 3 (moderate)
    3 [4.6-5.4 pH]..... : 2 (slight)
    4 [5.4-7 pH]..... : 1 (none)
    5 [7-8 pH]..... : =3
    6 [8-8.5 pH]..... : =2
    7 [8.5-14 pH]..... : =1
    ?..... : ?
```

47 Severity Level RRice,n

```
> tN-A (total nitrogen (0-30 cm))
  vl (very low) [0-.1 %N] > aP-A (available phosphorus (0-30 cm))
    vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 4 (severe)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5 : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5 : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    m (medium) [15-25 ppm].. : =2
    h (high) [25-35 ppm].... : =2
    vh (very high) [35-10000 : =2
    ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5 : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
  l (low) [.1-.2 %N] > aP-A (available phosphorus (0-30 cm))
    vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 4 (severe)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5 : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5 : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    m (medium) [15-25 ppm].. : =2
    h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : 2 (slight)
      m (medium) [117.3-195.5 : =2
      h (high) [195.5-391 ppm] : =2
      vh (very high) [391-1000 : =2
      ?..... : ?
    vh (very high) [35-10000 : =4
    ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : 2 (slight)
      m (medium) [117.3-195.5 : 2 (slight)
      h (high) [195.5-391 ppm] : =3
      vh (very high) [391-1000 : =3
      ?..... : ?
  m (medium) [.2-.5 %N] > aP-A (available phosphorus (0-30 cm))
    vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 4 (severe)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5 : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : =1
      m (medium) [117.3-195.5 : =1
      h (high) [195.5-391 ppm] : =1
      vh (very high) [391-1000 : =1
      ?..... : ?
    m (medium) [15-25 ppm].. : =2
    h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : 2 (slight)
      m (medium) [117.3-195.5 : =2
      h (high) [195.5-391 ppm] : =2
      vh (very high) [391-1000 : =2
      ?..... : ?
    vh (very high) [35-10000 ppm] > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : 2 (slight)
      m (medium) [117.3-195.5 : 1 (none )
      h (high) [195.5-391 ppm] : =3
      vh (very high) [391-1000 : =3
      ?..... : ?
    ? > aK-A (available potassium (0-30 cm))
      vl (very low) [0-78.2 pp : 3 (moderate)
      l (low) [78.2-117.3 ppm] : 2 (slight)
      m (medium) [117.3-195.5 : 1 (none )
      h (high) [195.5-391 ppm] : =3
      vh (very high) [391-1000 : =3
```

?..... : ?
h (high) [.5-.75 %N].... : =3
vh (very high) [.75-1000 : =3
? > aP-A (available phosphorus (0-30 cm))
vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 4 (severe)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1
vh (very high) [391-1000 : =1
?..... : ?
m (medium) [15-25 ppm].. : =2
h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : 2 (slight)
m (medium) [117.3-195.5 : =2
h (high) [195.5-391 ppm] : =2
vh (very high) [391-1000 : =2
?..... : ?
vh (very high) [35-10000 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : 2 (slight)
m (medium) [117.3-195.5 : 1 (none)
h (high) [195.5-391 ppm] : =3
vh (very high) [391-1000 : =3
?..... : ?
? > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : 2 (slight)
m (medium) [117.3-195.5 : 1 (none)
h (high) [195.5-391 ppm] : =3
vh (very high) [391-1000 : =3
?..... : ?

54 Severity Level RRice,s

> slp-R (slope range for rice)
1 [0-3 %] > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 1 (none)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-100 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 1 (none)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [3-5 %] > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 2 (slight)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-100 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 2 (slight)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
3 [5-8 %] > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-100 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
4 [8-100 %] > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
2 [1-100 %]..... : =1
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 1 (none)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-100 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 1 (none)
2 [1-2 %]..... : 3 (moderate)

3 [2-100 %]..... : 4 (severe)
?..... : ?

72 Severity Level IR-S,t

> aat-RS (average annual temperature for rice - soybean)
1 [0-18 °C]..... : 4 (severe)
2 [18-21 °C]..... : 3 (moderate)
3 [21-24 °C]..... : 2 (slight)
4 [24-28 °C]..... : 1 (none)
5 [28-30 °C]..... : =3
6 [30-32 °C]..... : =2
7 [32-1000 °C]..... : =1
?..... : ?

70 Severity Level IR-S,r

> dra (soil drainage class)
vpd (very poorly drained) > text-A (soil texture (surface))
s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam)... : =2
sl (sandy loam)..... : =2
l (loam)..... : =2
cl (clay loam)..... : =2
i (silt)..... : =2
il (silty loam)..... : =2
icl (silty clay loam)... : =2
c (clay)..... : =2
sc (sandy clay)..... : =2
ic (silty clay)..... : =2
? > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
pd (poorly drained)..... : =1
spd (somewhat poorly drained) > text-A (soil texture (surface))
s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
sl (sandy loam)..... : =3
l (loam)..... : =3
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =3
c (clay)..... : =2
sc (sandy clay)..... : =3
ic (silty clay)..... : =2
? > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
mwd (moderately well drained) > text-A (soil texture (surface))
s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
l (loam)..... : =4
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =4
c (clay)..... : =2
sc (sandy clay)..... : =4
ic (silty clay)..... : =2
? > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)

2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
wd (well drained)..... : =3
sed (somewhat excessivel : =1
ed (excessively drained) > text-A (soil texture (surface))

s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand)..... : =1
scl (sandy clay loam)... : =1
sl (sandy loam)..... : =1
l (loam)..... : =1
cl (clay loam)..... : =1
i (silt)..... : =1
il (silty loam)..... : =1
icl (silty clay loam)... : =1
c (clay)..... : =1
sc (sandy clay)..... : =1
ic (silty clay)..... : =1
? > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
? > text-A (soil texture (surface))
s (sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : =1
3 [40-50 cm]..... : =1
4 [50-10000 cm]..... : =1
?..... : ?
ls (loamy sand) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : =2
4 [50-10000 cm]..... : =2
?..... : ?
scl (sandy clay loam) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : 1 (none)
?..... : ?
sl (sandy loam) > dep-R (surface soil depth for rice)
1 [0-20 cm]..... : 4 (severe)
2 [20-40 cm]..... : 3 (moderate)
3 [40-50 cm]..... : 2 (slight)
4 [50-10000 cm]..... : =3
?..... : ?
l (loam)..... : =4
cl (clay loam)..... : =3
i (silt)..... : =3
il (silty loam)..... : =3
icl (silty clay loam)... : =4
c (clay)..... : =2
sc (sandy clay)..... : =4
ic (silty clay)..... : =2
?..... : ?

68 Severity Level IR-S,f

> cec-B (cation exchange capacity (>30 cm))
vl (very low) [0-5 CEC] > pH-S (pH-A for soybean)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : =2
4 [5.9-7 pH]..... : =2
5 [7-7.5 pH]..... : =2
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
l (low) [5-16 CEC] > pH-S (pH-A for soybean)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : =3
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?

m (medium) [16-24 CEC] > pH-S (pH-A for soybean)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?
h (high) [24-40 CEC].... : =3
vh (very high) [40-10000 : =3
? > pH-S (pH-A for soybean)
1 [0-5 pH]..... : 4 (severe)
2 [5-5.4 pH]..... : 3 (moderate)
3 [5.4-5.9 pH]..... : 2 (slight)
4 [5.9-7 pH]..... : 1 (none)
5 [7-7.5 pH]..... : =3
6 [7.5-8.5 pH]..... : =2
7 [8.5-14 pH]..... : =1
?..... : ?

69 Severity Level IR-S,n

> tN-A (total nitrogen (0-30 cm))
vl (very low) [0-.1 %N] > aP-A (available phosphorus (0-30 cm))
vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 4 (severe)
l (low) [78.2-117.3 ppm] : =1
m (medium) [117.3-195.5 : =1
h (high) [195.5-391 ppm] : =1

