

## Groundnut in Gujarat poised for Growth

This week I had the privilege to travel with ICRISAT Groundnut breeder, Dr Janila Pasupuleti, and Dr T Radhakrishnan, Director of Directorate of Groundnut Research (DGR) to large expanses of precision groundnut production in Saurashtra region in the Indian state of Gujarat. Junagadh is one of 11 districts there and it was truly impressive to see straight rows of groundnut devoid of weeds as far as the eye could see.

It was obvious how progressive and proud the Gujarati groundnut farmers are in this region. We talked about the challenges and economics of groundnut production with two brothers, Damodar Patel and Chandras Patel (Kevadra Village, Junagadh district), who spoke about the importance of the groundnut seeds they buy from local seed traders. Seed is a business based on trust and they are willing to pay a 40% price premium over state provided seed that translates to a total cost of USD200 per hectare.

The Patel brothers view seed as an investment, and like 60% of the groundnut farmers in Gujarat, they invested in GG20 that was released 20 years ago by Junagadh Agricultural University. With an estimated total cost of production of USD600 (30% on seed) their yield averages 2500kg per ha which at 50 rupees per kg translates to just over USD1900 per ha. Damodar, like many farmers in Gujarat who are meticulous in keeping their fields clean of weeds, was weeding when we met him, and keeping pests under control. One of the challenges farmers face is having access to the right knowledge and inputs to implement Good Agricultural Practices (GAP).

Damodar had just sprayed for aphids with a product he called "Maharaja" or Emperor and Drs. Radhakrishnan and Pasupuleti asked him about this intervention.

Interacting with scientists at the DGR highlighted the good progress being made in improving groundnut for drought, pests and diseases while considering processing qualities. Improved varieties from the partnership between ICRISAT, DGR and Junagadh Agricultural University, are showing considerable promise to not only improve productivity but also consumer health as high oleic acid varieties are about to be released. Oleic acid can reduce cardiovascular diseases among other health benefits and has a longer shelf life.

We saw how the three institutes are working together to reduce the time for farmers to have access to these new varieties. This in turn is likely to capture a higher price by processors like Khedut who are engaging with farmers directly to support GAP, that in turn increases productivity, profitability and a safer and high quality nutrition for consumers.

The last critical links in the chain to realize groundnut growth are the aggregators, processors, exporters and food retailers. Tushar Dayabhai Thumar, Director, Khedut Feeds and Foods Pvt Ltd, provided a fascinating tour of their state-of-the-art processing facility and how his family business is helping farmers increase their profitability. In 2009, Khedut decided to modernize their processing facility to address the severe issue of aflatoxin in peanuts that was restricting India's groundnut trade, as is the case for African exporting countries.

Khedut developed a rigorous and systematic procurement and testing process to ensure the peanuts they pack are well below the international limits of 10 parts per billion. Khedut is also working with over 8000 farmers to spread GAP to increase groundnut productivity, including innovative methods to control an emerging and serious pest called white grub. White grub larvae eat the roots and pods of groundnut but

during the mating stage the adult beetles feed on tree foliage from two months before. Khedut explained to farmers the connection and the need for community level engagement to control white grub by spraying tree foliage at the time of mating and before the eggs are laid in the soil of groundnut fields. Khedut developed a simple sprayer for trees and the early results are tremendous.

It is coalitions of this nature where scientists are working closely with farmers and processors and engaging with policy makers to create a growth and prosperity for groundnut farmers in Gujarat and to serve as a model for smallholder groundnut farmers and producers around the world.