

Collecting and evaluating Chilean germplasm of grasspea (*Lathyrus sativus* L.).

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Summary

In Chile grasspea is a minor crop grown by small farmers as a rainfed crop in the inland and coastal dryland of the South-Central Zone. The climate of this zone is a maritime Mediterranean type, characterised by winter rain and summer drought. Crops are sown in autumn and winters are mild (July minimum temperature $\approx 5^{\circ}\text{C}$, maximum $\approx 14^{\circ}\text{C}$) with winter rainfall ≈ 500 mm. Grasspea is produced with low inputs and has an average seed yield of 1800 kg/ha, superior to lentil and chickpea. However, this crop has not received much attention from agricultural research, and this study describes part of the effort in Chile to collect, conserve and evaluate genetic resources of diverse species and crops as part of the Plant Genetic Resources Project, INIA. Seventy four accessions of grasspea were evaluated, collected from 18 locations in the inland and coastal dryland of the South-Central Zone, between Llico ($34^{\circ} 46' \text{S}$ and $72^{\circ} 04' \text{W}$) and San Nicolás ($36^{\circ} 30' \text{S}$ and $72^{\circ} 13' \text{W}$) at altitudes between 50 and 230 m.a.s.l. The results show variation in seed size, shape and colour, days to flowering, protein content (24-32%) and ODAP content (0.18-0.52%). Chilean grasspea germplasm is characterised by its large average seed size (100 seed weight 17.6g).