

CHAPTER 5

CONCLUSION

The study on ozone application for controlling seed-borne pathogen and insect in the seed of Khao Dawk Mali 105 rice variety was conducted on the 1.25 mg/g rice seed/hr ozone dose for various times: 2, 4, 6 and 8 hrs. The results could be concluded as follows:

1. The ozonation significantly controlled seed-borne fungi in rice seed. The efficacy of ozonation to control seed-borne fungi was positively related to the increase of ozonation times. The ozonation in the wet seed (18% MC) was much more effective to control seed-borne fungi than in the dry seed (11% MC).
2. The increase of ozonation time significantly resulted in the decrease of rice qualities determined: seed moisture content, percent germination, viability, speed of germination, seedling growth rate and germination by cold test.
3. The ozonation had 100% efficacy to eradicate the adult of *Sitophilous oryzae*.

Therefore, the experimental results indicated the ozonation with 1.25 mg/g rice seed/hr for 6 hr in the wet seed (18% MC) was the best condition to control seed-borne fungi in the rice seed. The treatment had no effect on seed qualities, although decreased percentage of seed-borne invasion to 26.39 percent. The ozone condition at 3 hr was the best level to eradicate *Sitophilous oryzae* to 100%.