

IT TAKES ONE “LITTLE WONDER” TO WEIGH ANOTHER

Case Study **Starke Ayres**

Facts and figures

- » The Ishida CCW-M-214W-S/005-SS is designed to handle very small target weights with great accuracy and speed.
- » Known as the ‘Lilliput’ because of its small size (it has a 650mm x 650mm footprint and 0.05 litre hoppers).
- » The Lilliput packing process has a typical speed of 52 packs per minute.
- » Giveaway is down to just 2%, a reduction of 60%.

One of South Africa's leading seed companies has installed an Ishida ‘Lilliput’ multihead weigher to increase capacity and provide greater control over pack fill accuracy, which is of crucial importance in this highly competitive business.

Challenge

Starke Ayres produce a great variety of pack sizes, mainly within the range 0.33g to 100g.

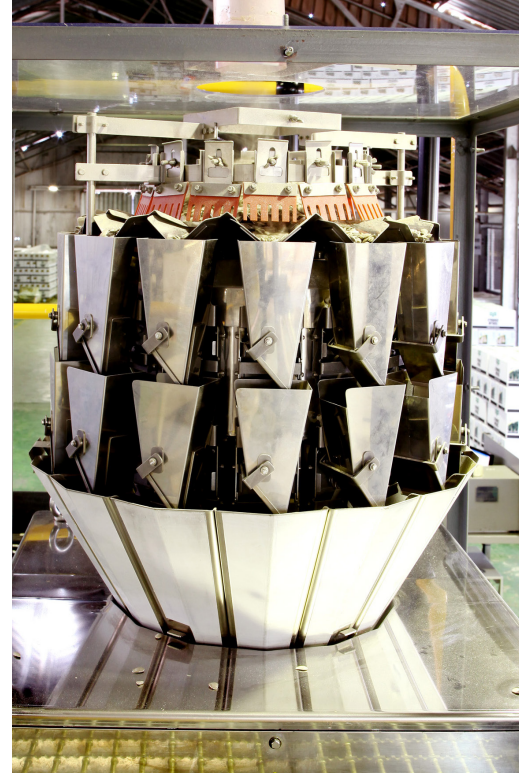
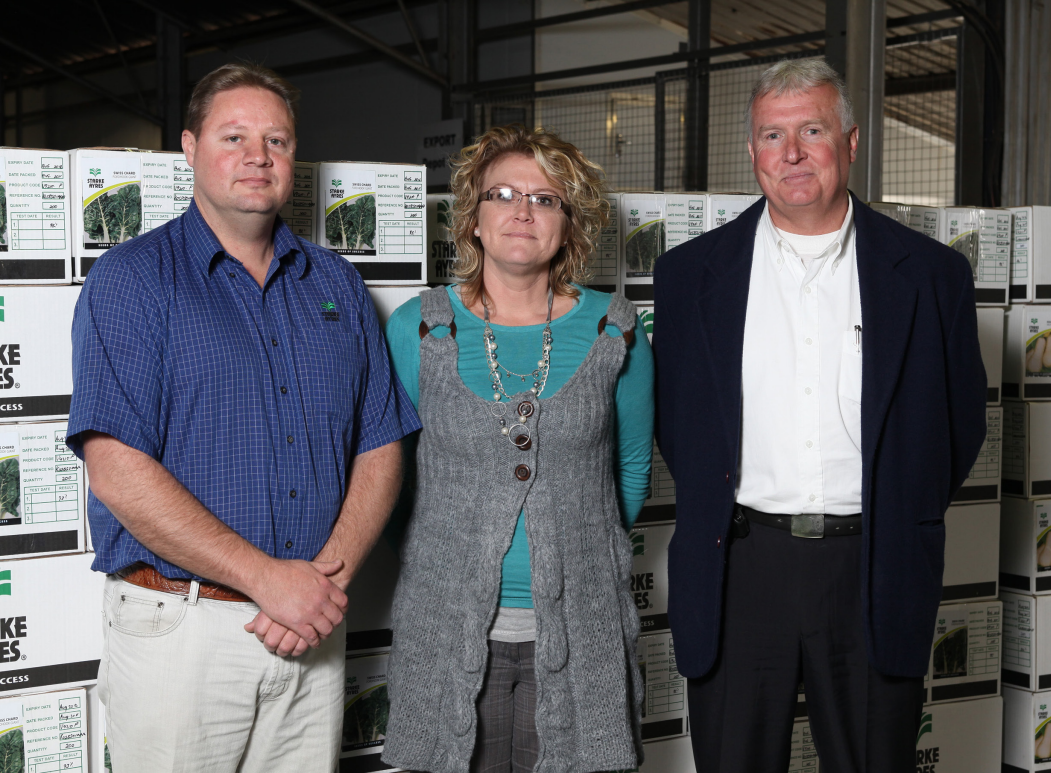
Packing seeds by hand is highly labour-intensive. In manually weighing 1000 hybrid tomato seeds, for example, overweight at the level of over 5% is unavoidable in order to be absolutely sure that the pack contents will measure up to the declared content, not to mention the critical eye of the grower.

