

Explosive start to the asparagus season

At the end of March all the experts agreed, the 2009 asparagus season would be a late one. But nothing is as unpredictable as the spring, and in the week after Easter asparagus harvesting in North West Europe started with a bang. Even later crops of Backlim (covered with white thermal sheeting) were already harvested in the last week of April. The sudden, lengthy spell of high temperatures resulted in a great number of hollow asparagus, particularly in the region around Schrobenhausen (Germany). This region saw cold weather until mid-March, with still some snow on the ground, and the rapid change to high temperatures resulted in many hollow spears. A number of farms in the German region of Frankfurt / Karlsruhe also experienced a lot of problems with hollow spears, although to a lesser degree. The commercial benefits of measures aimed at forcing the harvest, such as heating, tunnels and mini tunnels were considerably less compared to last year. The high temperatures meant that the market had to cope with a flood of asparagus early on in the season, so last year's high price levels were not realised in April. Partly caused by the severe winter, the production of nearly all varieties was relatively thick. Gijnlim, the most widely grown variety, is still unparalleled in



the early segment regarding production and quality. On light, sandy soils Avalim performs well through excellent spear thickness.

The season in South Europe fluctuated widely. In the South East of France the harvest started exceptionally late this year, and during harvest the region were plagued on several occasions by heavy rainfall. In the South West the start came early and initially weather conditions were much better, growers here were able to benefit from good prices for the first asparagus on the market. Vitalim once again proved its worth by its very early start and high productivity, plus this variety has little susceptibility to breaking and hollow spears.

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Greece

Stopping harvesting

From manual to mechanised harvest

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Greece

In Greece asparagus was already being cultivated in 2500 B.C. The plant was not only valued at the time for its culinary properties, but equally for the medicinal power attributed to it. Nowadays, white asparagus is widely grown on a large scale in Greece. In 2006 the growing area covered around 4150 hectares with a total yield of 23,000 tons. The main region of asparagus production is in the province of Giannitsa, other important regions are Evros, Xanthi and Agrinio.

The very limited domestic consumption means that 99% is exported. The key

export destinations are Germany (87%), the Netherlands (7%) and Italy (3.5%). Greece is the main exporter to Germany and accounts for some 50% of the total imports of asparagus into Germany. Greece has adapted its growing methods to suit German wishes. In Greece they like to harvest as early as possible in the season, as once local German production kicks off imported asparagus is no longer interesting to German consumers. The current Greek growing area is relatively stable, but has shown a slight decline since 2000. This fall is partly caused by a higher growing area in Germany and the increasing use of thermal sheeting to bring forward production.

Stopping harvesting

A frequently asked question during the asparagus season concerns the right moment to stop picking. To answer this question, it's necessary to understand the physiology of the plant in greater detail. During the harvesting season the plant uses the energy stored in its root system. The plant stores this energy in the form of sugars, namely carbohydrates. These carbohydrates are created from the stage of growth when the plant has fully developed foliage. Storage of the accumulated energy starts when the ferns die off naturally in the autumn. This power house is then needed for asparagus production and foliage growth.

When determining the ideal moment to stop harvesting it's important not just to take the current production into consideration, but also the preceding period. Stopping is necessary if the carbohydrate level has fallen to an extent that there is still sufficient energy to form new foliage. Foliage development in the previous season and production during the current season influence the carbohydrate levels in the roots. Measuring the carbohydrates levels should theoretically indicate the right moment to stop harvesting. But, it's not only the sugar level that is indicative; variety traits and the regeneration capacity also play an

important role. A correctly working model is not yet available as an indicator. Until such time, is actually quite simple; if the spears start to get thinner this often means that the weaker buds are forming spears, an indication that the plant is running on its fuel reserves, so it's high time to stop harvesting. Plus, it is also highly important to stop when the speed of growth is high so that vigorous spears can form which will provide a strong fern canopy.

From manual to mechanised harvest

Faced with the pressure of increasing labour problems and to cope with peaks in labour during the harvesting season, many companies have taken a new, innovative route. These issues have prompted companies to develop machines that completely mechanise the harvesting process. These innovations fall into two categories; a non-selective harvester (make; Kirpy) and the development of selective harvesters (various manufacturers).

The Kirpy's rotating discs cut into the bed to a depth of about 10 cm above the head of the plant, before lifting the asparagus out of the bed via an elevator belt to a sorting band. All the spears in the bed are harvested in this way. This method results in a harvesting interval of between 4 and 10 days, depending on the growing conditions. The main advantage is the very high capacity, with approximately 5 people the machine can move at a speed of 2-3 km/hour and at harvesting no remains of plants or other soiling is left behind in the bed. However, these important advantages should be offset against a number of other consequences. For example, consider the plant's reaction to all the spears being harvesting at one and the same moment, the lengthy interval between harvests in unfavourable weather (up to 12 days) and possible

quality losses (many broken spears). This season the machine will be used on a larger scale, so we can get a better idea of how it can be used optimally and if the machine offers operational advantages. The development of selective harvesters is also in an advanced stage. The machines use camera technology to localise individual asparagus spears. Once spears have been localised they are picked individually and placed in crates carried along by the machine. Again, the big advantage offered by these machines is that asparagus can be harvested using a minimum of labour and almost 24 hours a day. Compared to the Kirpy, this machine has a lower capacity, but is the closest in method to traditional harvesting. Unlike the Kirpy, these machines are not yet available operationally. However, developments are at an advanced stage, so they are expected to be on the market in a couple of years. The prospect of combining this technical development with the two row system described elsewhere appears interesting. Combining the two would give a positive impulse to the profitability of asparagus growing.



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