DEVIL'S CLAW (*Harpagophytum procumbens*)

PRODUCTION GUIDELINES

Devil's claw is a perennial, tuberous plant characterised by large, tubular flowers ranging in colour from pink to dark violet, and distinctive spiny or thorny fruits.

Propagation: Devil's claw propagation can be achieved through both seed and secondary tuber cuttings. However, low germination percentages and survival rates have been recorded. Alternatively, Devil's claw can be successfully and rapidly micro-propagated *in vitro* using nodal and shoot-tip explants cultured on suitable growth media.

Crop management: Devil's claw grows well during summer, autumn, and spring, but enters a dormant period in winter. It requires sandy-loam soil and temperatures above 27°C. The field where Devil's claw is cultivated should be kept clean, and soil moisture must be carefully monitored to prevent rotting and damping-off.

Water requirements: Light irrigation should commence at the beginning of spring and be increased in summer. Irrigation may be reduced in late autumn and omitted entirely in winter, depending on soil moisture levels. Excessive irrigation in winter may increase plant mortality due to a higher risk of rotting.

Pests and diseases: The major pests of cultivated Devil's claw are black aphids, red spider mites, and damping-off caused by fungal diseases of *Phytophthora sp*., *Rhizoctonia sp*. and *Pythium sp*. Scouting should be done frequently.

Fertilizer: Established seedlings of Devil's claw should be supplemented with suitable multi-nutrients. While based on the soil analysis report, transplanted Devil's claw should be given N:P:K fertilizers and follow up P nutrients should be applied for root development. Fertilizer application should be split and once in winter, autumn and again once in spring.

Harvesting and drying: Using micro propagated Devil's claw seedlings, harvesting can be achieved after one year (reducing the harvest period from 4 years), with secondary tubers per plant ranging from 9 to 21. The fresh mass of harvested tubers can vary between 561 g and 2076 g per plant.

To prevent mould development, sliced tubers can be pre-treated by dipping in an antioxidant solution for 1 minute and then blot-dried with a clean, dry cloth. The material can be oven-dried at 45 ± 5 °C for 1-3 days or dried under shade or full sun exposure for 3-6 days until completely dry.

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