Solution

Knowing that multihead weighing could transform this situation, Starke Ayres looked into the available options and chose an Ishida CCW-M-214W-S/005-SS. Known as the ‘Lilliput’ because of its small size (it has a 650mm x 650mm footprint and 0.05 litre hoppers), it is designed to handle very small target weights with great accuracy and speed.

The Ishida Lilliput at Starke Ayres has brought giveaway down to just 2%, a reduction of 60%. This means that for every 35 packs or so, a given batch of seed will yield one extra pack. Automatic weighing on the Ishida achieves this while practically eliminating the possibility of any underweight packs reaching the grower, something that manual weighing could never accomplish with such a low level of giveaway.





“ The after sales support and training given by Ishida was outstanding ”

Few companies can claim more experience in the seed business than Starke Ayres Pty Ltd, of South Africa, which continues to thrive after 135 years in the industry. Starke Ayres is strongly focused on research, development and breeding of vegetable seed cultivars, and in the production, marketing and distribution thereof.

From its headquarters, based on a farm to the East of Johannesburg, the company markets and distributes to commercial vegetable growers in many countries across Africa, North and South America, Europe and the Mediterranean as well as Australia.

Starke Ayres develops and breeds its own high quality hybrid vegetable varieties. Breeding programmes are focused on tomatoes, pumpkins, zucchini, butternut squash, sweet corn and peppers. The company also has a strong national retail component supplying hobbyists with vegetable and flower seeds as well as a range of pesticides and plant nutrients.

A single seed often has the potential to produce many kilograms of fruit or vegetables. Yet a Little Wonder tomato seed, for instance, measures just two millimetres across and weighs less than 0.002g. This large ratio of value to weight means that getting products into packs is a crucial part of a seed merchant's business and any advance in accuracy can directly affect the bottom line.

Seed is delivered to the top of the Ishida using a vacuum system. It passes through the weigher driven by gravity with the assistance of a powerful vibratory system. To prevent air currents from interfering with the process, the entire machine is enclosed in a transparent case.

At the outlet of the discharge chute of the Ishida, weighed product falls into a bagmaker. The filled and sealed bags are bundled and palletted.

With manual weighing, the packing process ran at between 15 and 20 packs per minute. The Ishida has increased this by well over 250%, with a typical speed of 52 packs per minute.

Apart from the primary benefit of consistent pack weights, the new multihead has speeded up distribution and, of course, increased capacity while markedly reducing labour costs.

Starke Ayres also believes it benefited from the services surrounding the weigher. "The after sales support and training given by Ishida was outstanding," says Tewie Pretorius, Factory Manager at the company's vegetable seed packing plant.

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