

Wasurat Saengow 2011: Impact Analysis of the Changes in Government Policies and Significant Factors towards Maize Production by Positive Mathematical Programming Model. Master of Science (Agricultural Economics), Major Field: Agricultural Economics, Department of Agricultural and Resource Economics. Thesis Advisor: Mr. Chakrit Potchanasin, Ph.D. 104 pages.

The main objective of this study is to conduct impact analysis of the changes in government policies and significant factors towards domestic maize production area and resource utilization. The positive mathematical programming (PMP) are being applied to analyze the secondary data of agricultural land and crop production information from 10 provinces in Thailand which are Phetchabun, Nakhon Ratchasima, Tak, Loei, Nan, Chiang Rai, Nakhon Sawan, Lop Buri, Phitsanulok, and Phayao. The data covers secondary data collected by Land Development Department, in production year 2009/10. The analysis has been carried out by using PMP model that includes the coefficient to reflect reality which is used for calibration in order to close to the real situations and, then, its results are used to compare to 6 different scenario. The result shows that the situation of rising in maize price to 8 baht gives the biggest impact on resources distribution causing the rise of total gross margin by 28.66%. Total agricultural land expands by 5.06% which is increasing of maize area while cassava and sugar cane area is decreasing. Regarding the use of cash, the results show that it rises by 4.63% while labor use decreases by 2.53%. For the cases of cassava and sugarcane guarantee price, these causes decreasing of total cultivated area

By comparing the change of resource utilization, it can be concluded that land resource will be mostly affected while the impact of cash and labor use is lower respectively. The policy of price guarantee helps farmers gain more income and also affects the use of the respective resources at different levels. Therefore, if the government wants to make more change in resources distribution, guarantee price at high level should be considered; On the contrary, if the government intend to make only small changes in resources distribution, guarantee price should be set at low price level

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