```
    vh (very high) [391-1000 : =1
    ?..... : ?
  l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5  : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 : =1
    ?..... : ?
  m (medium) [15-25 ppm].. : =2
  h (high) [25-35 ppm].... : =2
  vh (very high) [35-10000 : =2
  ? > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5  : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 : =1
    ?..... : ?
l (low) [.1-.2 %N] > aP-A (available phosphorus (0-30 cm))
  vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 4 (severe)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5  : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 : =1
    ?..... : ?
  l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5  : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 : =1
    ?..... : ?
  m (medium) [15-25 ppm].. : =2
  h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5  : =2
    h (high) [195.5-391 ppm] : =2
    vh (very high) [391-1000 : =2
    ?..... : ?
  vh (very high) [35-10000 : =4
  ? > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5  : 2 (slight)
    h (high) [195.5-391 ppm] : =3
    vh (very high) [391-1000 : =3
    ?..... : ?
m (medium) [.2-.5 %N] > aP-A (available phosphorus (0-30 cm))
  vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 4 (severe)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5  : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 : =1
    ?..... : ?
  l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5  : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 : =1
    ?..... : ?
  m (medium) [15-25 ppm].. : =2
  h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5  : =2
    h (high) [195.5-391 ppm] : =2
    vh (very high) [391-1000 : =2
    ?..... : ?
  vh (very high) [35-10000 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5  : 1 (none)
    h (high) [195.5-391 ppm] : =3
    vh (very high) [391-1000 : =3
    ?..... : ?
  ? > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5  : 1 (none)
    h (high) [195.5-391 ppm] : =3
    vh (very high) [391-1000 : =3
    ?..... : ?
h (high) [.5-.75 %N].... : =3
vh (very high) [.75-1000 : =3
? > aP-A (available phosphorus (0-30 cm))
  vl (very low) [0-10 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 4 (severe)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5  : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 : =1
    ?..... : ?
  l (low) [10-15 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : =1
    m (medium) [117.3-195.5  : =1
    h (high) [195.5-391 ppm] : =1
    vh (very high) [391-1000 : =1
    ?..... : ?
  m (medium) [15-25 ppm].. : =2
  h (high) [25-35 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5  : =2
    h (high) [195.5-391 ppm] : =2
    vh (very high) [391-1000 : =2
    ?..... : ?
  vh (very high) [35-10000 ppm] > aK-A (available potassium (0-30 cm))
    vl (very low) [0-78.2 pp : 3 (moderate)
    l (low) [78.2-117.3 ppm] : 2 (slight)
    m (medium) [117.3-195.5  : 1 (none)
    h (high) [195.5-391 ppm] : =3
    vh (very high) [391-1000 : =3
```

?..... : ?
? > aK-A (available potassium (0-30 cm))
vl (very low) [0-78.2 pp : 3 (moderate)
l (low) [78.2-117.3 ppm] : 2 (slight)
m (medium) [117.3-195.5 : 1 (none)
h (high) [195.5-391 ppm] : =3
vh (very high) [391-1000 : =3
?..... : ?

71 Severity Level IR-S,s

> slp-R (slope range for rice)
1 [0-3 %] > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 1 (none)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-100 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 1 (none)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [3-5 %] > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 2 (slight)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-100 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 2 (slight)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
3 [5-8 %] > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-100 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 3 (moderate)
2 [1-2 %]..... : =1
3 [2-100 %]..... : 4 (severe)
?..... : ?
4 [8-100 %] > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
2 [1-100 %]..... : =1
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > ston-R (surface stoniness for rice)
1 [0-1 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 1 (none)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?
2 [1-100 %] > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 4 (severe)
2 [1-2 %]..... : =1
3 [2-100 %]..... : =1
?..... : ?
? > rock-R (rock outcrop range for rice)
1 [0-1 %]..... : 1 (none)
2 [1-2 %]..... : 3 (moderate)
3 [2-100 %]..... : 4 (severe)
?..... : ?

Appendix Table 9. The examples physical suitability decision trees of RCorn, RPea and RRice.

55 Physical Subclass RCorn

```
> fl (flood hazard)
  1 (none) > t (temperature regime)
    1 (none) > w (water availability)
      1 (none) > r (rooting conditions)
        1 (none) > f (nutrient retention)
          1 (none) > n (nutrient availability)
            1 (none) > s (terrain)
              1 (none)..... : 1
              2 (slight)..... : 2s
              3 (moderate)..... : 3s
              4 (severe)..... : 3s
              ?..... : ?
            2 (slight) > s (terrain)
              1 (none)..... : 2n
              2 (slight)..... : 2s/n
              3 (moderate)..... : 3s
              4 (severe)..... : 3s
              ?..... : ?
            3 (moderate) > s (terrain)
              1 (none)..... : 3n
              2 (slight)..... : =1
              3 (moderate)..... : 3s/n
              4 (severe)..... : 3s
              ?..... : ?
            4 (severe) > s (terrain)
              1 (none)..... : 3n
              2 (slight)..... : =1
              3 (moderate)..... : =1
              4 (severe)..... : 3s/n
              ?..... : ?
            ?..... : ?
          2 (slight) > n (nutrient availability)
            1 (none) > s (terrain)
              1 (none)..... : 2f
              2 (slight)..... : 2s/f
              3 (moderate)..... : 3s
              4 (severe)..... : 3s
              ?..... : ?
            2 (slight) > s (terrain)
              1 (none)..... : 2n/f
              2 (slight)..... : 2s/n/f
              3 (moderate)..... : 3s
              4 (severe)..... : 3s
              ?..... : ?
            3 (moderate) > s (terrain)
              1 (none)..... : 3n
              2 (slight)..... : =1
              3 (moderate)..... : 3s/n
              4 (severe)..... : 3s
              ?..... : ?
            4 (severe) > s (terrain)
              1 (none)..... : 3n
              2 (slight)..... : =1
              3 (moderate)..... : =1
              4 (severe)..... : 3s/n
              ?..... : ?
            ?..... : ?
          3 (moderate) > n (nutrient availability)
            1 (none) > s (terrain)
              1 (none)..... : 3f
              2 (slight)..... : =1
              3 (moderate)..... : 3s/f
              4 (severe)..... : 3s
              ?..... : ?
            2 (slight)..... : =1
            3 (moderate) > s (terrain)
              1 (none)..... : 3n/f
              2 (slight)..... : =1
              3 (moderate)..... : 3s/n/f
              4 (severe)..... : 3s
              ?..... : ?
            4 (severe) > s (terrain)
              1 (none)..... : 3n
              2 (slight)..... : =1
              3 (moderate)..... : =1
              4 (severe)..... : 3s/n
              ?..... : ?
            ?..... : ?
          4 (severe) > n (nutrient availability)
            1 (none) > s (terrain)
              1 (none)..... : 4f
              2 (slight)..... : =1
              3 (moderate)..... : =1
              4 (severe)..... : 4s/f
              ?..... : ?
            2 (slight)..... : =1
            3 (moderate)..... : =1
            4 (severe) > s (terrain)
              1 (none)..... : 4n/f
              2 (slight)..... : =1
              3 (moderate)..... : =1
              4 (severe)..... : 4s/n/f
              ?..... : ?
            ?..... : ?
          ?..... : ?
        2 (slight) > f (nutrient retention)
          1 (none) > n (nutrient availability)
            1 (none) > s (terrain)
              1 (none)..... : 2f
```

2 (slight)..... : 2s/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r
2 (slight)..... : 2s/n/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r
2 (slight)..... : 2s/f/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r
2 (slight)..... : 2s/n/f/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1

3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
2 (slight) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2w
2 (slight)..... : 2s/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/w
2 (slight)..... : 2s/n/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/w
2 (slight)..... : 2s/f/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/w
2 (slight)..... : 2s/n/f/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n

2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r/w
2 (slight)..... : 2s/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r/w
2 (slight)..... : 2s/n/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r/w
2 (slight)..... : 2s/f/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r/w
2 (slight)..... : 2s/n/f/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f

4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1

3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3w
2 (slight)..... : =1
3 (moderate)..... : 3s/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/w
4 (severe)..... : 4s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1

```
            4 (severe)..... : 3s/n
            ?..... : ?
          ?..... : ?
        4 (severe) > n (nutrient availability)
          1 (none) > s (terrain)
            1 (none)..... : 4f
            2 (slight)..... : =1
            3 (moderate)..... : =1
            4 (severe)..... : 4s/f
            ?..... : ?
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe) > s (terrain)
            1 (none)..... : 4n/f
            2 (slight)..... : =1
            3 (moderate)..... : =1
            4 (severe)..... : 4s/n/f
            ?..... : ?
          ?..... : ?
      ?..... : ?
    4 (severe) > f (nutrient retention)
      1 (none) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4r
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/r
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/r
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/r
          ?..... : ?
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4f/r
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/f/r
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/f/r
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/f/r
          ?..... : ?
        ?..... : ?
      ?..... : ?
    ?..... : ?
  4 (severe) > r (rooting conditions)
    1 (none) > f (nutrient retention)
      1 (none) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/w
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/w
          ?..... : ?
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4f/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/f/w
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/f/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/f/w
          ?..... : ?
        ?..... : ?
      ?..... : ?
    2 (slight)..... : =1
    3 (moderate)..... : =1
    4 (severe) > f (nutrient retention)
      1 (none) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/r/w
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/r/w
          ?..... : ?
        ?..... : ?
      2 (slight)..... : =1
```

3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/w
?..... : ?
?..... : ?
?..... : ?
?..... : ?
2 (slight) > w (water availability)
1 (none) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2t
2 (slight)..... : 2s/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/t
2 (slight)..... : 2s/n/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/t
2 (slight)..... : 2s/f/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/t
2 (slight)..... : 2s/n/f/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)

1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r/t
2 (slight)..... : 2s/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r/t
2 (slight)..... : 2s/n/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r/t
2 (slight)..... : 2s/f/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r/t
2 (slight)..... : 2s/n/f/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)

1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
2 (slight) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2w/t
2 (slight)..... : 2s/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/w/t
2 (slight)..... : 2s/n/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/w/t
2 (slight)..... : 2s/f/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/w/t
2 (slight)..... : 2s/n/f/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s

?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r/w/t
2 (slight)..... : 2s/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r/w/t
2 (slight)..... : 2s/n/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r/w/t
2 (slight)..... : 2s/f/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r/w/t
2 (slight)..... : 2s/n/f/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)

1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1

4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3w
2 (slight)..... : =1
3 (moderate)..... : 3s/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)

1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
4 (severe) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/w

?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/w
?..... : ?
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > w (water availability)
1 (none) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3t
2 (slight)..... : =1
3 (moderate)..... : 3s/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/t
2 (slight)..... : =1
3 (moderate)..... : 3s/f/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/r/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/t
2 (slight)..... : =1

3 (moderate)..... : 3s/f/r/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... 4 (severe)..... : 3s
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/w/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/w/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/f/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/w/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1

4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/r/w/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/w/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/w/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/w/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1

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            4 (severe)..... : 4s/n/f/r
            ?..... : ?
          ?..... : ?
        ?..... : ?
      ?..... : ?
  4 (severe) > r (rooting conditions)
    1 (none) > f (nutrient retention)
      1 (none) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/w
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/w
          ?..... : ?
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4f/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/f/w
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/f/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/f/w
          ?..... : ?
        ?..... : ?
      ?..... : ?
    2 (slight)..... : =1
    3 (moderate)..... : =1
    4 (severe) > f (nutrient retention)
      1 (none) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/r/w
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/r/w
          ?..... : ?
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4f/r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/f/r/w
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/f/r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/f/r/w
          ?..... : ?
        ?..... : ?
      ?..... : ?
    ?..... : ?
  4 (severe) > w (water availability)
    1 (none) > r (rooting conditions)
      1 (none) > f (nutrient retention)
        1 (none) > n (nutrient availability)
          1 (none) > s (terrain)
            1 (none)..... : 4t
            2 (slight)..... : =1
            3 (moderate)..... : =1
            4 (severe)..... : 4s/t
            ?..... : ?
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe) > s (terrain)
            1 (none)..... : 4n/t
            2 (slight)..... : =1
            3 (moderate)..... : =1
            4 (severe)..... : 4s/n/t
            ?..... : ?
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > n (nutrient availability)
          1 (none) > s (terrain)
            1 (none)..... : 4f/t
            2 (slight)..... : =1
            3 (moderate)..... : =1
            4 (severe)..... : 4s/f/t
            ?..... : ?
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe) > s (terrain)
            1 (none)..... : 4n/f/t
```

2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/t
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/t
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1

4 (severe) > s (terrain)
1 (none)..... : 4n/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/w/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/w/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/w/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w/t
?..... : ?
2 (slight)..... : =1

3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/l/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/l/r/w
?..... : ?
?..... : ?
?..... : ?
?..... : ?
?..... : ?
?..... : ?
2 (severe)..... : 4fl
?..... : ?

