

TARWI

Andean Lupin, Pearl Lupin, Tarhui

Lupinus mutabilis

Fabaceae

ECHO® PLANT INFORMATION SHEET

Description

This legume crop grows best in cool highlands and plateaus. Tarwi seeds have been found in tombs of the pre-Incan era of the central Andean region of South America. A mass of foliage is produced with brilliant purplish blue blossoms; the plant grows to a height of 1 meter.

Uses

Tarwi seeds should be soaked in water for several days to remove bitter alkaloids. They are a source of high protein and oil for human consumption as well as livestock. As a legume it is important as a nitrogen-fixing crop for poor soils (as much as 400 kg. of nitrogen per hectare) and as a green manure crop.

Cultivation

- Elevation: 0-3800 m (0-12,500 ft)
- Rainfall: as little as 500 mm (20 in) or as much as 1,000 mm (40 in) but it will not produce a good crop of seed under high humidity or if drought occurs during flowering and pod set.
- Temperature: 6° - 30° C (42° - 86° F); Mature plants will tolerate frost.
- Soil: It will produce a crop in poor soil but the best yields are from well-drained, sandy soil.

Harvesting and Seed Production

The seeds may be harvested from 150 to 360 days after sowing depending upon the length of warm days. Pollination is by insects attracted by the honey-smelling nectar. At optimal temperatures, up to 130 pods per plant containing 2-6 seeds may be harvested. In wild species, spontaneous splitting open and scattering of seeds disperses seed but this species is particularly good for maintaining a closed pod until after harvest. Tarwi plants blossom and produce seed continuously making it a constant source of food for a small grower who harvests by hand. The seed coat is soft, so germination is rapid.

Pests and Diseases

It is known that varieties exist that resist alternaria fungus, mildews and rust.

Cooking and Nutrition

After soaking or cooking, Tarwi seeds are one of the richest sources of good quality protein in the pea family. Seeds contain up to 40% protein and 20% light-colored oil. When ground into flour, the resultant product can be made into protein rich bread.

References

<http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=7435>