

NEW CULTIVARS MAKE MUNG BEAN A CASH CROP

“Mung bean and soybean were never main crops in this area. People grew them in their back yard just for the purpose of kitchen ingredients,” Padid Kamenketkit, Head of Ban Don Hwai Village, recounts the farming practice in his village in Uthai Thani Province.

However, things took a turn 15 years ago, when a ban on off-season rice cultivation was issued and mung bean cultivation was promoted to supplement farmers’ income. Farmers can sell their produce to Chai Nat Field Crops Research Center or supply to the industry through middlemen. As a post-rice crop, mung bean is planted from November to February. However, maize farmers start planting mung bean in May. Chai Nat 84-1, Kampaengsaen 1 and Kampaengsaen 2 were among popular cultivars.

In 2016, the shortage of Kampaengsaen seed prompted Padid to look for other options. Upon consulting with the local agricultural extension office, he was introduced to newly-released mung bean cultivars, KUML1 to KUML5. To promote these new cultivars, NSTDA invited interested farmers to Raja-

mangala University of Technology Lanna Lampang to gain more information on the cultivars at the demonstration plot. Ten farmers from this village traveled to Lampang Province. After inspecting properties of plants and beans, they picked KUML3 for its light weight, KUML4 for its large bean size and KUML5 for its nice bean shape and distinct pod color making it easy to spot and remove contaminated plants in the field.

These ten farmers started forming a KUML mung bean grower group to work with NSTDA. They had to agree to the cultivation techniques prescribed by NSTDA which include manual seed dropping, manual harvesting and bean-size segregation before selling. Although these demanding techniques drove the production cost upward, they all agreed to the terms because of the attractive market price of 60 baht/kg for high quality mung bean. Each grower allocated a 7-rai (1.12-ha) farmland for mung



bean cultivation and received 2.8 kg/rai of seed of his/her choice (17.5 kg/ha) in the first year. Productivity of the first year was not satisfactory, but these growers did not feel discouraged as they understood that there would be a learning curve. Instead, they tried to learn and familiarize themselves with chosen cultivars. In the second year, each farmer increased the planting area to 10 rai (1.6 ha). Instead of giving out seed, NSTDA opted to lend seeds and buy back produce from growers at a guarantee price of 50 baht/kg. In this second year, farmers put more effort to tend their farms. Wasan Philuek, an experienced farmer of this group, volunteered himself to visit and inspect farms of other members and provide suggestions on pest management. It was told that many of his visits were unannounced! This time around, all their effort was paid off. The productivity of this second year exceeded 200 kg/rai (1.25 tons/ha).

Although NSTDA's buyback program only lasted for two years, this grower group continues to plant KUML cultivars, but has made adjustments to some cultivation techniques. Manual seed dropping and

harvesting are now replaced by seed casting and machine harvesting in order to keep the production cost down. Produce is now sold to middlemen. With good performance, the group membership has grown to 15 farmers.



New members are carefully screened as the group wants to maintain their reputation as producers of premium quality mung bean. Each member has a planting area of 10 rai (1.6 ha) or more. Some own their land, while others plant mung bean on someone else's land for free in exchange for green manure the legume plants become after harvesting.

It is unfortunate that the flood has caused damage to all mung bean fields in 2018/2019 cropping season, except for one belonging to Wasan. Wasan - who has increased the planting area to 27 rai (4.32 ha), his own and some rental land - planted his mung bean earlier than his peers so the plants were big enough to survive the flood. Wasan decided to keep his KUML4 produce for members of his group to use as seed for the next cropping season. NSTDA also donated KUML seed to flood-affected farmers. As the industry

demand for KUML mungbean grows due to its superb quality, this farmer group is keen to produce KUML seed to supply to mung bean farmers in other regions. With this aspiration, NSTDA provided training on postharvest management of seed and connected the group to mung bean farmers in other areas, thereby enhancing the whole mung bean production value chain.

Five mung bean cultivars, KUML1 to KUML5, were developed by Prof. Dr. Peerasak Srinives and Assist. Prof. Dr. Prakrit Somta of Kasetsart University with research grant provided by NSTDA. These KUML cultivars are disease-resistant and have short maturity time, providing high yield of 200-300 kg/rai (1.25- 1.875 tons/ha).