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> fl (flood hazard)
1 (none) > t (temperature regime)
1 (none) > w (water availability)
1 (none) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 1
2 (slight)..... : 2s
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n
2 (slight)..... : 2s/n
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f
2 (slight)..... : 2s/f
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f
2 (slight)..... : 2s/n/f
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r
2 (slight)..... : 2s/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r
2 (slight)..... : 2s/n/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r
2 (slight)..... : 2s/f/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r
2 (slight)..... : 2s/n/f/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?

?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
2 (slight) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2w
2 (slight)..... : 2s/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/w
2 (slight)..... : 2s/n/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/w
2 (slight)..... : 2s/f/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/w
2 (slight)..... : 2s/n/f/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1

3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r/w
2 (slight)..... : 2s/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r/w
2 (slight)..... : 2s/n/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r/w
2 (slight)..... : 2s/f/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r/w
2 (slight)..... : 2s/n/f/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1

4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3w
2 (slight)..... : =1
3 (moderate)..... : 3s/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : 3s/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)

1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
4 (severe) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/w
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/w
?..... : ?
?..... : ?
?..... : ?
?..... : ?
2 (slight) > w (water availability)
1 (none) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2t
2 (slight)..... : 2s/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/t
2 (slight)..... : 2s/n/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/t
2 (slight)..... : 2s/f/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/t
2 (slight)..... : 2s/n/f/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s

?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r/t
2 (slight)..... : 2s/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r/t
2 (slight)..... : 2s/n/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r/t
2 (slight)..... : 2s/f/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r/t
2 (slight)..... : 2s/n/f/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?

2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
2 (slight) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2w/t
2 (slight)..... : 2s/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/w/t
2 (slight)..... : 2s/n/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/w/t
2 (slight)..... : 2s/f/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/w/t
2 (slight)..... : 2s/n/f/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r/w/t
2 (slight)..... : 2s/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r/w/t
2 (slight)..... : 2s/n/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r/w/t
2 (slight)..... : 2s/f/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)

1 (none)..... : 2n/f/r/w/t
2 (slight)..... : 2s/n/f/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3w
2 (slight)..... : =1
3 (moderate)..... : 3s/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1

4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
4 (severe) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/w
2 (slight)..... : =1
3 (moderate)..... : =1

4 (severe)..... : 4s/n/f/w
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/w
?..... : ?
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > w (water availability)
1 (none) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3t
2 (slight)..... : =1
3 (moderate)..... : 3s/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/t
2 (slight)..... : =1
3 (moderate)..... : 3s/f/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1

3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/w/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/w/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/f/w/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/w/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/r/w/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/w/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/w/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/w/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/w/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?

```
    2 (slight)..... : =1
    3 (moderate)..... : =1
    4 (severe) > n (nutrient availability)
      1 (none) > s (terrain)
        1 (none)..... : 4f/r
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/f/r
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > s (terrain)
        1 (none)..... : 4n/f/r
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/n/f/r
        ?..... : ?
      ?..... : ?
    ?..... : ?
  ?..... : ?
4 (severe) > r (rooting conditions)
  1 (none) > f (nutrient retention)
    1 (none) > n (nutrient availability)
      1 (none) > s (terrain)
        1 (none)..... : 4w
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/w
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > s (terrain)
        1 (none)..... : 4n/w
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/n/w
        ?..... : ?
      ?..... : ?
    2 (slight)..... : =1
    3 (moderate)..... : =1
    4 (severe) > n (nutrient availability)
      1 (none) > s (terrain)
        1 (none)..... : 4f/w
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/f/w
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > s (terrain)
        1 (none)..... : 4n/f/w
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/n/f/w
        ?..... : ?
      ?..... : ?
    ?..... : ?
  2 (slight)..... : =1
    3 (moderate)..... : =1
    4 (severe) > f (nutrient retention)
      1 (none) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/r/w
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/r/w
          ?..... : ?
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4f/r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/f/r/w
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/f/r/w
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/f/r/w
          ?..... : ?
        ?..... : ?
      ?..... : ?
    ?..... : ?
4 (severe) > w (water availability)
  1 (none) > r (rooting conditions)
    1 (none) > f (nutrient retention)
      1 (none) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4t
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/t
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/t
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/t
          ?..... : ?
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4f/t
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/f/t
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/f/t
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/f/t
          ?..... : ?
        ?..... : ?
      ?..... : ?
    2 (slight)..... : =1
    3 (moderate)..... : =1
    4 (severe) > f (nutrient retention)
      1 (none) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4r/t
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/r/t
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/r/t
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/r/t
          ?..... : ?
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > n (nutrient availability)
        1 (none) > s (terrain)
          1 (none)..... : 4f/r/t
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/f/r/t
          ?..... : ?
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe) > s (terrain)
          1 (none)..... : 4n/f/r/t
          2 (slight)..... : =1
          3 (moderate)..... : =1
          4 (severe)..... : 4s/n/f/r/t
          ?..... : ?
        ?..... : ?
      ?..... : ?
  ?..... : ?
```

2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/w/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/w/t
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/w/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4n/s/f/r/w/t
?..... : ?
?..... : ?
?..... : ?
?..... : ?
?..... : ?
2 (severe)..... : 4fl
?..... : ?

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> t (temperature regime)
1 (none) > w (water availability)
1 (none) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 1
2 (slight)..... : 2s
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n
2 (slight)..... : 2s/n
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f
2 (slight)..... : 2s/f
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f
2 (slight)..... : 2s/n/f
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r
2 (slight)..... : 2s/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r
2 (slight)..... : 2s/n/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r
2 (slight)..... : 2s/f/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r
2 (slight)..... : 2s/n/f/r
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?

4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
?..... : ?
2 (slight) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2w
2 (slight)..... : 2s/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/w
2 (slight)..... : 2s/n/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/w
2 (slight)..... : 2s/f/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/w
2 (slight)..... : 2s/n/f/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
4 (severe)..... : 3s/n
?..... : ?
?..... : ?

4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r/w
2 (slight)..... : 2s/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r/w
2 (slight)..... : 2s/n/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r/w
2 (slight)..... : 2s/f/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r/w
2 (slight)..... : 2s/n/f/r/w
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f

?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3w
2 (slight)..... : =1
3 (moderate)..... : 3s/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)

1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
4 (severe) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/w
?..... : ?
?..... : ?
?..... : ?
?..... : ?
2 (slight) > w (water availability)
1 (none) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2t
2 (slight)..... : 2s/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/t
2 (slight)..... : 2s/n/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/t
2 (slight)..... : 2s/f/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/t
2 (slight)..... : 2s/n/f/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?

2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r/t
2 (slight)..... : 2s/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r/t
2 (slight)..... : 2s/n/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r/t
2 (slight)..... : 2s/f/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/r/t
2 (slight)..... : 2s/n/f/r/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?

2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
2 (slight) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2w/t
2 (slight)..... : 2s/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/w/t
2 (slight)..... : 2s/n/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/w/t
2 (slight)..... : 2s/f/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/f/w/t
2 (slight)..... : 2s/n/f/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
2 (slight) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2r/w/t
2 (slight)..... : 2s/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)
1 (none)..... : 2n/r/w/t
2 (slight)..... : 2s/n/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 2f/r/w/t
2 (slight)..... : 2s/f/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
2 (slight) > s (terrain)

1 (none)..... : 2n/f/r/w/t
2 (slight)..... : 2s/n/f/r/w/t
3 (moderate)..... : 3s
4 (severe)..... : 3s
?..... : ?
3 (moderate) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : 3s/n
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f
2 (slight)..... : =1
3 (moderate)..... : 3s/f
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r
2 (slight)..... : =1
3 (moderate)..... : 3s/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3w
2 (slight)..... : =1
3 (moderate)..... : 3s/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1

4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight).....t)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/w
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/w
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
4 (severe) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/w
2 (slight)..... : =1
3 (moderate)..... : =1

