

## Minitubers surprise even optimistic experts

With its Seeds2B\* initiative, the Syngenta Foundation helps smallholders worldwide improve their yields. In Indonesia, a potato partnership is shaping up even better than expected.



Indonesian smallholders share a problem with many other farmers in the developing world: they can often not find high-quality seeds to plant. Lack of access to good seeds means that they harvest much less than they could. “This is particularly evident in crops like potato”, says Clive Murray, the Syngenta Foundation’s Regional Project Manager. “Viruses and disease carried over in seed saved from previous years can seriously reduce yields.”

The two major potato varieties in Indonesia are *Atlantic* and *Granola*. Yields of both have been decreasing over the past decade. “They’re now only about 14-18 tonnes per hectare”, notes Clive. “That is just over half of what Atlantic growers achieve in Thailand, where there is much better access to clean seed.”

The Syngenta Foundation (SFSA) aims to help close this gap. It is working with East West Seeds Indonesia (EWINDO) to develop a local certified seed potato scheme. EWINDO is the national market leader for vegetable seeds, and has strong production and marketing expertise. SFSA provides additional know-how, links to further external experts and initial investment support.

### Tests point to a real opportunity

Production of disease-free seed potato is costly and complex. In 2013, SFSA invested in a greenhouse to produce clean minitubers, known as ‘G0 seed’. It followed this up with field trials to produce G2 and later G3 seed. “Experiences here confirmed there was a real business opportunity”, declares EWINDO’s Managing Director Glenn Pardede.



In 2014, EWINDO invested in a 300m<sup>2</sup> aeroponics system for mass production of minitubers (*top photo*) in Lembang, West Java. SFSA contributed technical support. The partners set

their yield targets “optimistically”, says Clive Murray, at 35 tubers per plant. However the second cycle, harvested this July, achieved well over 40. “That’s an exceptional result”, says Hariyadi Setiawan, Potato Project Manager at EWINDO. “It puts us in a strong position to produce G3 seed sustainably over the long term.” Such is the company’s commitment to this program that it is now building another 600 m<sup>2</sup> facility in East Java.

The impact of better access to high-quality G3 seed is likely to be significant. In Indonesia, potato is typically a smallholder crop. “The expected 30% increase in yield from using good seeds should make a substantial improvement to farmers’ livelihoods”, predicts Clive.



#### **Further information**

East West Seed Indonesia: [www.panahmerah.id/home](http://www.panahmerah.id/home)

\*Seeds2B: [www.seeds2B.org](http://www.seeds2B.org)

SFSA in Indonesia: [www.syngentafoundation.org/index.cfm?pageID=680](http://www.syngentafoundation.org/index.cfm?pageID=680)