

A-151

Linkage between seed extension and soybean production under drought crisis in Chiangmai province, Thailand

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Under drought situation, soybean known as fast-growing crop is grown instead of rice crop for enhancing the efficiency of water usage and for food and nutritional security of Thailand. However, insufficient seed supply has been still happening. Consequently, there is necessary to link research and extension and seed quality control among stakeholders in the production system. Soybean seed extension in the community through smart demonstration farms was set in the main areas of Maetang, Chiangmai both in dry and rainy seasons during 2015-2016. Fifty farmers were selected and divided into two groups based on location and then six representative farmers were also selected and smart demonstration farms were conducted. All farmers learned together how to produce good quality of seed, multiplication and distribution through demonstration farm and group discussion. Moreover, fifty farmers at Sanpatong, Chiangmai were selected for setting soybean grower group and six representative farmers were also selected and smart demonstration farms of cost reduction technology were conducted. All farmers voted the optimum cost reduction technologies for learning together via smart demonstration farms. The results illustrated that soybean seed growers groups got an increase of seed production knowledge. They produced and saved their own seed and supported 30% of community requirement. Besides, Soybean growers group understood and learned together how to decrease production cost in their farms. Preliminary cost reduction technologies were optimum seed rate (62 kg ha^{-1}), planter and harvester application which reduced 54.5 % of seed cost, 67.5% of labor cost for cultivation and 45.0% of labor cost for harvesting, respectively. Further research should emphasize community seed multiplication and seed distribution outside the community and link soybean grower group with related industries sectors.