The study of the water level management model that affect the growth

and qualityof rice Chainat 1

by

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**ABSTRACT**

The Study of Height of the water level , that affect the growth , yield , and the quality of Chainat 1. In studying the Height of the water level that will affect the growth, yield and quality of Chainat1. Water shortage will be solve during of season of crop planting. By casting it at Don Chan district, Kalasin Province. Experiment 5 Methodology designed of 3 times and controlled different water levels 0, 5, 10, 15 and 20 cm. In this study it was found out that there were growth in Height, increase in number of leaves and a significant change in the weight of the rice stalks. On .05 By controlling the water level of 20 cm. with an average growth best. The analysis showed that the yield of rice grain weight percent grain. No difference. However, a number heads of grain and seed weight as kilograms per hectare. The difference is statistically significant at the .05 level. By controlling the water level of 5 cm, with the average high yield. And quality analysis of paddy grains found that the humidity does not vary. The quality of grain is peeling and lengths differences are statistically significant at the .05 level by controlling the water level of 5 cm with a mean high quality grain. This study shows that Chainat 1 planting do not need that much water, because it only affect our water resources This experiment is for the benefit of the farmer, during the off - season of rice water is very important to us during this season, that why we have this experiment to inform the farmer that there's no need to supply to much water during the off - season of rice. Instead of using hectares for irrigation, the formers can plant more ice on their irrigated land, if we will follow and apply this experiment, water shortage during off - season of rice will be solved and best quality of rice will be produce.

**Introduction**

Farming in Thailand often uses more water than necessary. So water is kept in the field the most in case a shortage. Current problems of water use in rice cultivation, especially in rain fed farming, water shortages are often a problem. Therefore, water management is a key role that will allow farmers to maintain production levels in satisfaction. According to the registration of agricultural products. Don Chan District Agricultural Office (2554) found that farmers in the district have been registered for off-season rice plantations. And rice can grow just one: seven of the area due to shortage of water. Although most rice plantations near the irrigation canal, problem is the use of water by farmers in upstream irrigated areas store water,

then the downstream farmer can’t have enough water. Such problems make the assumption that “ Good water management can increase the area for planting rice or not ” The researchers will use the rice Chainat 1which grow well in dry season the most.We will study the water level, which affect the growth and qualityof rice Chainat 1**,** in order to manage water shortage problems in the off-season rice cultivation in Don Chan district, Kalasin province.

**2.**The research question

How the height of water level in rice fields affect the growth, and quality of rice Chainat 1?

**3.** Hypothesis

The different of the water level in rice fields affect the growth, and quality of rice Chainat1.

**4.** Objective

 1.To determine the appropriate water level management on growth, productivity and quality of rice Chainat 1.

 2. So as to solve the problem of water shortage in the district.

5. Science garden at Don Chan wittayakhom school, Donjan district, Kalasin province

**11.** Results

The study found that the growth of rice height, number of leaves and dry weight of the crop.

The difference is statistically significant at the .05 level. The Analysis showed the weight of 100 rice grains are no difference. But the number of grains in one spike and the weight (a kilogram per rai), the difference is statistically significant at the .05 level.

and length are significantly different statistically at the .05 level.

Grain quality analysis found no difference in moisture content . But the grinding quality

**12.** Conclusions.

The study found that the growth of rice height, number of leaves and dry weight of the

crop, the difference is statistically significant at the .05 level. When the water level at 20 cm, rice has the highest average growth. The analysis showed that the productivity of rice 100 grain weight is not different. Number of grains in one spike by kilograms per rai,the difference is statistically significant at the .05 level. When control the water level at 5 cm, rice give the highest productivity. And quality analysis of rice grains found that the humidity does not vary

But the quality of the grain, color and length are significantly different statistically at the .05 level by controlling the water level of 5 cm make a high quality grain. To achieve high-producing rice is not necessary to maintain a high level of water than the rice’s requirmemt

, It is wasting water and also decreased the land. **12.**

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**13.** research discussion

The results of controlling water level in the rice Chainat 1 found that the productivity and quality of grain that grown from controlling levels at 5 cm, the seed got the most standard quality as Kalasin grain center has set the standard as follows , hundred grain weights not less than 3.0 grams, the moisture is 14-15% milling quality is 34% and weight is 740 kg per rai. So it shows that the rice plant does not need too much water, if the farmer can control water

not higher than 5 cm, they can have more land to grow rice and got more productivity as well.