

Luanco-INIA, a large-seeded cultivar of *Lathyrus sativus* released in Chile

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Grass pea (*Lathyrus sativus* L.) is a minor crop in Chile that has received attention lately because small southern farmers have begun to export this grain to Europe. Grass pea is also locally used for animal feeding and occasional human consumption. The Chilean grass pea has a large, clear white seed, which complies with the requisites of the European market⁽¹⁾.

A new large-seeded cultivar, named Luanco-INIA, was obtained through pure line selection from accession LS-0027, from the Chilean grass pea germplasm collection⁽²⁾. After preliminary evaluation, it was included in yield trials over three years at five central-south and south locations. Seed yield is not superior to the prevalent grass pea landraces, but seed size is larger. Mean seed weight is usually around 300 mg seed⁻¹ though it can reach 350 mg in a favourable environment. Generally, mean seed weight of Luanco-INIA is about 50 mg over the prevalent local landrace. A mean seed weight of 300 mg seed⁻¹ matches with a seed calibre (longest seed diameter) of between 9 and 10 mm.

The seed coat is clear ivory white with yellow cotyledons. Flowers are white and number of seeds per pod varies from 1 to 3. Foliage is light-green. ODAP content has not been reduced, and it is within the range of other Chilean landraces (0.175 - 0.516 %). As for most grass pea material evaluated, Luanco-INIA had extremely variable plant height, with stems

being able to reach up to 150 cm in length when the conditions favour soil moisture retention late in the season. Despite this exuberant vegetative growth, seed yields have also been high in these cases, exceeding 4000 kg ha⁻¹. Luanco-INIA is well adapted to winter and spring seeding, either in medium or high rainfall areas in the central-south and south regions.

Seed of this variety is being increased and hopefully will be distributed soon to farmers, who are expected to benefit from the better price that should come with improved grain quality.

Acknowledgements

FNDR Project BIP 20155696-0 granted by Gobierno Regional de La Araucania.

References

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