CHAPTER 5

Conclusions

In conclusion, all of the results in this study can be summarized as follows:

Pangola grass which was cut at 45 days of regrowth stage and conducted at the Department of Animal and Aquatic Sciences, Faculty of Agriculture, Chiang Mai University, northern of Thailand, is a good quality forages contained 8.9 % CP, 28.16 % CF, 62.99 % NDF, 36.77 % ADF, 3.68 % ADL and 59.49 % TDN, respectively. The 45 days of regrowth stage cutting involves properly good nutrient composition and digestibility.

Pangola silage with molasses gave the highest gas products at all incubation time (at 24, 48, 72 and 96 hours). Then the high products leaded to the highest ME prediction which was contrast with pangola silage without additive that showed lower than other pangola grass groups. However, although pangola silage resulted low gas products and low DM digestibility in Daisy^{II} incubator but not affect on *in sacco* disappearance parameters (b, a+b). There are some suggestions that pangola grass should be used silage additive as a improvement fermentation because tropical forages are low in WSC, which are important for ensiling. They may be relatively expensive, but cost-effectiveness should always consider the improvement in preservation and nutritive value of the ensiled forage. Additions of sources of WSC, such as molasses to forage have resulted in increased lactic acid production that affected preserved time and increased protein for silage.

The Daisy^{II} *in vitro* fermentation method can provide important nutrient information in dynamic degradation of forage, especially DM and NDF digestibility. Pangola silage added molasses gave the higher NDF digestibility at 24 h than others. Due to lower NDF contents that decreased in preserved fermentation. Moreover, the use of nylon bag technique not only showed higher insoluble but fermentable fraction (b)

and degradability rate constant (c) from pangola silage with molasses, but also effective degradability at all the rate of passage (0.02, 0.05 and 0.08). The fresh and preserved pangola grass presented that potential degradable fraction (a+b), which showed the value of total degradability in rumen, were higher than fresh napier and ruzi at the same cutting stage.

In conclusion, Fresh pangola grass at 45 days of regrowth stage cutting is good quality forage. Fresh pangola reported high DM digestibility and good prediction data including TDN and metabolizable energy which are rich of beneficial for ruminants. After preserved, pangola hay and both silage groups especially added with molasses have potential to be reserved forage for ruminants livestock which have good *in vitro* digestibility and rumen degradability. There is a suggestion for pangola silage, should be treat with molasses for improving silage characteristics and digestibility.

Recommendation for future work

Fresh and preserved pangola grass for ruminants was clearly visualized based on the results obtained from this research. Further research work still needs to be studied.

1. Effects of silage additive for pangola grass on digestibility.
2. Effects of fresh and preserved pangola grass on carcass and meat quality.