4 (severe)..... : 4s/n/f/w
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (nohe) > s (terrain)
1 (none)..... : 4f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/w
?..... : ?
?..... : ?
?..... : ?
?..... : ?
3 (moderate) > w (water availability)
1 (none) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3t
2 (slight)..... : =1
3 (moderate)..... : 3s/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/t
2 (slight)..... : =1
3 (moderate)..... : 3s/f/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/r/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/r/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 3f/r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/f/r/t
4 (severe)..... : 3s
?..... : ?
2 (slight)..... : =1
3 (moderate) > s (terrain)
1 (none)..... : 3n/f/r/t
2 (slight)..... : =1
3 (moderate)..... : 3s/n/f/r/t
4 (severe)..... : 3s
?..... : ?
4 (severe) > s (terrain)
1 (none)..... : 3n
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 3s/n
?..... : ?
?..... : ?
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f
?..... : ?
?..... : ?
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r
2 (slight)..... : =1

```
        3 (moderate)..... : =1
        4 (severe)..... : 4s/r
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > s (terrain)
        1 (none)..... : 4n/r
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/n/r
        ?..... : ?
      ?..... : ?
    2 (slight)..... : =1
    3 (moderate)..... : =1
    4 (severe) > n (nutrient availability)
      1 (none ) > s (terrain)
        1 (none)..... : 4f/r
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/f/r
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > s (terrain)
        1 (none)..... : 4n/f/r
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/n/f/r
        ?..... : ?
      ?..... : ?
    ?..... : ?
  ?..... : ?
2 (slight)..... : =1
3 (moderate) > r (rooting conditions)
  1 (none) > f (nutrient retention)
    1 (none) > n (nutrient availability)
      1 (none ) > s (terrain)
        1 (none)..... : 3w/t
        2 (slight)..... : =1
        3 (moderate)..... : 3s/w/t
        4 (severe)..... : 3s
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate) > s (terrain)
        1 (none)..... : 3n/w/t
        2 (slight)..... : =1
        3 (moderate)..... : 3s/n/w/t
        4 (severe)..... : 3s
        ?..... : ?
      4 (severe) > s (terrain)
        1 (none)..... : 3n
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 3s/n
        ?..... : ?
      ?..... : ?
    2 (slight)..... : =1
    3 (moderate) > n (nutrient availability)
      1 (none ) > s (terrain)
        1 (none)..... : 3f/w/t
        2 (slight)..... : =1
        3 (moderate)..... : 3s/f/w/t
        4 (severe)..... : 3s
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate) > s (terrain)
        1 (none)..... : 3n/f/w/t
        2 (slight)..... : =1
        3 (moderate)..... : 3s/n/f/w/t
        4 (severe)..... : 3s
        ?..... : ?
      4 (severe) > s (terrain)
        1 (none)..... : 3n
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 3s/n
        ?..... : ?
      ?..... : ?
    4 (severe) > n (nutrient availability)
      1 (none ) > s (terrain)
        1 (none)..... : 4f
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/f
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > s (terrain)
        1 (none)..... : 4n/f
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/n/f
        ?..... : ?
      ?..... : ?
    ?..... : ?
  2 (slight)..... : =1
  3 (moderate) > f (nutrient retention)
    1 (none) > n (nutrient availability)
      1 (none ) > s (terrain)
        1 (none)..... : 3r/w/t
        2 (slight)..... : =1
        3 (moderate)..... : 3s/r/w/t
        4 (severe)..... : 3s
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate) > s (terrain)
        1 (none)..... : 3n/r/w/t
        2 (slight)..... : =1
        3 (moderate)..... : 3s/n/r/w/t
        4 (severe)..... : 3s
        ?..... : ?
      4 (severe) > s (terrain)
        1 (none)..... : 3n
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 3s/n
        ?..... : ?
      ?..... : ?
    2 (slight)..... : =1
    3 (moderate) > n (nutrient availability)
      1 (none ) > s (terrain)
        1 (none)..... : 3f/r/w/t
        2 (slight)..... : =1
        3 (moderate)..... : 3s/f/r/w/t
        4 (severe)..... : 3s
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate) > s (terrain)
        1 (none)..... : 3n/f/r/w/t
        2 (slight)..... : =1
        3 (moderate)..... : 3s/n/f/r/w/t
        4 (severe)..... : 3s
        ?..... : ?
      4 (severe) > s (terrain)
        1 (none)..... : 3n
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 3s/n
        ?..... : ?
      ?..... : ?
    4 (severe) > n (nutrient availability)
      1 (none ) > s (terrain)
        1 (none)..... : 4f
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/f
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > s (terrain)
        1 (none)..... : 4n/f
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/n/f
        ?..... : ?
      ?..... : ?
    ?..... : ?
  4 (severe) > f (nutrient retention)
    1 (none) > n (nutrient availability)
      1 (none ) > s (terrain)
        1 (none)..... : 4r
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/r
        ?..... : ?
      2 (slight)..... : =1
      3 (moderate)..... : =1
      4 (severe) > s (terrain)
        1 (none)..... : 4n/r
        2 (slight)..... : =1
        3 (moderate)..... : =1
        4 (severe)..... : 4s/n/r
        ?..... : ?
      ?..... : ?
```

2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r
?..... : ?
?..... : ?
?..... : ?
4 (severe) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/w
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/w
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/w
?..... : ?
?..... : ?
?..... : ?
4 (severe) > w (water availability)
1 (none) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/t
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/t
?..... : ?
?..... : ?
?..... : ?

2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > r (rooting conditions)
1 (none) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/w/t
?..... : ?

2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/w/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/w/t
?..... : ?
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/r/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/r/w/t
?..... : ?
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > n (nutrient availability)
1 (none) > s (terrain)
1 (none)..... : 4f/r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/f/r/w/t
?..... : ?
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe) > s (terrain)
1 (none)..... : 4n/f/r/w/t
2 (slight)..... : =1
3 (moderate)..... : =1
4 (severe)..... : 4s/n/f/r/w/t
?..... : ?
?..... : ?
?..... : ?
?..... : ?
?..... : ?

Appendix Table 10. Proportional Yield Decision Trees

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```
> f (nutrient retention)
  1 (none) > n (nutrient availability)
    1 (none)..... : ?
    2 (slight) > r (rooting conditions)
      1 (none)..... : .97
      2 (slight)..... : .96
      3 (moderate)..... : ?
      4 (severe)..... : ?
      ?..... : ?
    3 (moderate) > r (rooting conditions)
      1 (none)..... : .97
      2 (slight)..... : ?
      3 (moderate)..... : .9
      4 (severe)..... : ?
      ?..... : ?
    4 (severe)..... : ?
    ?..... : ?
  2 (slight) > n (nutrient availability)
    1 (none)..... : ?
    2 (slight) > r (rooting conditions)
      1 (none)..... : .954
      2 (slight)..... : .95
      3 (moderate)..... : ?
      4 (severe)..... : ?
      ?..... : ?
    3 (moderate) > r (rooting conditions)
      1 (none)..... : .96
      2 (slight)..... : .954
      3 (moderate)..... : .9
      4 (severe)..... : ?
      ?..... : ?
    4 (severe) > r (rooting conditions)
      1 (none)..... : .87
      2 (slight)..... : .91
      3 (moderate)..... : .84
      4 (severe)..... : ?
      ?..... : ?
    ?..... : ?
  3 (moderate) > n (nutrient availability)
    1 (none)..... : ?
    2 (slight)..... : ?
    3 (moderate)..... : ?
    4 (severe) > r (rooting conditions)
      1 (none)..... : ?
      2 (slight)..... : ?
      3 (moderate)..... : .97
      4 (severe)..... : ?
      ?..... : ?
    ?..... : ?
  4 (severe)..... : ?
  ?..... : ?
```

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```
> f (nutrient retention)
  1 (none) > n (nutrient availability)
    1 (none)..... : ?
    2 (slight) > r (rooting conditions)
      1 (none)..... : 1
      2 (slight)..... : 1
      3 (moderate)..... : .98
      4 (severe)..... : ?
      ?..... : ?
    3 (moderate) > r (rooting conditions)
      1 (none)..... : 1
      2 (slight)..... : ?
      3 (moderate)..... : ?
      4 (severe)..... : ?
      ?..... : ?
    4 (severe)..... : ?
    ?..... : ?
  2 (slight) > n (nutrient availability)
    1 (none)..... : ?
    2 (slight) > r (rooting conditions)
      1 (none)..... : 1
      2 (slight)..... : 1
      3 (moderate)..... : .98
      4 (severe)..... : ?
      ?..... : ?
    3 (moderate) > r (rooting conditions)
      1 (none)..... : 1
      2 (slight)..... : .98
      3 (moderate)..... : .97
      4 (severe)..... : ?
      ?..... : ?
    4 (severe)..... : ?
    ?..... : ?
  3 (moderate) > n (nutrient availability)
    1 (none)..... : ?
    2 (slight)..... : ?
    3 (moderate) > r (rooting conditions)
      1 (none)..... : ?
      2 (slight)..... : ?
      3 (moderate)..... : .99
      4 (severe)..... : ?
      ?..... : ?
    4 (severe)..... : ?
    ?..... : ?
  4 (severe)..... : ?
  ?..... : ?
```

76 Proportional Yield IR-S,soy-2

> f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : .99
2 (slight)..... : .97
3 (moderate)..... : .84
4 (severe)..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : .99
2 (slight)..... : ?
3 (moderate)..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : .99
2 (slight)..... : .95
3 (moderate)..... : .84
4 (severe)..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : .99
2 (slight)..... : .93
3 (moderate)..... : .8
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate)..... : .99
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?

77 Proportional Yield RRice,rice

> f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : .86
2 (slight)..... : .84
3 (moderate)..... : .29
4 (severe)..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : .71
2 (slight)..... : ?
3 (moderate)..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : .71
2 (slight)..... : ?
3 (moderate)..... : .42
4 (severe)..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : .85
2 (slight)..... : .74
3 (moderate)..... : .68
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... ?
3 (moderate) > n (nutrient availability)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : .79
3 (moderate)..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?

