

Preparation

The chicory cultivation starts with the sowing of the chicory roots. The chicory root cultivation preferably requires a light clay soil with little humus. These sandy loam soils have less than 20% lutum and less than 40% silt particles. The humus percentage is preferably around 1.5 to 2.5%. Good drainage on the one hand and the possibility to irrigate on the other are also important. Finally, choose plots with little disease pressure from *Phytophthora*, *Sclerotinia* and *Phoma* are common diseases in this context. Please take this into account when choosing the previous crop.

Sowing

The general guidelines for sowing chicory were drawn up a long time ago but are still in use today: the minimum recommended 24-hour temperature (this being the average of the day and night temperatures) for a good germination and emergence of the chicory seeds is 12°C. Low night temperatures (around freezing point) also increase the likelihood of bolting during the field phase (bolting is when agricultural and horticultural crops prematurely produce a flowering stem before the crop is harvested, in a natural attempt to produce seeds). In other words, don't sow until the average 24-hour temperature is about 12°C. The best emergence results are achieved with the shortest possible time to emergence. Shallow sowing (0.5-1.0 cm) in combination with irrigation offers the greatest chance of success. If irrigation is not possible, then deeper sowing will increase the risks: the time to emergence will increase, and when the conditions deteriorate (lower temperatures, crust formation) then this can have disastrous consequences for the emergence of the seedlings. When sowing seeds with a pneumatic seed drill, Chicosem recommends a hole diameter of 0.55 - 0.65 mm for our precision seeds (coated or uncoated) and a hole diameter of 0.9 - 1.0 mm for our minipills.



Fertilisation

Chicory requires controlled growth. An excess supply of nitrogen and potassium in particular causes too rich growth, high leaf mass formation and increased disease pressure. Moreover, in the forcing phase we see a poorer quality and more disease pressure due to softrot bacteria. Chicory extracts roughly 200 kg N and 400 kg K₂O from the soil at an average production of 180,000 chicory roots in Western Europe (about 30 tons net). Start with a low initial level of nitrogen in the soil. A starting gift N is usually not necessary. If the crop is growing well, it is possible to add fertilizer with 1-3 doses of a maximum of 25 kg N per dose to maintain growth. Fertilizing potassium is only necessary if the potassium availability in the soil is very low. Then give a maximum of 100 kg K₂O in one or two times during the growing season. These recommended doses are based on Dutch soil types and climate conditions and can therefore only be used as a very global guideline for other cultivation areas.

Lifting the roots

The chicory roots are lifted when the optimal diameter has been reached at the end of the growing season. The diameter of the chicory root largely determines the final head weight. The optimal root diameter therefore depends on the crop weight that you want to achieve in the forcing. The most optimal root diameter is between 4.0 and 5.0 cm. This diameter is reached after 140-160 growing days. If a dry matter analysis of the chicory roots is carried out just before or immediately after lifting the roots, these will have a dry matter of at least 22% and optimally between 24 and 26%. The N content is optimal for early varieties between 0.6 and 1.0%, for medium varieties between 0.8 and 1.2% and for late varieties between 1.2 and 1.6%. The K content usually fluctuates between 1.5 and 2.0%.

All descriptions, recommendations, and advice on crops or otherwise featured in this leaflet have been put together with due care. Descriptions are exclusively intended as general information and not as a measure of quality or warranty. Recommendations and advice on crops or otherwise are general in character and are at best indicative but not applicable for a variety of company circumstances and all local conditions for growth or otherwise. Chicosem will in no case accept liability for results in cultivated products that deviate from the information in this leaflet. Clients must decide for themselves whether the products featured in this leaflet are suitable for the user's personal company circumstances and for use in local cultivation or other conditions. All pictures, images, and illustrations are exclusively intended as general information and not as a measure of quality or warranty. Images of varieties were made in optimal conditions. Comparable results are not guaranteed, nor are they meant for all company circumstances and local circumstances concerning cultivation or otherwise. Chicosem is the holder of the copyright for all pictures, images, and illustrations in this leaflet.