



Better seed brings progress to Myanmar

Farmers in Myanmar find it hard to get hold of quality seed. Wageningen scientists are working on this with the government, farmers, businesses and NGOs. This has already led to less bureaucracy, new investments and a handy app. ‘Now I can buy a small rice thresher and send my children to school.’

TEXT ALEXANDRA BRANDERHORST

‘More and more farmers in Myanmar have access to smartphones,’ says Abishkar Subedi of the Wageningen Centre for Development Innovation. ‘That is why we developed the free app Quality Seeds, which they can use to buy baskets of seeds. A basket is a standard measure in Myanmar.’ Subedi leads Integrated Seed Sector Development (ISSD) Myanmar, a project in which Wageningen scientists work with the Myanmar government, agricultural research and development organizations, farmers, national and international seed companies, and NGOs on strengthening the seed sector. On his smartphone, Subedi opens the English-language demo version of the app,



PHOTO YE AUNG THU / APF / ANP

Farmers sowing their fields in Magway, July 2019

which won a certificate of merit in Hong Kong last year at the Asia Smart App Awards. The app is speech-controlled in Burmese, so that illiterate farmers can use it. The home screen shows pictures of rice, sesame, peanuts and legumes such as chickpeas, pigeon peas, black grams and green grams. Users can choose a crop variety and growing season, whereupon the app shows the nearest seed producers and how many baskets they have in stock. The farmers can then phone the producer to reserve seed. 'Over the whole of Myanmar there are about 15,000 small-scale seed producers who are also farmers, as well as a few national seed companies,' says Subedi. Sometimes farmers have to travel great distances to buy qual-

ity seed, running the risk that it has sold out by the time they get to the producer. The app solves that problem.

The story of farmer U Aung Myo Thant from Central Myanmar illustrates the importance of good seed. He grows rice, chickpeas and green grams, but finds himself forced to grow local varieties from seed from previous harvests. 'That seed germinates poorly, and produces seedlings that are not uniform, and gives low yields. So our product doesn't fetch a good price and we get into financial difficulties as a family,' he says.

The app has given him better access to quality seed. It solved a problem for seed producers too. Subedi: 'Seed producers need registered seed as propagation >

'Local seed germinates poorly and gives low yields'



PHOTOS ABISHKAR SUBEDI

ISSD MYANMAR WORKS ON FOOD SECURITY

Since 2017, Wageningen has been leading the ISSD Myanmar project, which works on improving the seed sector in Myanmar. The programme is funded by the Dutch government's Directorate-General for International Cooperation (DGIS). 'We are working on the availability of quality seed of a wide range of improved varieties of nutritious crops. That leads to bigger and more reliable harvests, and as a result, food security increases, people eat a more varied and nutritious diet, and farmers earn more,' says project leader Abishkar Subedi of the Wageningen Centre for Development Innovation (WC DI).

Ever since 2010, WC DI has also led ISSD Africa, in which seed experts work with local farmers, companies, NGOs, government bodies and research institutes to improve the seed sector in 12 sub-Saharan countries, including Nigeria.



material, in order to produce certified seed themselves. It used to take six months for the government to tell seed producers whether the ordered registered seed was available. Now the producer knows that within a month via the app.'

Thanks to its military regime, Myanmar was closed to the outside world for over 30 years before it became a democracy in 2011. That history has had an impact on the agricultural sector. There is not much knowledge about artificial fertilizers, for example, or about simple techniques for increasing yields. 'There are still a few older people who studied abroad, but after that the country shut itself off. It is very important now to train young people at all levels,' explains Subedi. ISSD Myanmar runs training courses

on business management for small-scale seed producers, and demonstrations to introduce them to new varieties and quality seed. The sector also needs agricultural extension workers and advisors on product quality and marketing. An education project is contributing to that (see inset).