78 Proportional Yield RSoy,soy-1

> f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : 1
2 (slight)..... : ?
3 (moderate)..... : .99
4 (severe)..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : 1
2 (slight)..... : ?
3 (moderate)..... : .945
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : .965
2 (slight)..... : .93
3 (moderate)..... : .99
4 (severe)..... : ?
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : .98
2 (slight)..... : .965
3 (moderate)..... : .84
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate)..... : 1
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?

79 Proportional Yield RP-P,pea-1

> f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : 1
3 (moderate)..... : .95
4 (severe)..... : .99
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : 1
3 (moderate)..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : .95
2 (slight)..... : 1
3 (moderate)..... : .95
4 (severe)..... : .99
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : .98
2 (slight)..... : 1
3 (moderate)..... : .98
4 (severe)..... : .99
?..... : ?
4 (severe)..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate)..... : ?
4 (severe)..... : 1
?..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?

80 Proportional Yield RP-P,pea-2

> f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : .59
3 (moderate)..... : .62
4 (severe)..... : .79
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : .59
3 (moderate)..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : .32
2 (slight)..... : .59
3 (moderate)..... : .62
4 (severe)..... : .79
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : .53
2 (slight)..... : .59
3 (moderate)..... : .67
4 (severe)..... : .76
?..... : ?
4 (severe)..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate)..... : ?
4 (severe)..... : .67
?..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?

81 Proportional Yield RPea,pea-1

> f (nutrient retention)
1 (none) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : 1
3 (moderate)..... : .95
4 (severe)..... : .99
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : 1
3 (moderate)..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?
2 (slight) > n (nutrient availability)
1 (none)..... : ?
2 (slight) > r (rooting conditions)
1 (none)..... : .95
2 (slight)..... : 1
3 (moderate)..... : .95
4 (severe)..... : .99
?..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : .98
2 (slight)..... : 1
3 (moderate)..... : .98
4 (severe)..... : .99
?..... : ?
4 (severe)..... : ?
?..... : ?
3 (moderate) > n (nutrient availability)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate) > r (rooting conditions)
1 (none)..... : ?
2 (slight)..... : ?
3 (moderate)..... : ?
4 (severe)..... : 1
?..... : ?
4 (severe)..... : ?
?..... : ?
4 (severe)..... : ?
?..... : ?

Appendix Table 11-1. Physical suitability classes and subclasses matrix of rainfed rice proceeded by matching soil data from DLD and land use requirements from CSR/FAO (1983).

	Physical Suitability	
Soil Unit	Class	Subclass
4	4	4n
5	4	4n
6	4	4n
7	3	3n/w=.5, 3s/n/w=.5
15	4	4n
15/5	4	4n
21	3	3n/w=.5, 3s/n/w=.5
22	4	4n
59	4	4n
29B	4	4n
29B/35B	4	4n
29C	4	4s/n
29D	4	4s/n
29E	4	4s/n
35B	4	4n
35C	4	4s/n
47B	4	4n
47D	4	4s/n
48C	4	4s/n
48C/56C	4	4s/n
48D	4	4s/n
48D/56D	4	4s/n
48E	4	4s/n
48E/56E	4	4s/n
62	nr	nr

Appendix Table 11-2. Physical suitability classes and subclasses matrix of rainfed corn proceeded by matching soil data from DLD and land use requirements from CSR/FAO (1983).

	Physical Suitability	
Soil Unit	Class	Subclass
4	4	4n=.5, 4n/r=.5
5	4	4n
6	4	4n
7	3	3n/r=.5, 3s/n/r=.5
15	4	4n
15/5	4	4n
21	3	3n=.5, 3s/n=.5
22	4	4n
59	4	4n
29B	4	4n=.66, 4n/r=.33
29B/35B	4	4n=.66, 4n/r=.33 & 4n=.8, 4n/r=.2
29C	4	4n=.6534, 4n/r=.3267
29D	4	4n=.6534, 4n/r=.3267
29E	4	4s/n=.4686, 4s/n/r=.2343, 4n=.1848, 4n/r=.0924
35B	4	4n=.8, 4n/r=.2
35C	4	4n=.792, 4n/r=.198
47B	4	4n=.66, 4n/r=.33
47D	4	4n=.6534, 4n/r=.3267
48C	4	4n=.792, 4n/r=.198
48C/56C	4	4n=.792, 4n/r=.198
48D	4	4n=.792, 4n/r=.198
48D/56D	4	4n=.792, 4n/r=.198
48E	4	4s/n=.568, 4n=.224, 4s/n/r=.142, 4n/r=.056
48E/56E	4	4s/n=.568, 4n=.224, 4s/n/r=.142, 4n/r=.056
62	nr	nr

Appendix Table 11-3. Physical suitability classes and subclasses matrix of rainfed peanut proceeded by matching soil data from DLD and land use requirements from CSR/FAO (1983).

	Physical Suitability	
Soil Unit	Class	Subclass
4	4	4r=.5, 3n/r=.25, 3s/n/r=.25
5	4	4r
6	4	4r
7	4	4r
15	3	3n/r=.5, 3s/n/r=.5
15/5	3	3n/r=.5, 3s/n/r=.5 & 4r
21	2	2n/f/r=.25, 3n=.25, 3s=.25, 3s/n=.25
22	4	4r
59	4	4r
29B	4	4r=.33, 3n=.165, 3n/r=.165, 3s/n=.165, 3s/n/r=.165
29B/35B	3	3n/f=.3, 3s/n/f=.3, 4r=.2, 3n/f/r=.1, 3n/f/n/r=.1 & 4r=.33, 3n=.165, 3n/r=.165, 3s/n=.165, 3s/n/r=.165
29C	4	4r=.3267, 3s/n=.18315, 3s/n/r=.18315, 3n=.14355, 3n/r=.14355
29D	4	4r=.3267, 3s/n=.18315, 3s/n/r=.18315, 3n=.14355, 3n/r=.14355
29E	4	4s=.4686, 4s/r=.2343, 3s/n=.0924, 3s/n/r=.0924, 4r=.0924
35B	3	3n/f=.3, 3s/n/f=.3, 4r=.2, 3n/f/r=.1, 3s/n/f/r=.1
35C	3	3s/n/f=.333, 3n/f=.261, 4r=.198, 3s/n/f/r=.111, 3n/f/r=.087
47B	4	4r=.33, 3n/r=.1914, 3s/n/r=.1914, 3n=.1386, 3s/n=.1386
47D	4	4r=.3267, 4s/n/r=.212454, 3n/r=.166518, 3s/n=.153846, 3n=.120582
48C	3	3s/n=.27972, 3n=.21924, 4r=.198, 3s/n/r=.16428, 3n/r=.12876
48C/56C	3	3s/n=.27972, 3n=.21924, 4r=.198, 3s/n/r=.16428, 3n/r=.12876 & 3s/n=.333, 3n=.261, 4r=.198, 3s/n/r=.111, 3n/r=.087
48D	3	3s/n=.27972, 3n=.21924, 4r=.198, 3s/n/r=.16428, 3n/r=.12876
48D/56D	3	3s/n=.27972, 3n=.21924, 4r=.198, 3s/n/r=.16428, 3 n/r=.12876 & 3s/n=.333, 3n=.261, 4r=.198, 3s/n/r=.111, 3n/r=.087
48E	4	4s=.568, 4s/r=.142, 3s/n=.14112, 3s/n/r=.08288, 4r=.056
48E/56E	4	4s=.568, 3s/n=.168, 3s/r=.142, 3s/n/r=.056, 4r=.056 & 4s=.568, 4s/r=.142, 3s/n=.14112, 3s/n/r=.08288, 4r=.056
62	nr	nr

Appendix Table 11-4. Physical suitability classes and subclasses matrix of rainfed soybean proceeded by matching soil data from DLD and land use requirements from CSR/FAO (1983).

	Physical Suitability	
Soil Unit	Class	Subclass
4	4	4r=.5, 3r=.15, 3s/r=.15, 3n/r=.1, 3s/n/r=.1
5	3	3n/r=.5, 3s/n/r=.5
6	3	3n/r=.5, 3s/n/r=.5
7	3	3r=.3, 3s/r=.3, 3n/r=.2, 3s/n/r=.2
15	3	3r=.27, 3s/r=.27, 3n/r=.23, 3s/n/r=.23
15/5	3	3n/r=.5, 3s/n/r=.5 & 3r=.27, 3s/r=.27, 3n/r=.23, 3s/n/r=.23
21	3	3n=.5, 3s/n=.5
22	3	3n/f/r=.5, 3s/n/f/r=.5
59	4	4r=.5, 3r=.15, 3s/r=.15, 3n/r=.1, 3s/n/r=.1
29B	3	3n=.33, 3s/n=.33, 4r=.33
29B/35B	3	3n/f=.3, 3s/n/f=.3, 4r=.2, 3n/f/r=.1, 3s/n/f/r=.1 & 3n=.33, 3s/n=.33, 4r=.33
29C	3	3s/n=.3663, 4r=.3267, 3n=.2871
29D	3	3s/n=.3663, 4r=.3267, 3n=.2871
29E	4	4s=.4686, 4s/r=.2343, 4s/n=.1848, 4r=.0924
35B	3	3n/f=.3, 3s/n/f=.3, 4r=.2, 3n/f/r=.1, 3s/n/f/r=.1
35C	3	3s/n/f=.333, 3n/f=.261, 4r=.198, 3s/n/f/r=.111, 3n/f/r=.087
47B	4	4r=.33, 3n=.2772, 3s/n=.2772, 3n/r=.0528, 3s/n/r=.0528
47D	4	4r=.3267, 3s/n=.307692, 3n=.241164, 3s/n/r=.058608, 3n/r=.045936
48C	3	3s/n=.27972, 3n=.21924, 3s/n/r=.16428, 3n/r=.12876
48C/56C	3	3s/n=.27972, 3n=.21924, 3s/n/r=.16428, 3n/r=.12876 & 3s/n=.444, 3n=.348, 4r=.198
48D	3	3s/n=.27972, 3n=.21924, 3s/n/r=.16428, 3n/r=.12876
48D/56D	3	3s/n=.27972, 3n=.21924, 3s/n/r=.16428, 3n/r=.12876 & 3s/n=.444, 3n=.348, 4r=.198
48E	4	4s=.568, 4s/r=.142, 3s/n=.14112, 3s/n/r=.08288, 4r=.056
48E/56E	4	4s=.568, 4s/r=.142, 3s/n=.14112, 3s/n/r=.08288, 4r=.056 & 4s=.568, 3s/n=.224, 4s/r=.142, 4r=.056
62	nr	nr

