

## FOOD SECURITY

Millions of people worldwide have limited access to sufficient and nutritious food. In the future the global food supply will increasingly become a problem, especially because of climate change and the depletion of natural resources. Specifically in developing countries and emerging markets food security is put under pressure. Food security is therefore one of the most important challenges worldwide and is featured prominently in the UN's Sustainable Development Goals, in the form of SDG 2 ('No Hunger'). An important part of PUM's activities is related to food supply. We are active in various sectors of crucial importance to food security, such as agriculture, horticulture, livestock and fisheries. PUM focuses expressly on strengthening the role of small and medium-sized enterprises in sustainable food production. As an organisation we can fall back on leading Dutch expertise and experience in agriculture and food.

LEES MEER

### DUTCH EXPERTISE FOR INDONESIAN PRAWN CRACKER FACTORY

Our annual plan 2018 started with the promising introductory title: **Change makers.**

Everyone knows the delicious snack the prawn cracker. In Indonesia, dozens if not hundreds of different types of prawn cracker are produced. The Javanese company Cassanatama Naturindo asked PUM for advice on the production of their prawn cracker pellets – the predried form of the cracker that still has to be fried in oil.

This apparent reversal of roles was unravelled when co-owner Ardley Widjaja explained why his family business needed the assistance of PUM expert Henk Afman. "In Indonesia, prawn crackers are traditionally fried and packed by hand. We export our products to the Netherlands and other countries in Europe where the crackers are machine-fried. That is why we must produce raw pellets of constant quality and regular size."

#### Testing, investigating and tasting

A key ingredient of the prawn cracker is the cassava. The starch in the cassava reacts to weather conditions and during the rainy season has other properties than during the periods. The production process has to be adapted all the time to ensure constant quality.

### AS ARDLEY EXPLAINED,

"Prior to Henk Afman's visit, we received complaints from our clients that our product was not constant; in other words, the quality was forever changing. Henk taught us a new approach; how to examine our raw material and carry out trials every time, to see what happens and whether we could accelerate the production process or improve the product. Thanks to this testing procedure, we have finally identified the best production method, and must stick to that method every time."

The most important advance in the production process was achieved with the personnel. "Henk advised us to put our workforce to work as efficiently as possible. The people in our company have years of experience, but lack training. For them, any change to the production process is difficult. The greatest challenge for the coming period is to convince our people why they need to change or improve their working method, every time."

### 'WE HAVE RECEIVED NO MORE COMPLAINTS BECAUSE THE PRODUCTS WE NOW DELIVER ARE OF CONSTANT QUALITY'



Henk Afman has now completed his 15th advisory mission for PUM. He built up years of experience in the food industry among others at Nutricia and Johma B.V.

### KNOWLEDGE OF PRAWN CRACKERS

Henk Afman commented, "Ardley acquired the company from his parents. His mother is still employed in the business, but is gradually stepping back. Ardley needed our assistance in two main areas. The constancy of the finished product was below par. And it turned out there was insufficient knowledge of precisely how prawn crackers are made. They always followed the same process but had little idea of why and how this influenced the specifications of the finished product.

We therefore launched a whole series of tests and trials to measure time and temperatures, mixing times, shear effects, etc. By changing just 1 parameter for each test, we were able to establish which process parameter influenced a particular product property. One of the problems for example was the viscosity of the dough.

That must be made measureable, if you wish to say anything about the process itself. We were able to measure the viscosity by dropping a ball from a fixed height into the dough. It took some trial and error with the angle of the ball to achieve sufficient definition, but we succeeded in the end, and now viscosity at Cassanatama Naturindo is expressed in mm Desty, named after the laboratory technician who assisted us!

As well as problems in the production process, I also offered Ardley advice on managing his business. What structure works best at this company, what types of people work there, and how do you get them moving forward? In that process, the Indonesian culture played an important role: what can you and can you not do?"

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