

## IRELAND

### PEDO-CLIMATIC CONDITIONS:

Mild and temperate oceanic climate.

### CROP: Quinoa

Quinoa was shown to be adaptable to the Irish climate. Using adaptable varieties and implementing regenerative agricultural practices, yields of about 1.3 tons per hectare can feasibly be achieved.

The varieties used in the study were selected on the basis that they are well-known, highly productive cultivars that are adaptable to a wide range of growing conditions.

Growing quinoa in Ireland offers promising results since it adapts well to various climates and the demand for high-protein crops is continuing to grow.

In field trials over the past three years, the Titicaca and Puno cultivars produced the largest yield, while the other cultivars only partially performed. Aphid attacks were observed on all varieties during growth and development, although blight pressure wasn't considered a significant risk.

Quinoa typically grows to a height of about 1 metre in the case of the Vikinga variety, and up to 1,8 metres with the Puno and Titicaca varieties.

The seeds are contained in loose clusters, which fall off when shaken. The colour of the seeds ranges from golden (the Titicaca variety) to white (the Puno variety). Because it is difficult for the seeds to reach full maturity under Irish climatic conditions, the use of seed-drying technology is strongly recommended.

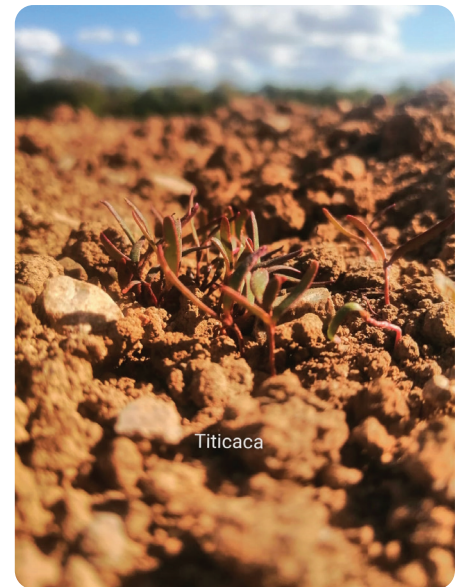
Additionally, new quinoa varieties that are more diversified in terms of seed colour and protein content are entering the market, which is likely to promote wider consumer acceptance. Higher yields, along with easier mechanisation and the use of regenerative agriculture, are other potential benefits of this crop's diversification.

Variety	Avg germination	Avg plant density	Avg yield (kg/ha)
TITICACA	88%	88	1237.5
VIKINGA	67%	67	650
PUNO	95%	95	775

## BEST AGRICULTURAL PRACTICES:

### • Organic regenerative practices applied:

- Intercropping of clover with quinoa.
- Foliar spraying with organic products for pest and disease control.
- Three mechanical weedings during the growing season.
- The remaining biomass was incorporated back into the soil in the form of green manure, which improves soil health.



*Picture 1: first growth of Titicaca quinoa (Source: Beotanics)*

### • Best practices for sowing :

- Soil preparation should involve shallow ploughing of up to 30 cm and the application of 100–150 kg/ha of organic fertiliser, with a nitrogen-phosphorus-potassium ratio of 9:3:3 or 9:3:6.
- Sowing should be shallow, at a depth of 2 cm, with row spacing of 50 cm and a density of 100 plants per square metre.
- The most suitable time for sowing quinoa is from March to April, using a mechanical or pneumatic seeder.



*Picture 2: quinoa in full development (Source: Beotanics)*

### • Best practices for managing the chosen crops:

- Soil analysis.
- Proper fertilisation based on soil and plant needs.
- Proper sowing (on time).
- Preventive control against diseases and pests.
- A minimum of three mechanical weedings.
- On-time harvesting in order to avoid water-logging.

### • Best practices for harvesting the chosen crops

- in September, with a mechanical harvester.

## CONTACT

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