Appendix Tables 12. Error matrix of DLD method (columns) against ALES method (rows) for current suitability evaluation. (express by the number of pixels)

RICE

	suitable	not suitable	total
suitable	3990	5202	9192
not suitable	0	1619	1619
total	3990	6821	10811

CORN

	suitable	not suitable	total
suitable	3182	0	3182
not suitable	2715	4914	7629
total	5897	4914	10811

PEANUT

	suitable	not suitable	total
suitable	5897	0	5897
not suitable	0	4914	4914
total	5897	4914	10811

SOYBEAN

	suitable	not suitable	total
suitable	5897	0	5897
not suitable	0	4914	4914
total	5897	4914	10811

Appendix Tables 13. Error matrix of DLD method (columns) against ALES method (rows) for potential suitability evaluation. (express by the number of pixels)

RICE

	suitable	not suitable	total
suitable	3990	5202	9192
not suitable	0	1619	1619
total	3990	6821	10811

CORN

	suitable	not suitable	total
suitable	5897	924	6821
not suitable	0	3990	3990
total	5897	4914	10811

PEANUT

	suitable	not suitable	total
suitable	5897	924	6821
not suitable	0	3990	3990
total	5897	4914	10811

SOYBEAN

	suitable	not suitable	total
suitable	5897	924	6821
not suitable	0	3990	3990
total	5897	4914	10811

Appendix Tables 14. Error matrix of land use in Phrao district area in 1992 (columns) against ALES method (rows) for current suitability evaluation. (express by the number of pixels)

RICE			
	grown	not grown	total
suitable	3361	5038	8399
not suitable	61	1530	1591
total	3422	6568	9990

FIELD CROPS			
	grown	not grown	total
suitable	2619	2937	5556
not suitable	229	4205	4434
total	2848	7142	9990

Appendix Tables 15. Error matrix of land use in Phrao district area in 1992 (columns) against ALES method (rows) for potential suitability evaluation. (express by the number of pixels)

RICE			
	grown	not grown	total
suitable	3361	5038	8399
not suitable	61	1530	1591
total	3422	6568	9990

FIELD CROPS			
	grown	not grown	total
suitable	2642	3823	6465
not suitable	206	3319	3525
total	2848	7142	9990

Appendix Tables 16. Overall suitability of each Land Mapping Unit for specified Land Utilization Type.

LMU	Crop	Phys. Class	Physical suitability subclass	Yield (kg/rai)	Gross Margin (฿/rai)	Econ. Class
4	IR-S	3	3n/r	rice = 629.6	2,888.62	s2
				soybean = 278.3		
	RCorn	4	4fl	0	0	n2
	RP-P	4	4fl	0	0	n2
	RPea	4	4fl	0	0	n2
	RRice	3	3n	256.0	1,207.69	s2
	RSoy	4	4fl	0	0	n2
5	IR-S	3	3n	rice = 623.2	2,716.31	s2
				soybean = 266.6		
	RCorn	4	4fl	0	0	n2
	RP-P	4	4fl	0	0	n2
	RPea	4	4fl	0	0	n2
	RRice	3	3n	486.6	1,013.10	s2
	RSoy	4	4fl	0	0	n2
6	IR-S	3	3n	rice = 623.1	2,716.31	s2
				soybean = 266.6		
	RCorn	4	4fl	0	0	n2
	RP-P	4	4fl	0	0	n2
	RPea	4	4fl	0	0	n2
	RRice	3	3n	486.6	1,013.11	s2
	RSoy	4	4fl	0	0	n2
7	IR-S	2	2n/f/r=.8,2n/r=.2	rice = 642.4	3,369.60	s2
				soybean = 318.0		
	RCorn	4	4fl	0	0	n2
	RP-P	4	4fl	0	0	n2
	RPea	4	4fl	0	0	n2
	RRice	2	2n/r/w=.5,2n/w=.5	526.0	1,252.39	s2
	RSoy	4	4fl	0	0	n2

Appendix Tables 16. (continued)

LMU	Crop	Phys. Class	Physical suitability subclass	Yield (kg/rai)	Gross Margin (฿/rai)	Econ. Class
15	IR-S	3	3n	rice = 629.6	3,186.10	s2
				soybean = 313.3		
	RCorn	4	4fl	0	0	n2
	RP-P	4	4fl	0	0	n2
	RPea	4	4fl	0	0	n2
	RRice	3	3n	526.0	1,151.19	s2
	RSoy	4	4fl	0	0	n2
21	IR-S	3	3n=.495,2n=.31,2n/f=.185	rice = 636.0	3,394.36	s2
				soybean = 326.7		
	RCorn	4	4fl	0	0	n2
	RP-P	4	4fl	0	0	n2
	RPea	4	4fl	0	0	n2
	RRice	3	3n=.495,2n/w=.31,2n/f/w=.185	480.5	1,070.78	s2
	RSoy	4	4fl	0	0	n2
22	IR-S	3	3n	rice = 636.0	3,267.91	s2
				soybean = 330.0		
	RCorn	4	4fl	0	0	n2
	RP-P	4	4fl	0	0	n2
	RPea	4	4fl	0	0	n2
	RRice	3	3n	519.4	1,128.17	s2
	RSoy	4	4fl	0	0	n2
59	IR-S	3	3n	rice = 629.6	3,186.10	s2
				soybean = 313.3		
	RCorn	4	4fl	0	0	n2
	RP-P	4	4fl	0	0	n2
	RPea	4	4fl	0	0	n2
	RRice	3	3n	486.6	1,013.10	s2
	RSoy	4	4fl	0	0	n2

Appendix Tables 16 (continued)

LMU	Crop	Phys. Class	Physical suitability subclass	Yield (kg/rai)	Gross Margin (฿/rai)	Econ. Class
62	IR-S	0	nr	0	0	nr
	RCorn	0	nr	0	0	nr
	RP-P	0	nr	0	0	nr
	RPea	0	nr	0	0	nr
	RRice	0	nr	0	0	nr
	RSoy	0	nr	0	0	nr
15/5	IR-S	3	3n	rice = 626.4 soybean = 290.0	2,951.21	s2
	RCorn	4	4fl	0	0	n2
	RP-P	4	4fl	0	0	n2
	RPea	4	4fl	0	0	n2
	RRice	3	3n	506.3	1,082.15	s2
	RSoy	4	4fl	0	0	n2
29B	IR-S	3	3n	rice = 513.9 soybean = 266.6	2,371.07	s2
	RCorn	3	3n	886.2	1,335.27	s2
	RP-P	3	3n/r	peanut1 = 422.6 peanut2 = 243.4	1,809.44	s2
	RPea	3	3n/r	517.6	1,801.49	s1
	RRice	3	3n	476.7	946.58	s2
	RSoy	3	3n=.5,3n/r=.5	382.8	1,996.64	s2
29B/35B	IR-S	3	3n	rice = 513.9 soybean = 266.6	2,417.82	s2
	RCorn	3	3n	886.17	1,375.77	s2
	RP-P	3	3n & 3n/r	peanut1 = 422.6 peanut2 = 218.0	1,644.12	s2
	RPea	3	3n & 3n/r	517.6	1,801.49	s1
	RRice	3	3n & 3n/r	442.2	854.015	s2
	RSoy	3	3n & 3n=.5,3n/r=.5	395.9	2,101.79	s1

Appendix Tables 16. (continued)

LMU	Crop	Phys. Class	Physical suitability subclass	Yield (kg/rai)	Gross Margin (฿/rai)	Econ. Class
29C	IR-S	3	3n	rice = 257.0	405.07	s3
				soybean = 133.3		
	RCorn	3	3n	886.1	615.27	s2
	RP-P	3	3n/r	peanut1 = 442.6	1,089.44	s2
				peanut2 = 243.4		
	RPea	3	3n/r	442.6	558.58	s2
	RRice	3	3n	263.0	198.63	s3
	RSoy	3	3n=.5,3n/r=.5	336.5	906.50	s2
29D	IR-S	3	3s/n	rice = 128.5	-577.92	n1
				soybean = 66.7		
	RCorn	3	3n	886.2	615.27	s2
	RP-P	3	3n/r	peanut1 = 422.6	1,089.44	s2
				peanut2 = 243.4		
	RPea	3	3n/r	422.6	558.58	s2
	RRice	3	3s/n	131.5	-261.64	n1
	RSoy	3	3n=.5,3n/r=.5	336.5	906.50	s2
29E	IR-S	3	3s/n	rice = 128.5	-577.92	n1
				soybean = 66.7		
	RCorn	3	3s/n	221.5	-2,480.29	n1
	RP-P	3	3s	peanut1 = 105.6	-3,197.56	n1
				peanut2 = 72.7		
	RPea	3	3s	105.6	-2,618.44	n1
	RRice	3	3s/n	131.5	-261.64	n1
	RSoy	3	3s	84.1	-2,546.42	n1
35B	IR-S	3	3n	rice = 513.9	2,464.57	s2
				soybean = 266.6		
	RCorn	3	3n	886.2	1,416.27	s2
	RP-P	3	3n	peanut1 = 422.5	1,478.80	s2
				peanut2 = 192.6		
	RPea	3	3n	517.6	1,801.49	s1
	RRice	3	3n/r	407.7	761.44	s2
	RSoy	3	3n	409.0	2,206.94	s1

