

Hemp cultivation tips and harvesting advice

The goal is to produce high-quality hemp straw or high-quality seeds and green material. Over the past few years, we have gained the following experience with hemp cultivation together with our farmers:

- Regulations: Please strictly observe current cultivation regulations!!
Never destroy seed documents or labels!!
- Soil cultivation: Soil compaction must be avoided or remedied to prevent waterlogging and stunted growth. Especially on heavy soils, do not prepare the seedbed with too fine a crumb, as this leads to surface silting and waterlogging during heavy rainfall. Hemp is extremely sensitive to a lack of oxygen in the soil, resulting in uneven emergence and stunted growth, so soils with a high clay content are unsuitable! In sites prone to erosion, a winter cover crop should be planted before planting hemp, and soil cultivation should not be reversed.
- Sowing: A sowing rate of 40 kg/ha of Z-seed results in a crop favorable for hemp of approximately 250 plants/m². The crop should have stems with an average diameter of 14 mm. A stem thickness of up to 20 mm may occur in no more than 15% of the crop. Sow with a seed drill at a depth of 2-3 cm (FINOLA max. 1-1.5 cm) in soil that is as dry and warm as possible (the heavier the soil, the later the sowing; the soil temperature should not fall below 8°C). Depending on the weather and the region, the best time is the end of April, before the corn sowing. Starting conditions, balanced nutrient supply, good soil water drainage, and weather conditions during the main growing season are crucial.
=> warmer soil results in faster and more even emergence, better weed suppression, and fewer slug problems. Rolling after sowing has proven effective (improved emergence).
- Fertilization: Excessive nitrogen fertilization in mineral or organic form does not lead to increased yields but rather to overgrown, wind-prone stands, which cause problems during harvest and produce inferior straw. Nutrient removal at a yield of 5-8 t DM in kg/ha is approximately:

100-120 N
50-75 P₂O₅
200-300 K₂O
150-200 CaO
40-60 MgO

Use soil samples to determine residual nitrogen, estimate subsequent nitrogen supply, and apply fertilizer. On light soils, nitrogen fertilization in two applications is recommended, with the second application at 25-40 cm of stand height. Do not apply undiluted fertilizers, nor liquid fertilizers, such as ammonium sulfate, without applying undiluted fertilizers with a slurry tanker!

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Maintenance measures:	No herbicides, as weeds are suppressed by rapid emergence and equally rapid crop closure. The use of fungicides and insecticides is also unnecessary.
Snails:	Slugs are the only known pests currently known and must be controlled immediately upon their first appearance!
Crop rotation:	No restrictions; as a deep-rooted plant, hemp is a highly valuable crop; the field is weed-free after harvest.
Harvest time	is determined by the contractor and primary processor. When harvesting seeds, the harvest time is the best compromise between ripe, already fertilizing and green seeds.
Mowing:	Mowing is carried out by contractors using a hemp harvester. The straw is shortened to approximately 40 cm - 60 cm, which significantly simplifies the subsequent harvesting process and is a prerequisite for processing. FINOLA can be harvested without the use of a hemp harvester.
Field retting:	After mowing, the material must be dried with occasional remoistening (dew and rain). UV light and microorganisms decompose the plant's own binding agents, and the stems take on a beige to medium brown base color. Light to heavy fungal spots that may occur during this process do not reduce the quality! Even several days of rain are harmless, as only through retting the hemp straw becomes friable and optimal separation of the fibers from the shives is possible. Repeated turning (once or twice) is required. Retting can take two to four weeks, depending on the weather. Simple swaths facilitate both turning and pressing and lead to more even retting. The hemp straw should still have intact stems and not be over-retting.
Baling and Storage:	When the straw is sufficiently retted, i.e., a maximum of 10% green remains, the dry straw can be baled. Only large square bales (0.6 m - 0.9 m x 0.6 m - 1.2 m x 2.4 m) are accepted. To prevent mold and rot during storage, the compressed straw may have a maximum average moisture content of 16%. A maximum moisture content of 18% is also permissible for individual batches of straw. Dry storage of the hemp straw is essential. Dry delivery, ideally in a closed vehicle or with adequate tarpaulin cover (to prevent splashing water from reaching the straw), must also be ensured.