

## Stylo in India: much more than a plant for the revegetation of wasteland

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**Introduction** Since the 1950s introductions of *Stylosanthes scabra*, *S. hamata* and *S. guianensis* from Australia, South America, the USA and Africa have continued in India. Although no cultivar has been released, selections of *S. scabra*, *S. guianensis* and *S. hamata* are used in a range of environmental and commercial production systems. A large seed industry spanning >400 ha and run by >600 smallholder farmers producing 800t seeds/year supports this usage (Rao *et al.*, 2004). Stylo is mainly used in India for revegetation of wastelands where it reduces soil erosion and offers fodder for livestock (Pathak *et al.*, 2004). Relatively small use is made as supplementary feed for dairy and breeding farms, as pastures in sheep and goat farms, in urban forestry and as a cover crop in horticulture and agroforestry. There are probably some 20,000 ha under silvipasture and horticulture. In mixed crop-livestock farming system stylo has been a saviour for smallholder farmers in some arid areas. The recent success of *S. seabrana* as a multipurpose legume and the suitability of stylo leaf meal as a replacement for expensive constituents in commercial poultry feed formulations may further accelerate uptake.

### Major reasons for success:

1. Government policy on wasteland development. Government-backed wasteland and watershed development programmes have created a sustainable demand for stylo seeds over the past three decades. This long running revegetation programme for village commons and problem lands has supported animal production by the rural poor and nomadic tribes. The 'Rajiv Gandhi Watershed Mission' in Madhya Pradesh is a good example, which covers a network of over 3,800 watersheds over 147,000 ha and developed in partnership with >100 NGOs. Others watersheds are developed by private-public partnerships through NGOs such as the Watershed Organization Trust, which has improved 160,000 ha in several states including Maharashtra.
2. The technology met a need. Stylo has a ready-made market for the degraded land covering well over 100 million ha. Smallholder farmers have used simple, effective and appropriate seed production technology to meet the strong demand for stylo seeds generated by the wasteland development programmes of the federal and state governments. The seed industry has expanded naturally and steadily over the last 25 years, from a handful of growers to several hundreds covering 40 villages.
3. The technology is simple and profitable. With excellent adaptation to infertile acid soils in arid zones, stylo is well suited to large tracts of problem soils to produce high quality forage and add 100-150 kg/ha N. Establishment and management is simple and does not require any specialised equipment. Stylo seed production in the major production region around Andhra Pradesh and Karnataka is more profitable than growing other commercial crops and it offers much-needed employment to rural women.
4. Strong network and partnerships between stakeholders. Stylo has featured prominently in deliberations of the fledgling sheep unions to the more formalised co-operative and village clusters. In recent years, strategic partnerships have been forged between poultry feed manufacturers and stylo leaf meal producer/co-operatives to exploit commercial opportunities. Some NGO's like the Bharatiya Agro Industries Federation (BAIF) and Nimbkar Agricultural Research Institute (NARI), have played a key role in forging these alliances.
5. Dedicated champions from private and public sectors have promoted stylo. Personnel from the Indian Grassland and Fodder Research Institute through the Dharwad regional station have run effective extension and training programmes for farmers. The NGOs, various farmers' co-operatives and several visionary farmers have persisted with stylo and promoted its use among end users. Departments of Animal Husbandry and Forestry in Kerala, Tamil Nadu, Karnataka and others have consistently supported and promoted the use of stylo.

**Conclusion** The use of stylo for wasteland and watershed development helped develop a large seed industry. Following success in soil stabilisation, water availability and forage production, watersheds are now commonplace on many privately owned village lands. Commercial success has come from its use in large-scale plantation and forestry projects. Use will accelerate with the widespread use of stylo leaf meal in poultry feed.

### References

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