



▲ Pongu-flavoured stock powder is pressed into 12g tablets and conveyed for individual BOPP wrapping (shown right). Malda Pack describes Pongu as 'a smokey taste profile, consisting of river fish smoked over charcoal/ firewood and boiled cassava leaves'. Other co-packed variants are beef and chicken.



▲ Bob Bell, Promasidor's regional technical manager, and Lance Hendricks, Reitech SA technician.

◀ Malda Pack's Dean Rodel and Reitech SA's sales manager, Olaf Socher, in front of the 4g hard-pressed stock cube line.

Pressing for new technology frontiers

South Africa's first hard stock cube and tablet lines recently went live at contract packer Malda Pack's new facility in Hammarsdale (KZN). Nici SOLOMON discovers more about this technology and the export opportunities it's creating.

ESTABLISHED in 1995, Malda Pack has acted as co-packer for big-name customers such as Unilever, Imana Foods and the Promasidor Group.

Dean Rodel, acting on behalf of Malda Pack's owner, and assisted by a strong leadership team – including quality control, production, technical and supply chain managers – is handling troubleshooting issues and administrative problems.

Dean explains that although most products contract packed at Malda Pack's new 8 800m² facility in Hammarsdale's Keystone Park are for export markets, additional capacity enables the operation to meet local customers' needs in due course.

In 2015, Promasidor approached Malda Pack – which already packed and distributed its milk powder brands to 25 countries – to produce stock cubes/





Malda Pack's hard-pressed stock tablet and cube blenders, operators and packers.

tablets and help extend the Onga brand's reach into existing African markets. The case for a hard-pressed cube is based on market conditions, for instance, demand is high in Democratic Republic of Congo, where most sales are conducted from table tops in 40°C heat, making soft extruded products unfeasible. The Onga brand is also a market leader in Ghana, but Promasidor's facility only has the capacity to produce for local consumption, and not export market requirements.

'Based on Malda Pack's ability to manage short runs and to act as a central production and distribution hub for 200 tons of hard-pressed stock tablets and 60 tons of cubes a month, we were able to reach an agreement with Promasidor, and the 12g tablet and 4g cube lines went live on June 7,' Dean relates.

Malda Pack, he adds, has customised the maturation process, which cools and matures stock powder in just one hour, creating a continuous process that substantially reduces standing time and increases production time compared to the traditional 12- to 24-hour batch-by-batch process.

From the maturation room, powder is fed into the press to form either a 12g tablet or 4g cube, each

individually wrapped in a BOPP wrapper. The tablet tray is then overwrapped into a carton. The cubes, on the other hand, pass a counting machine and then fall into a bucket conveyor system and are packed using a vertical form-fill-seal machine.

Malda Pack opted for a load cell on each Corazza press, which automatically regulates the weight of the stock cubes and tablets, keeping the machines running consistently at 750 tablets or cubes/min and product rejection rates to a minimum.

According to Olaf Socher, Reitech SA's sales manager – local agent for IMA Dairy & Food, which supplies Benhil, Corazza, Erca, Gasti, Hamba and Hassia machine brands – Corazza is the global market leader when it comes to stock cube and tablet production machinery. And Malda Pack chose Corazza based on the excellent track record of 10 hard cube lines running at Promasidor's Nigerian facility.

Taking up the story, Andrea Pellegrini, IMA Dairy & Food's executive VP, explains that his company acted as the main contractor for this project, delivering 14 machines and integrating them with product preparation equipment, providing Malda Pack with two complete lines.

New premises: benefits, challenges and certifications

HAVING grown substantially over time, Malda Pack previously occupied five units in a Pinetown industrial park, two on opposite sides of the road. The resulting disjointed production flow and storage challenges (with only three metre stacking height) prompted the contract packer to look for new premises.

Keystone Park in Hammarsdale was chosen because it allowed the facility to be designed to meet specific food safety and production flow needs by segregating lines for spices, milk powders and soya to avoid cross-contamination issues. In addition, as an importer/exporter, the location will be ideal when the proposed inland container terminal comes online in Cato Ridge.

And, as Dean Rodel explains, Malda Pack has set up its own freight forwarding department on the premises, ensuring complete control and accuracy of documentation for inward and outward clearing, in the process realising significant annual savings.

Dean also stresses that being the first operating company in this new industrial park has been testing in terms of infrastructure development. 'The first challenge was our planned move being delayed by 22 days. This, in turn, pushed out our production start date,' he explains.

'The second challenge was running off a generator for three months and having to cope with unscheduled delays in a variety of services.'