Appendix Tables 16. (continued)

LMU	Crop	Phys. Class	Physical suitability subclass	Yield (kg/rai)	Gross Margin (฿/rai)	Econ. Class
35C	IR-S	3	3s/n	rice = 257.0	498.57	s3
				soybean = 133.3		
	RCorn	3	3n	886.2	696.27	s2
	RP-P	3	3n	peanut1 = 422.6	758.80	s2
				peanut2 = 192.6		
	RPea	3	3n	422.6	558.58	s2
	RRice	3	3s/n/r	263.0	255.13	s3
	RSoy	3	3n	336.5	906.50	s2
47B	IR-S	3	3n/r	rice = 513.9	2,390.56	s2
				soybean = 266.6		
	RCorn	3	3n/r	886.2	1,416.27	s2
	RP-P	3	3r	peanut1 = 422.6	1,839.35	s2
				peanut2 = 225.3		
	RPea	3	3r	501.8	1,788.34	s1
	RRice	3	3n/r	190.7	1.98	s3
	RSoy	3	3n/r	362.1	1,831.76	s2
47D	IR-S	3	3s	rice = 128.5	-558.42	n1
				soybean = 66.7		
	RCorn	3	3s/n/r	443.1	-1,845.44	n1
	RP-P	3	3s/r	peanut1 = 211.3	-1,996.22	n1
				peanut2 = 145.3		
	RPea	3	3s/r	211.3	-1,963.43	n1
	RRice	3	3s	131.5	-205.14	n1
	RSoy	3	3s/n/r	168.2	-1,873.45	n1
48B	IR-S	2	2s/n/f/r=.5,3n=.5	rice = 513.9	2,486.92	s2
				soybean = 266.6		
	RCorn	3	3n=.5,2n/f/r/w=.25,2n/f/w=.25	886.2	1,443.27	s2
	RP-P	2	2n/f/w=.5,3n=.5	peanut1 = 422.6	1,304.83	s2
				peanut2 = 154.4		
	RPea	2	2n/f=.5,3n=.5	509.7	1,794.92	s1
	RRice	3	3n/r=.5,3r=.5	341.9	553.65	s3
	RSoy	3	3n=.5,2n/f=.25,2n/f/r=.25	403.8	2,185.88	s1

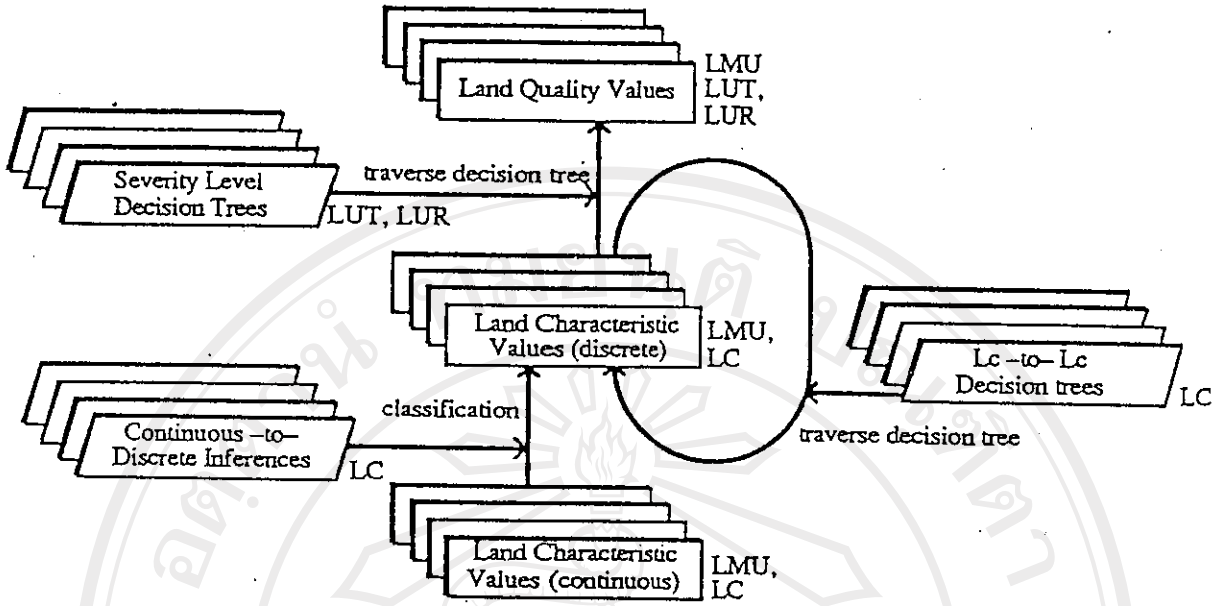
Appendix Tables 16 (continued)

LMU	Crop	Phys. Class	Physical suitability subclass	Yield (kg/rai)	Gross Margin (฿/rai)	Econ. Class
48C	IR-S	3	3s=.5,3s/n=.5	rice = 257.0 soybean = 133.3	520.92	s3
	RCorn	3	3n=.5,2s/n/f/r/w=.25,2 s/n/f/w=.25	886.2	723.27	s2
	RP-P	2	2s/n/f/w=.5,3n=.5	peanut1 = 422.6 peanut2 = 154.4	584.83	s2
	RPea	2	2s/n/f=.5,3n=.5	422.6	595.58	s2
	RRice	3	3s/n/r=.5,3s/r=.5	263.0	277.48	s3
	RSoy	3	3n=.5,2s/n/f=.25,2s/n/f/r=.25	336.5	927.50	s2
48C/56C	IR-S	3	3n & 3s=.5,3s/n=.5	rice = 257.0 soybean = 133.3	481.50	s3
	RCorn	3	3n & 3n=.5,2s/ n/f/r/w=.25,2s/n/f/w=.25	886.2	669.27	s2
	RP-P	2	2s/n/f/w=.5,3n=.5 & 3n=.5, 3n/r=.5	peanut1 = 422.6 peanut2 = 186.2	754.48	s2
	RPea	2	2s/n/f=.5,3n=.5 & 3n=.5, 3n/r=.5	422.6	577.08	s2
	RRice	3	3n & 3s/n/r=.5,3s/r=.5	263.0	238.06	s3
	RSoy	3	3n & 3n=.5,2s/n/f=.25, 2s/n/f/r=.25	336.5	917.00	s2
48D	IR-S	3	3s	rice = 128.5 soybean = 66.7	-462.07	n1
	RCorn	3	3n=.5,2s/n/f/r/w=.3,2 s/n/f/w=.2	886.2	723.27	s2
	RP-P	2	2s/n/f/w=.5,3n=.5	peanut1 = 422.6 peanut2 = 154.4	584.83	s2
	RPea	2	2s/n/f=.5,3n=.5	422.6	595.58	s2
	RRice	3	3s	131.5	-182.79	n1
	RSoy	3	3n=.5,2s/n/f=.25,2s/n/f/r=.25	336.5	927.50	s2

Appendix Tables 16 (continued)

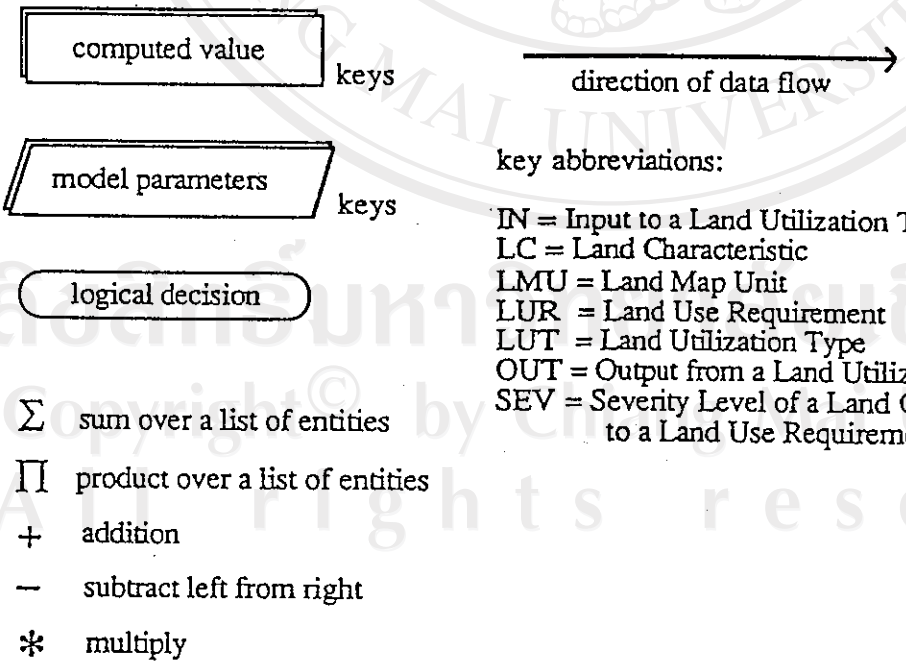
LMU	Crop	Phys. Class	Physical suitability subclass	Yield (kg/rai)	Gross Margin (฿/rai)	Econ. Class
48D/56D	IR-S	3	3s & 3s/n	rice = 128.5 soybean = 66.7	-501.50	n1
	RCorn	3	3n & 3n=.5,2s/n/f/r/w=.3,2s/n/f/w=.2	886.2	669.27	s2
	RP-P	2	2s/n/f/w=.5,3n=.5 & 3n=.5, 3n/r=.5	peanut1 = 422.6 peanut2 = 186.2	754.48	s2
	RPea	2	2s/n/f=.5,3n=.5 & 3n=.5, 3n/r=.5	422.6	577.08	s2
	RRice	3	3s & 3s/n	131.5	-222.22	n1
	RSoy	3	3n & 3n=.5,2s/n/f=.25, 2s/n/f/r=.25	336.5	917.00	s2
48E	IR-S	4	4s	0	0	n2
	RCorn	3	3s	221.5	-2,372.29	n1
	RP-P	3	3s	peanut1 = 105.6 peanut2 = 72.7	-3,123.56	n1
	RPea	3	3s	105.6	-2,581.44	n1
	RRice	4	4s	0	0	n2
	RSoy	3	3s	48.1	-2,525.42	n1
48E/56E	IR-S	4	4s & 4s/n	0	0	n2
	RCorn	3	3s & 3s/n	221.5	-2,426.29	n1
	RP-P	3	3s	peanut1 = 105.6 peanut2 = 72.7	-3,160.56	n1
	RPea	3	3s	105.6	-2,599.94	n1
	RRice	4	4s & 4s/n	0	0	n2
	RSoy	3	3s	48.1	-2,535.92	n1

