SUMMARY

Rice is a staple food consumed by a majority of the Indonesian people. The problem of rice production is caused by the increase in rice demand along with the increasing population growth which is not followed by rice supply and reduced irrigated rice fields, and agricultural land.. High rice needs encourage the development of upland rice as an alternative effort in increasing national food security. Factors affecting upland rice production, including the limitations of superior varieties, pest and disease attacks and low land fertility. The efforts to increase rice production is by applying good fertilization and the use of environmentally friendly pesticides, by using liquid smoke. This research aims to determine the effect of application of coconut liquid smoke (CLS) on the presence of upland predators, to determine the effect of application of coconut liquid smoke on the presence of rice pests and to determine the effect of N, P, K fertilizer dosage and coconut liquid smoke concentrations which can increase upland rice yields.

This research was conducted at Suro Village, Kalibagor, Banyumas on March until August 2018. The experimental research used split plot design that the main plot was N, P, K fertilizers and sub plot was concentration of CLS. N, P, K fertilizer consisted of 50 and 100% recommended dose. Liquid smoke consisted of 5 concentrations, i.e. 0; 2,5; 5,0; 7,5; and 10,0%. Observed variabels were number of insect pest, number of predators and yield components (number of panicles per clump, number of grain per clump, grain weight per clump, grain weight per effective plot, weight of 1000 grains, grain per hectare, and harvest index). Data were analyzed by Anova (Analysis of Variance) and continue tested by Duncan's Multiple Range Test (p=0,05).

The result showed application of CLS affected on predators but did not affect on insect pest. Application of N, P, K fertilizer 50% recommended dose was as same as N, P, K fertilizer 100% recommended dose.