The main objective of this study is to analyze the impacts of the government policies towards resource utilization in Suphan Buri province. The positive mathematical programming (PMP) is applied to analyze the collected data interviewed from 32 rice growers and 34 sugarcane growers during production year 2008/09.

In the year 2008/09, the 2 rounds a year rice production was 5,520 rais and 3 rounds a year rice production was 3,680 rais while sugarcane production area was 2,995.52 rais. Labor resource was consumed 136,280 working days and capital resource was used 231,050,000 baht while water resource was irrigated 65,456,000 m^3. An average rice price was 9,790 baht per ton and sugarcane price was 930 baht per ton. The study PMP model is calibrated to the area current production situation. Government policies were separately determined as scenarios with guarantee price at 3 different price levels, 10,000, 12,000 and 14,000 baht per ton. The main finding shows that policy with the highest guaranteed price (14,000 baht per ton) induces relatively high effects of changing in resource allocation. Also, the policy produces higher net revenue 39.40% and the cultivated area extension 7.16% which particularly 3 rounds a year rice is increased by 35.09% and 2 rounds a year rice is also increased by 31.14% while sugarcane is decreased by 5.4%. This makes higher use of resources by average 12.66%. The study results also indicate that policy with lowest guarantee price (10,000 baht per ton) causes only a little change by 0.85% increasing of the resource use. Furthermore, the findings can be concluded that introducing guarantee price policies affect mainly to 3 rounds a year rice production area followed by 2 rounds a year rice production and sugarcane cultivation area respectively. In addition, the policies mainly induce the change in resource use especially for labor resource followed by water capital and land resource respectively.

From this study, guarantee price policies in different price levels give different change in resource utilization. In the case that government needs high level of resource allocation change, using high guarantee price should be considered. In contrast, if much change caused by policy is undesirable, determining low guarantee price should be a suitable alternative.

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