How BrimaPack evolved over 75 years
from a blacksmith's workshop to an international machine builder

“We started as farriers; today our machines use AI to determine the cutting height”



BrimaPack receives a Metaalunie certificate during its anniversary celebration to mark 75 years in business

When Ron van de Pavert's father started shoeing horses as the village blacksmith on 1 September 1951, a future as an international machinery manufacturer seemed unlikely. Yet by 1968 he had already built a self-propelled beet harvester for a local contractor. More than half a century later, BrimaPack supplies machines and complete systems to customers from South Africa to Iceland and from California to Taiwan. “When you tell the whole story, it all sounds very logical in the end. But it often starts with chance,” says Ron. “You do something, meet someone, and one thing leads to another.”



Ron van de Pavert’s father began as a farrier in 1951, laying the foundations for the family business

His father died in 1972, aged 48. His mother continued the business with the existing team. At the time, its activities covered agricultural mechanisation and steel fabrication, including cattle housing equipment. His eldest brother Jos joined straight from school in 1983. Jos focused mainly on the technical side, taking up turning, milling and drilling. “Over the years we built a great many special-purpose machines. We basically made whatever our customers needed.”

Ron had also gained experience outside the family business. Until 1995 he worked in robotics in Amsterdam, but he felt ready for a change. He called his brother with a plan to set up on his own. “I said, ‘Look, I’d like to rent a few square metres of the car park, put up a portable cabin and start my own business.’ There was a brief silence. Then my brother said, ‘Why don’t you just join the business?’ I thought about it for two seconds. Why not, indeed?”

THE FIRST BROCCOLI MACHINE

The move into fresh produce also came through a chance encounter. In 1997 the company met broccoli grower Peter Appelman from Stompetoren. He asked whether the machine builders could develop a machine to pack broccoli. Ron and his brother took up the challenge. In 2000 they sold their first broccoli machine in the Netherlands.

Initially the company built stand-alone packing machines, but demand grew for complete solutions. “At first our thinking was very simple: we build a packing machine, and the customer works out how to fit it into their process. But more and more customers came back asking whether we could supply the whole system.”

That development also took BrimaPack into harvesting. The company now builds machines that combine various steps in the field and in processing. Its focus is on iceberg lettuce and broccoli, alongside crops such as romaine lettuce and celery.

LABOUR SHORTAGES AND AUTOMATION

According to Ron, the economic reasons for further mechanisation are much the same in many countries. Labour costs are rising, but just as important is that growers and processors cannot find enough people. “The biggest problem is really the availability of labour. They simply can’t get the people any more. That combination of higher costs and staff shortages means they have to automate.”

In England, BrimaPack felt the effects of Brexit. After the 2016 referendum, Ron says, many foreign workers left the British sector. This increased demand for automation, making England a key export market for BrimaPack for years. He now sees similar developments in the United States and South Korea, where labour is becoming scarcer and more expensive, and demand for automation is therefore growing.

The appeal of mechanisation is not just about capacity. BrimaPack also works on solutions that make the work less physically demanding. One example is automatically cutting heads of lettuce. Instead of workers bending over in the field to cut them by hand, a machine does the cutting. The heads are then presented at working height. “It’s much nicer to work at a normal height and pick up the heads, rather than constantly working at ground level. That also helps make the work more attractive.”



A BrimaPack machine at work in the field

BrimaPack has systems like these operating in England and the United States, among other countries. In England, work is also under way on AI Vision, which lets the machine automatically determine the correct cutting height. “The right height matters. If you cut incorrectly, you still have to do manual work afterwards. And if you need people again for that, you lose some of the time you’ve saved.”

PACKAGING TO PREVENT WASTE

Alongside mechanising harvesting, BrimaPack develops packaging solutions that can extend the shelf life of vegetables. One example is BrimaFilm AF, a film for broccoli and other brassicas. Ron says that, under certain conditions at room temperature, the film can extend broccoli’s shelf life by five to six days compared with unpackaged and shrink-wrapped broccoli.

This brings up the debate about plastic packaging. While the sector seeks ways to reduce packaging materials, packaging can also prevent food waste. Ron likes to use cucumber as an example. “It has been calculated that a seven-millimetre slice of cucumber has roughly the same CO_2 footprint as its packaging. Yet that packaging keeps the cucumber fresh for longer.”

He therefore believes the assessment should not focus solely on the packaging material. Waste of the product itself must also be considered. “The CO_2 footprint of broccoli that actually reaches the consumer is much smaller if you prevent part of the harvest being lost because the product wasn’t packed properly.”

BrimaPack is also seeking ways to reduce fuel consumption in its harvesting machines’ drive systems. The machines are electrically driven, with a generator supplying the power. Ron cites consumption of around four litres of fuel an hour, compared with roughly ten litres for some competing machines.

Running entirely on batteries is technically possible, but economic viability remains a constraint. “A harvesting machine is right out in the field. You then have to bring in charged batteries and take the empty ones away. That uses a pallet’s worth of transport capacity, and therefore money. It can be done technically, but it is simply too expensive. Hydrogen is a better alternative in the longer term.”

AUTOMATED ICEBERG LETTUCE HARVESTING

International growth takes more than a machine that works well technically. Products differ between countries, so systems must suit local growing conditions. A head of iceberg lettuce in Chile, for instance, can be considerably larger than one in England. Packaging also varies by market. While romaine lettuce in Germany is sometimes still packed individually, buyers in the United States may want six in one pack. “You have to adapt your automation solution accordingly every time.”



Four BrimaPack machines working side by side in the field, where mechanisation helps increase harvesting capacity

BrimaPack finds customers through word of mouth and the internet. Ron describes the sector as relatively close-knit: large growers know each other, and experiences with machines spread quickly. Over the next five to ten years, he sees particular growth opportunities in the United States. BrimaPack wants to strengthen its position there and expand production capacity. Further automation of iceberg lettuce harvesting is a key requirement. "The big volumes are in iceberg lettuce, but that crop is not easy to harvest automatically. That's why we are working closely with seed companies to find suitable varieties. After all, the machine has to match the characteristics of the plant."

The company itself also depends on technical staff. Ron recognises the staff shortages his customers face, but sees an advantage in BrimaPack's way of working. Engineering, software development and assembly are largely carried out in-house. Machines are fully built and tested in the workshop before going to the customer. "The nice thing is that people here make the product from start to finish. We build the entire machine here and can deliver it in working order. That makes the work more enjoyable. We do the engineering, software and assembly ourselves."

SMALL STEPS, A BIG DIFFERENCE

Looking back on 75 years of family history, Ron sees no sudden shift from blacksmith's workshop to high-tech machinery manufacturer, but a series of smaller steps. From shoeing horses to tractors, from steel fabrication to special-purpose machines, and then from a packing machine to a complete harvesting solution. "If you look at all the steps in between, each development was logical. Only when you zoom out do you see just how big the difference really is: from a farrier to a machine that uses AI to determine the cutting height of iceberg lettuce." (JG) •

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