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Second factory follows hot on heels of first

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South Africa's first commercial cassava starch plant has been operating successfully in the Northern Province for the past six months following its official opening in January.

Reported to be one of the few commercial cassava-starch operations in Africa, the R28-million plant, which is owned and operated by CS Manufacturing, of Parklands, Gauteng, is expected to reach full production of 25 000 t/y by December, reports MD Jim Casey.

This is almost 25% of the present South African market.

Cassava is being grown on the South African company's own farms near the factory, which account for about 50% of the capacity of the new plant, with the remainder being supplied by farmers in the area.

The company has not only proved that cassava grows successfully in South Africa, but that the yield is far greater than that achieved in the Far East, South America and other parts of Africa.

Since the cassava has to be processed within 24 hours after harvest, it was essential that the factory be located as close to the farming area as possible, explains Casey.

Following the initial success of the first factory, which uses technology imported from Sweden and Denmark, the company is expected to open a second factory, with a capacity of between 70 000 t/y to 75 000 t/y, in about 15 months.

The location of the second factory has not yet been disclosed.

Despite opposition from the country's largest starch producer, the company is confident that it is making inroads into the South African starch industry.

"There exists a vast market for cassava starch, which is similar to potato starch, in South Africa, since it displays superior properties over other starches for use in the paper and food industries," says Casey.

In addition, the cassava – unlike maize, which has been the main source of starch in South Africa until a few years ago – can remain in the ground until it is needed.

The initial reaction of the South African market to the new product has been positive and, once persuaded to use cassava starch, companies noticed a difference in quality within 24 hours, reveals Casey.

The plant, which originates from South America, grows in a bushy form with greenish-yellow flowers, while the roots, containing 20% to 32% starch in six- month to eighteen-month-old plants, are up to 80 mm thick and 910 mm long.

The plant grows generally to a height of between 1 m and 3 m, and is harvested after six months to two years.

Stems are cut into stakes of about 150 mm long, which are planted back in the ground, while the tuberous roots are processed in the starch facility.

Processing the starch from the roots of the plant is simplified, as the cassava roots do not contain protein, as does maize, which has to be separated from the starch.

In a fully-automatic process, the cassava roots are peeled before being washed, chopped and disintegrated into a liquidised form.

The starch is then separated from the pulp before being concentrated.

After the starch fibres are screened and washed, the starch milk is dewatered, and dried and cooled to form the starch used in corrugated cardboard, paper and food production.

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The factory also provides for the processing of cassava for sale to the animal-feed market.

As a result of the expected growth of this market, it is expected that the future expansion of the project could be a significant economic boost for the Northern Province.

Since its establishment in 1993, the company has taken about 25% of the starch market for South African paper and board production with the imported Thai cassava plant, and 15% of the overall starch market (including the food industry).

Over the past five years the company has grown cassava on a trial basis to ascertain the best cultivars, and to identify the best areas for growing the plant.

Hitherto, all starch produced on the South African market has been derived from maize. All cassava-starch imports have now ceased.

Although the South African starch market expects to experience about 2% growth each year, this is still insignificant when compared to markets in Europe, reports Casey.

The South African starch market produces about 300 000 t/y of starchy products, of which 100 000 t is starch only.

In Europe alone the starch market, which is split between maize and potato starch, is calculated to be in the region of six-million tons a year.

Commenting on its growth strategy, Casey reports that the company will be looking towards taking advantage of the local starch market's 2% yearly growth rate, while hoping to procure a part of the existing market.

"It is our aim to take over a reasonable percentage of the local market, as we feel it is large enough for two companies," he reports.

South African starch users will also benefit from the choice they are now offered between maize starch and cassava starch.

Following the initial successful introduction of cassava into South Africa, the company is expecting further growth in the future, says Casey.

"We do not foresee having any problems in promoting and selling cassava as a result of its superior qualities, and the factory has proved to be successful," he tells Engineering News.

"However, we do foresee some challenge from our main competitor, which has been the sole producer in the starch industry for quite some time," he adds.

"Therefore we will have to ensure our customers' happiness, and ensure that we provide the technical assistance and help them with any problems that they may have in starch applications," says Casey.