

CHAPTER VI

CONCLUSIONS

This chapter contains the conclusions of research results and suggestions for further research.

6.1. Conclusions

Based on the optimal production planning using fuzzy linear programming designed in this research, it can be concluded as follows:

1. Production planning using fuzzy linear programming can provide the increased profit for the company is Rp 10,274,600 or 11.60% compared than the actual profit.
2. The availability of capacity for each workstation is more than the capacity used, therefore overtime is not considered to be conducted by the company. The company can be utilize optimally the company's production capacity for all months.
3. In term of availability of raw materials, the company should increase the purchase of regrind because of actual availability is less than material used. Resin does not need additional purchase because of actual availability is greater than material used.
4. In term of availability of water requirement in production process, the company can optimize the usage of water requirement in previous period. Especially in June, the company can optimally utilizing of water requirement in previous period, i.e March, because in March the production planning of mineral water is lower than June.
5. In term of results of optimal production amount using fuzzy linear programming model, optimal production amount of drinking water 220 ml is equal to the demand and optimal production amount of drinking water 120 ml is more than demand. The company can produce drinking water

120 ml more than actual condition, therefore the company must expand its marketing area.

6.2. Suggestions

This research only conducted to the production of drinking water of 220 ml and 120 ml size. Further research can conducted by incorporate the all size of drinking water in the company.

