

Sutthipon Saelee 2013: Trait Valuation of Hybrid Rice in Thailand.
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Ms. Orachos Napasintuwong Artachinda, Ph.D. 85 pages.

Hybrid rice varieties in Thailand were certified for the first time on September 27, 2011. However, the information on farmers' preferences, particularly trait preferences, of rice varieties has not been much revealed. The main objective of this research is to quantify trait values of hybrid rice in Thailand by using choice experiment technique and estimate the values by adopting a Mixed Logit model.

The results from a survey of 396 farm households in irrigated areas of the Central plain of Thailand that has potential for hybrid rice production prove that average yield at 1,300, 1,450 and 1,600 kilograms per rai, resistance to brown plant-hoppers and semi-dwarf rice are positively influence farmers' preferences for hybrid rice adoption. On the contrary, average yield at 1,150 kilograms per rai which farmers may perceive as significantly no different from potential yield of current varieties, and growth duration which farmers may not be able to reveal true preferences due to government subsidization policy and risks from climate change are insignificant. The results of trait valuation of hybrid rice obtained from shadow price, additional cost of seeds, found that undesired traits of hybrid rice are non-resistance to brown plant-hoppers and tall plant type which devalue willingness to pay for seed costs of 1,659.77 and 353.62 bahts per rai, respectively. Traits of hybrid rice that farmers value the most is the resistance to brown plant-hoppers equal to 1,153.15 baht per rai, followed by yield at 1,600, 1,450 and 1,300 kilograms per rai and semi-dwarf rice equal to 307.62, 404.08, 518.69 and 241 bahts per rai, respectively.

The results of this study can be used to estimate the total value of traits of hybrid rice in the future given that the results are presented by average potential yields. Therefore, at the early stage of hybrid rice breeding program in Thailand, it is suggested that in addition to high yielding, breeding for resistance to brown plant-hoppers and semi-dwarf rice should be considered to fulfill farmers' need.

Student's signature

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