(to Appendix Figure 2, 3)



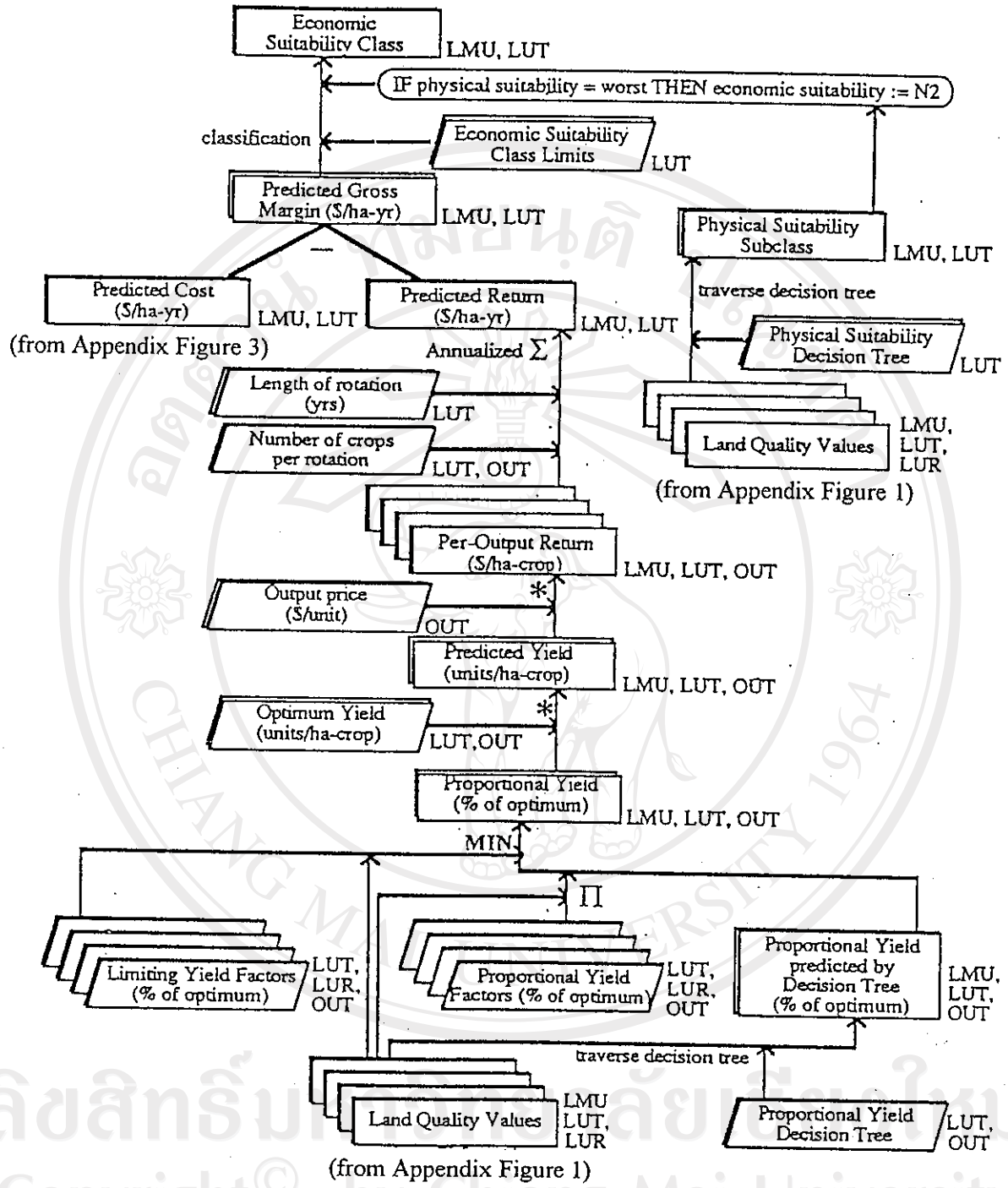
Appendix Figure 1. Computation of land quality values.
(Rossiter & Van Wambeke, 1989)

Legend for Appendix Figures 1, 2, and 3

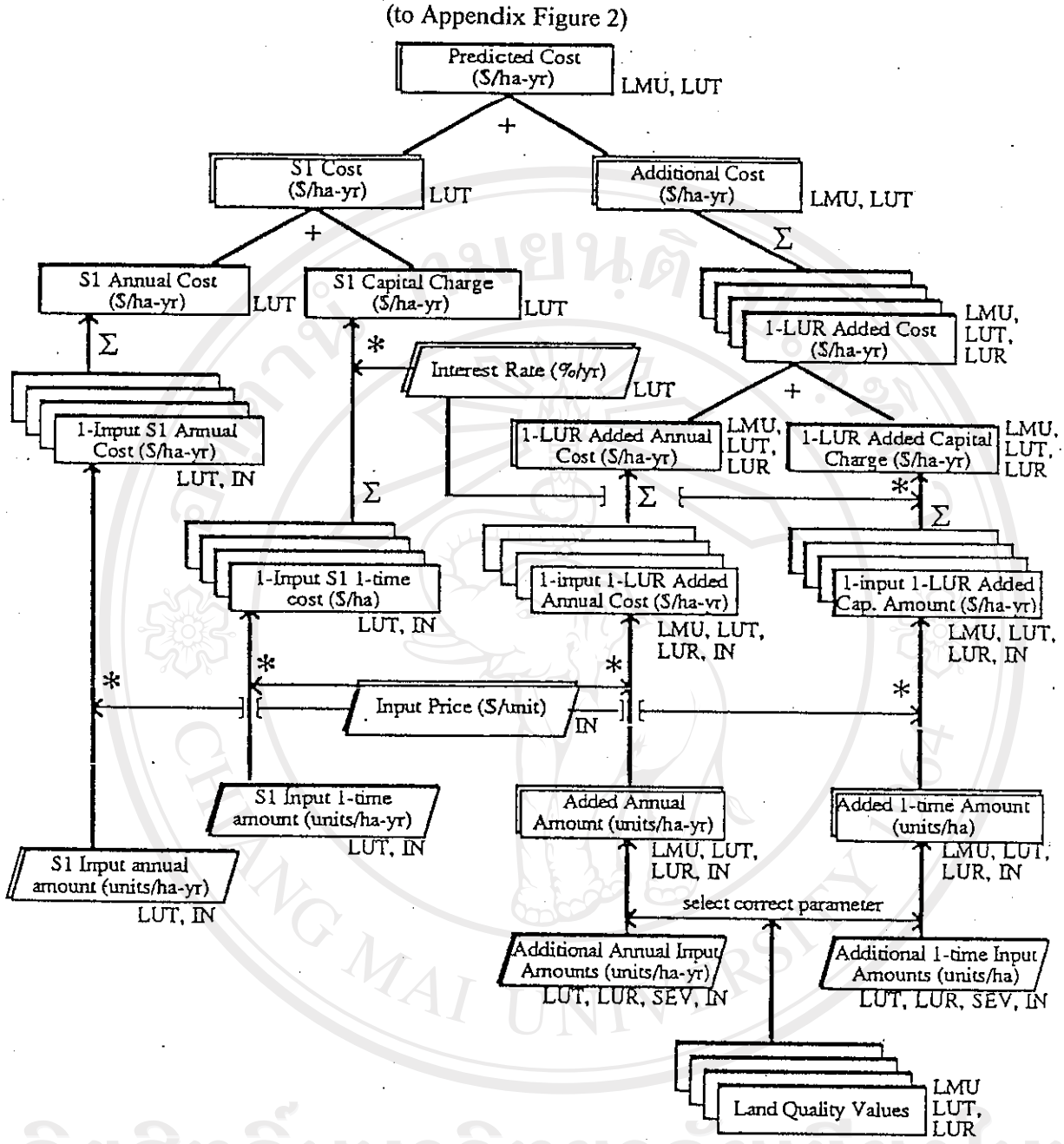


key abbreviations:

IN = Input to a Land Utilization Type
LC = Land Characteristic
LMU = Land Map Unit
LUR = Land Use Requirement
LUT = Land Utilization Type
OUT = Output from a Land Utilization Type
SEV = Severity Level of a Land Quality corresponding to a Land Use Requirement



Appendix Figure 2. Computation of economic and physical suitability classes. (Rossiter & Van Wambeke, 1989)



Appendix Figure 3. Computation of predict cost.
(Rossiter & Van Wambeke, 1989)

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