An ICRISAT groundnut variety resists drought and diseases, has good fodder quality and replaces varieties grown for more than 60 years, bringing hope to millions of poor farmers.

Overview

Anantapur is a drought-prone district in the rain shadow area of Andhra Pradesh, India. Despite frequent droughts and crop failures, over 70% of the cultivated area in the district (~1.0 million ha) is sown to groundnut each year (Figure 1). Smallholdings (<3.0 ha) dominate 60% of the district, the largest groundnut growing area in the world.

Soils are light textured, gravelly, shallow Alfisols, low in nutrients. Rainfall is erratic with prolonged dry spells of 45–50 days, Annual rainfall is 522 mm.

Groundnut yield in the district is highly variable (Figure 2) and determined by rainfall. Nevertheless, groundnut can survive long dry spells and is a valuable source of fodder during dry years.

The innovation

Groundnut variety ICGV 91114 was bred and developed at ICRISAT headquarters, India from a cross of ICGV 86055 x ICGV 86533, and has the following features:

❖ High yielding
❖ Matures in 90-95 days in the kharif (rainy season)
❖ Tolerant to mid-season and end-of-season drought
❖ Average shelling turnover of 75%
❖ Oil content of 48%, protein content of 27%
❖ Better digestibility and palatability of haulms (dry fodder).

ICGV 91114 was released by the Andhra Pradesh State Seed Sub-Committee in 2006 and was notified in The Gazette of India in July 2007. It was subsequently released as Devi in Orissa. Our collaborator in Anantapur district, Accion Fraterna, named it Anantha Jyothi.

The impact

❖ ICGV 91114 meets all farmer preferences of high pod and haulm yields, high shelling turnover, good seed size, and resistance to drought and diseases, making it the most popular dual-purpose groundnut cultivated in India today.
❖ Adoption of ICGV 91114 had a pod yield advantage of 23% with 30% reduction in yield variability and 36% higher net income compared to TMV 2.
❖ It is estimated that the annual value of benefits in the district would cross US$500 million, assuming 35% adoption by 2020-21.
❖ In spite of severe drought conditions in the past 4-5 years, ICGV 91114 occupied 25,000 ha out of the 800,000 ha under groundnut in the district in 2010.
❖ The possible economic benefits of its adoption demonstrate the impact of breeding groundnut for drought tolerance.

Partners

❖ International Fund for Agricultural Development;
❖ NGO, Accion Fraterna in Anantapur district;
❖ Acharya NG Ranga Agricultural University;
❖ State Farm Corporation of India; Department of Agriculture, Andhra Pradesh; and
❖ farmers of Anantapur district.