At the time of PPM's visit, components for an in-house microbiological laboratory were on order. Once this is up and running, Malda Pack can increase the frequency of testing products and blends and have results validated by a SANAS-accredited laboratory on a monthly basis.

Additionally, the factory is to be audited for HACCP certification when three months' worth of production and cleaning records has been generated. It then plans to work towards FSSC 22000 certification early next year.





He goes on to emphasise that these Corazza packaging lines have been adapted over a number of years to suit African conditions and environments. 'They're fitted with robust stainless steel and food-grade components, and are easy to use, clean and maintain. For instance, we designed the presses with easy access for manual cleaning because stock cube/tablet powder creates a dusty environment, making it necessary to dismantle press tools and devices for cleaning. Additionally, to prevent damage and operator mistakes, sensors detect if these components aren't perfectly fixed in place again.'

Training and learnings

According to Davide Giordano, IMA Dairy & Food's sales manager, it took two weeks to install and commission the two lines. This was followed by two weeks of fine-tuning and training of Malda Pack's operators and maintenance engineer and Reitech SA's technician, Lance Hendricks.

'During training, our engineer focused on how to use and maintain the machines, troubleshooting to fix potential problems, and what needs to be communicated to us in Italy to provide a clear idea of

what's happening in the factory when assistance is needed,' Davide explains.

Because the technology is new to South Africa, Lance Hendricks has been intimately involved in the process. 'Assisting with set-up and receiving in-depth training under production process conditions to learn how these lines work has been invaluable because I am responsible for the local after-sales service and support to Malda Pack,' Lance states.

Three Corazza engineers worked closely in partnership with the Malda Pack team during the critical line start-up phase to optimise the machines' performance (based on customer specifications) and to ensure correct product formulation.

As Dean Rodel remarks, getting the blending right is vital. 'If powder is not wet enough or is too wet, the whole line shuts down!'

In addition, Bob Bell, Promasidor's regional technical manager – who has been assisting with the factory move and overseeing the training of operators and maintenance technicians – describes this new technology experience as similar to having your first baby. 'You feel confident when all the nurses (or in our case, engineers) are around to point you in the right direction. It becomes more challenging, however, when they hand over the baby and you take it home (or they return to Italy). This is because a lot can go wrong very quickly across 14 pieces of machinery and 16 ingredients per blend, so it's imperative to train everyone to know what they're doing automatically. The positives from this learning curve are the confidence that we can overcome the problems and know how to fix them the next time they occur.'

CO-PACKING



IPSA'S WESTERN CAPE REGION BRINGS YOU THE MUCH-ANTICIPATED 2017 ANNUAL SEMINAR, THIS YEAR ENTITLED:

MYTH BUSTERS

YOU'VE HEARD THEM ALL:

'Packaging is the biggest contributor to the solid waste stream',

'Save our trees and avoid climate change',

'plastic packaging causes cancer'

... and all the rest.

The myths about packaging abound and it's our responsibility, as industry professionals, to debunk fake news when it comes our way. Don't delay. Book your seat, bring a colleague, and join us to hear about the myths and learn the real facts from our industry's experts.

To reserve your place at the seminar please contact Emma Dawson.

Booking enquiries: 082 566 8558 or 021 856 1783. Bookings can be emailed to secretarywc@ipsa.org.za.

Institute of Packaging (SA)

Western Cape Region's ANNUAL SEMINAR

September 27, 2015 at 12:00

River Club, Liesbeek Parkway, Observatory, Cape Town

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| Early Bird Members | R500 | Early Bird Non-members | R650 |
| Members | R550 | Non-members | R700 |

SEMINAR PROGRAMME

- 12:00 Registration
- 12:30 Finger lunch
- 13:30 **MYTH BUSTER #1**
Mark Liptrot | Sustainability Manager | Constantia Afripack
Mark explains why it's a myth that laminated flexible packaging cannot be recycled and is bad for the environment.
- 14:00 **MYTH BUSTER #2**
Chandru Wadhvani | Joint Managing Director | Extrupet
Chandru debunks the myth that plastic beverage bottles create waste and aren't recyclable in South Africa.
- 14:30 Tea/coffee break
- 15:00 **MYTH BUSTER #3**
Annabé Pretorius | Founder | Plastix 911
Annabé disputes the myth that plastic packaging must be biodegradable to save the environment.
- 15:30 **MYTH BUSTER #4**
Chris Burchmore | Africa Regional Director | Forest Stewardship Council
Chris upends the myth that using paper packaging destroys forests.
- 16:00 Discussion and questions
- 16:30 Close and cash bar