

## CHAPTER 6

### CONCLUSION

1. Vegetable soybean responded positively to the nitrogen fertilizer application. Minimum starter nitrogen application resulted in the minimum vegetative growth, the marketable pod yield and the amount of nitrogen fixed.

2. The timing of nitrogen application was critical. Adding the first top dressing at the early stage and the second dressing at reproductive stage (either R1 or R4.5), led to the highest marketable pod yield and N fixation as well as the highest economic return.

3. After the first top dressing at V1.5 stage, the second top dressing at V4 stage (Farmer's practice) led to significant decrease in both marketable pod yield and the amount of N fixed.

4. The contribution of nitrogen fixation to vegetable soybean ranged from 60% to 80% of the total nitrogen uptake. There were big amount of nitrogen contributed to soil nitrogen pool after vegetable soybean green pods harvested, particularly in the low nitrogen levels application.

5. Treatment F6, which performed best in both varieties in terms of economic return and N fixation should be recommended to the farmers for N management in vegetable soybean at the rainy season in Chiang Mai.