

## CHAPTER 4

### Conclusion

The PT1 rice plants could be hydroponically grown in modified Hoagland's nutrient solution. Under the different level of nitrogen and salt stress in the treatments, the different growth rate of the PT1 rice in each treatment could be seen. Although some important diseases such as leaf blight and pest such as brown plant hopper occurred and disturbed to this experiment, the PT1 rice plants resisted that problems and consequently produced the rice grains which are the key materials to determine yield components and 2AP content. Based on the planting conditions, growth parameters during the cultivation and some yield-related parameters, the established PLS model could be used to predict the 2AP content in the PT1 rice yields. The salt stress and nitrogen concentration were found to be important to the variation in the 2AP content. Although, the positive PLS coefficients suggested that the salinity stress significantly has a positive effect on the 2AP content, the SOM component plane visualization revealed that the salt stress in the presence of high concentration of nitrogen would dramatically reduce the aromatic quality. In addition, yield number of tillers and shoot dry weight, in the presence of salt stress, were also considerably correlated to the 2AP content.

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## SUGGESTIONS

1. For improving the predictive ability, other effecting factors such as temperature and other nutrients should be added into predictors.
2. The nutrients that rice plants take up should be estimated, the amount of nutrients used are accurate.
3. The data from replications of centroid and other treatments are necessary to use to calculate the important statistical value.
4. The problems in growing the aromatic rice plant are diseases and pests. Covering the cultivation zone with insect protection net could protect some pests. However, some diseases such as rice blast diseases could susceptible the high moisture and block the air ventilation.



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