DISEASES AND PESTS

Besides a lack of knowledge, the farmers and seed producers also face more and more problems related to climate change. 'Central Myanmar is experiencing more frequent and longer periods of drought. By contrast, the delta in the west, where a lot of rice is grown, floods more often due to heavier rainfall. In one particular area, the entire harvest of green grams was washed away

recently. Salinization is advancing in the lower-lying coastal regions. The changes in temperature and weather conditions are also causing diseases and pests,' says Subedi. So the farmers need seeds of resilient varieties of crops such as sesame, legumes and rice, which are more adapted to drought, too much moisture, brackish water or tolerant of diseases. To achieve this, the whole supply chain for seed is being professionalized, from the plant-breeding end to seed production and trade. The project works closely with the Myanmar Ministry of Agriculture, with consultations every six months with government bodies, businesses and NGOs to see what can be improved. As a result of these discussions, rules and regulations have been changed and time-consuming

bureaucratic procedures such as licensing procedures for seed producers have been simplified and speeded up.

Foreign seed companies can do business in Myanmar more easily now too. The Dutch ministry of Foreign Affairs and the Dutch embassy in Yangon are helping to stimulate trade, partly through financial support for ISSD Myanmar.

'It used to be a terrible job to get hold of information about all the licences you needed. Companies had to submit applications to three different departments,' explains Subedi. Nowadays an English-language website launched in 2018 provides clear information about licences for the import, production and sale of seeds. Through this website, the Myanmar Seed Portal, companies can also apply through a single channel. The applications are dealt with behind the scenes by specially trained staff.

SEED VALLEY

International companies such as Rijk-Zwaan and East-West Seed sell seeds of crop varieties from other South-East Asian countries in Myanmar, says Subedi. 'Myanmar also wants to produce its own local seed for rice, legumes, oil seeds, maize and vegetables, thereby creating more jobs. To this end, the country is allocating 800 hectares of land in Central Myanmar to both local and international companies.' This 'Myanmar Seed Valley' will also offer facilities for storage, processing, packaging and training. The government hopes to attract foreign investors and companies with tax exemptions. The government also has plans for the small-scale seed producers, who are required to start working in seed cooperatives. 'It is easier to organize training courses and to obtain loans if we work together,' explains Subedi. ISSD Myanmar has carried out pilots for the establishment of local seed producer cooperatives. The small companies that participated had more seed to trade and saw their turnover go up. To assess the

BETTER AGRICULTURAL EDUCATION

One of the challenges for strengthening the seed sector in Myanmar is the lack of knowledge and well-trained people. Wageningen is therefore engaged in improving agricultural education in Myanmar. At present, after their three-year programme, graduates of the 15 regional agricultural colleges do not have the knowledge the agricultural sector needs, says project leader Herman Snel of the Wageningen Centre for Development Innovation. 'We identify the needs on the labour market and help organize regional councils for consultations between educational institutions, agricultural organizations, companies and government bodies. We also advise the government and encourage cooperation between ministries and the public and private sectors, to secure more support for agricultural education.' The education project is led by Aeres Group from Wageningen, and the programme is financed by Nuffic, the Dutch organization for internationalization in education.

'The country is allocating 800 hectares of land to companies'

effects of this on the farmers, the ISSD team interviewed 1300 farmers. 'In total, about 62,000 farmers benefitted directly from quality seed,' says Subedi. Among them was farmer Ma Thein Nu from Chaung Oo, who grows rice, chickpeas and green grams. The seed she received germinates well and produces high yields, she says. 'Our incomes have gone up. I can now buy a small rice thresher, send my children to school, and renovate our house.'

'We are moving in the right direction,' Subedi remarks. The project leader expects that the seed sector in Myanmar will be competitive in South-East Asia in five to ten years. 'The culture in Myanmar is hierarchical. The advantage of that is that if the

boss decides something, it happens.' Myanmar is the poorest country in South-East Asia and the government is determined to change that. 'When they see how good the agricultural sector is in Vietnam and the Philippines, they think: we want to achieve that too.' ■

www.wur.eu/issd-myanmar

WCDI

WCDI's course 'Integrated Seed Sector Development' will be offered again in Wageningen in May. www.wur.eu/academy