



Production is determined by;

The production potential of asparagus is to a large degree determined by the quantity of carbohydrates that can be stored in the underground root system during the summer and autumn. The hundreds of fleshy roots on the asparagus plant together form a large reservoir of carbohydrates (CHO). The fuller the reservoir, the stronger the plant will be able to produce after the winter. The extent to which the reservoir is filled can be measured with a Brix meter. Generally speaking, the highest Brix percentage is measured in November, with values of anything up to 25. Shortly after harvesting, when the Brix percentage is at its lowest level, values are generally around 10. However, a small root system can produce the same Brix percentage in November as a large one, although in this situation the total quantity of carbohydrates in the larger root system will be significantly higher than in the smaller one.

There are therefore two basic principles that determine the production potential of asparagus. Number 1: the volume of the root system (the size of the reservoir), and

number 2: the Brix percentage in November (the extent to which the reservoir is filled). The volume of the root system is to a large extent determined on planting. Soil preparation and the depth of soil available for the root system to establish are of crucial importance. The depth of the soil for the root system is not only determined by the penetrability of the soil but also by the nutrient levels deeper down in the soil. This is based on the rule of thumb that every 10 cm of depth of soil available for the root system represents one harvest year. The Brix percentage in November depends very much on influences throughout the year. Strong foliage development during the summer is particularly important. Correct disease control and irrigating at the right time are also important growing measures. Less controllable but certainly not without relevance are the weather conditions in September and October. Relatively dry conditions with large differences between day-time and night-time temperatures and sun are the ideal weather conditions for storage of carbohydrates.

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How to grow....Gijnlim

Ahead of the field in seed quality

Get off to a flying start

How to grow....Gijnlim

For many years Gijnlim has been the most widely grown variety in north-western Europe and in the UK for both white and green asparagus. Gijnlim is the ideal choice for many because the variety combines a very early start with high production potential and reliable quality. So far the variety outstrips every other variety in terms of earliness and production. But like any variety, Gijnlim also has its weak points, and it is important to be aware of these so that you can take the appropriate growing measures. For example, we know that if the variety is planted on soil that is susceptible to drought, paying extra

attention to irrigation will be rewarded by yield and spear thickness. Another point to consider is disease control. Gijnlim's highly compact foliage sometimes fails to dry out properly in the autumn, which can encourage rust. But remember that the first sprayings for disease control in the summer are often much more important than the last ones in the autumn. In practice, Gijnlim has been grown ever more widely in recent years because of its tolerance to Fusarium. Research in Germany has shown that Gijnlim delivers excellent results on sites that are replanted. When replanting, make sure you plant fewer plants in order

Limseeds®
the asparagus breeding company

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to maintain spear thickness during the growing period. When choosing your variety, don't be tempted by irresponsible risks; opt for operational reliability and choose Gijnlim.

Ahead of the field in seed quality

Because a good crop starts at the very beginning, the quality of the seed is a top priority for Limseeds. One of the aspects we focus on in seed production is *Fusarium* spp. All the greenhouses in which we produce the seeds for the Limseeds varieties are designed to keep out insects that may bring in diseases or contamination.

This unique method of seed production delivers significantly more guarantees in terms of variety purity than the most common open-air seed production methods. All seeds sold to nurseries and asparagus growers are checked for purity, germinative power and *Fusarium* spp. by an independent Dutch government agency (Naktuinbouw).

This institute keeps a sample of every batch of seeds sold as a reference sample in long-term storage. The vast majority of Dutch nurseries have their future planting fields independently tested for *Fusarium* spp. and nematodes with a view to minimising the risks of disappointing results.

Get off to a flying start

Planting asparagus for commercial growing involves great care and accuracy. It represents a high investment, one which you will hopefully be profiting from for many years to come. Mistakes made in the early stages of planting are a costly matter and may affect your annual profits to the tune of hundreds of euros in losses per hectare. One of the first steps to be taken is selecting the site. Pay particular attention here to the highest ground water level and the possibilities of being able to irrigate. The ground water level should preferably not be higher than 1 metre below ground level. A higher ground water level means the depth of the soil available for the root system to establish in is less, which will result in a lower yield potential. When selecting a site always take a soil sample. Try to sample at a depth that is suitable for rooting or can be made suitable for rooting. Fertilize based on the results of the sample analysis, and pay special attention to the acidity of the soil - asparagus appreciates a high pH. Clearly agree the number of plants, variety and grade with the supplier of the plants. Talking about A and B plants is not everything, it's better to discuss the number of plants per 10 kg or an average plant weight with a lower limit. Preferably choose plants with a weight that varies between 70 and 120 grams. Heavy plants are not by definition better, it is far more important that the plants are healthy and supplied fresh.

Inspect the plants as soon as they arrive at your company. Check not only the number of plants delivered, but also examine their quality. Make sure the buds on the plants are firm and that the roots are free of moulds and not too dehydrated. Report any irregularities to your supplier immediately. Lodging a complaint with the supplier once the plants have been planted out and are already growing is not a realistic option! Plants don't necessarily need to be planted straight away provided they are stored in a cool, dry place out of any direct wind. Under these conditions plants can easily be stored for 7-10 days. If weather conditions force planting to be postponed, then it's best to store the plants in cold storage at a temperature between 2 and 5 degrees Celsius. This will prevent the plants sweating and the roots from starting to produce shoots. If the plants are stored for any length of time in cold storage (several weeks) there is a risk of dehydration. Regularly spraying the floor of the cold store with water can help alleviate the problem. However, always immerse the plants in water before planting and add an agent that will prevent *Fusarium* infection. This preventive treatment is recommended in all circumstances. Do not force any soil treatment in unsuitable conditions; wait patiently for the right soil and weather conditions to occur naturally. With correctly stored plants any damage will

never be as much as when development is delayed because the plants were put into soil that was far too wet, for example. After planting, cover the crowns with enough soil but limit this to around 5-10 cm. Covering the plants with too much soil will hamper rapid root establishment and early growth. Mechanically filling the trenches during cultivation also acts as a form of weed control each time, so treat the soil with care and fill the trench in 2-3 operations. A chemical treatment to control weeds can then be applied or you can continue to control weeds mechanically.

Company information

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Information about varieties developed by us (Avalim, Backlim, Gijnlim, Grolim, Herkolim, Thielim, Vegalim and Vitalim) can be obtained from our variety specialists. They can be reached using the telephone and fax number or email address stated above.

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