

## Plant Introduction—Achievements and Opportunities in Jute and Allied Fibre Crops in India

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Collection and introduction of jute and allied fibre crop germplasm through different modes like institute efforts, correspondence, joining in National and International Programmes from early twentieth century to recent time are narrated chronologically. Variability in different traits within the collected germplasm is studied and short listed accessions are utilized as base material of useful donor parent in breeding programme for crop improvement. Role of these valuable germplasm in developing different suitable varieties is enumerated. Their impact on national

productivity and in various industrial sectors has been dealt with.

Future need and scope in collecting germplasm for their utilization in developing varieties needed for diversified products are indicated for sustainability of these crops from competition with the synthetic fibres. Important traits and relevant country of rich diversity and germplasm availability in different crop species are stated for future collection and utilization as per changing industrial need of the country and for the farmers for managing their crop more remuneratively.

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## Plant Introduction in Forage Crops—Achievements and Opportunities

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Introduction of new germplasm of forage crops is highly important because of complex breeding behaviour of forage grasses and legumes. The fodder crops suffer from a lot of problems unique to these groups and are generally not encountered in the cultivated crops. Some of the general constraints faced with forage production and improvement include non synchronous flowering/ anthesis and spikelets maturity, abscission of spikelets after maturity in grasses, overlapping of vegetative and reproductive growth phases, uneven pod setting, maturity and shattering in legume species. In addition, apomictic nature of most of tropical forage grasses limits their genetic improvement. Hence, introduction of superior cultivars only offer logical approach for their genetic improvement.

Since ancient times Indian farmers practice mixed farming. Thus livestock and fodder are important component of agriculture and rural economy. India being a country with diverse agro-geographical zones needs a large variety of fodder crops for different zones to sustain its huge livestock population. Indian gene centers

also holds rich diversity in native grasses and legumes, which have potential to become important components of pastures and rangelands. However, the wide range of genetic diversity is the pre requisite for any breeding programme in the improvement of fodder crops. The threat of genetic erosion of fodder crops is much more higher for both landraces as well as for wild relatives, due to ever increasing expansion and development of agriculture through out the tropics.

During the last few decades introduction of new species, ecotypes, biotypes, wild relatives and improved cultivars have considerably enriched the genetic diversity available in the country. It has changed significantly the scenario of fodder cultivation in the country and has contributed a lot in the animal productivity. Particular mention may be made of introduction of new crops such as Berseem (*Trifolium alexandrinum*), Oats (*Avena sativa*), Lucerne (*Medicago sativa*), Stylos (*Stylosanthes* sp.), Subabul (*Leucaena leucocephala*) etc. that has contributed significantly in the fodder productivity and has completely revolutionized the fodder cultivation concept.