



BARFOOTS
grown with love

Case Study: Barfoots, Senegal, West Africa

Continuous supply



The drive for a continuous supply of vegetables throughout the year has seen British growers look for solutions that are both economic and sustainable. In 2006 Barfoots formed a company in Senegal 'Société de Cultures Légumières' (SCL) to make use of the significant opportunities that the country presents. The land in northern Senegal, Diama, is a 4-5 hour drive from the deep-water port in Dakar, and from there it is a 6-day 'reefer' journey to the UK. Barfoots lease 2500 hectares from the government of Senegal, converting scrubland and

bush into cultivated land. Close to the River Senegal fresh water is plentiful, with warm and sunny winters, excellent conditions for the crops produced. Sweetcorn (corn on the cob), Green Beans, Butternut Squash, Sweet Potato and Chillies are being grown for export with Peanuts, Onion and Niebe (a local legume) grown for local consumption. This approach reports Harry Wilder, Technical Manager, is in line with the strategy of the business overall:

"Our chairman, Peter Barfoots' philosophy, has always been to back what have been relatively niche crops; invest in them, in terms of sustainable farming, supply chain and marketing with a view to successfully growing the overall market place through improved quality and consistency."

A social contract

Over 2000 local people are employed by Barfoots in Senegal, and in response to an assessment of their needs a clinic has been established with a full-time nurse and weekly visits by a doctor; all staff and their families all receive health care from the farm. Also, fresh potable water supplies to local villages has been improved, workers receive meals from an onsite canteen, while investments have been made in local schools and classrooms.

Workers have also been trained in contemporary horticultural techniques, something which is now on the curriculum in the village schools near to the farms. This education and training has benefited the farm and also the local small holders who have seen improvements on their land. As a further part of the “social contract” between local villages and tribes in the area, local people are being trained and appointed into management and supervisory positions in all aspects of the farm's operation.



Managing the farmed environment in West Africa has placed an onus on Barfoots to build an understanding of what is appropriate, and in this, they have made significant knowledge investments:

“We have had to teach ourselves and pool knowledge from across the world; for example, for the IPM side of things we take a lot of expertise from the USA, South Africa and Southern Europe but then have to adapt it to work locally.”

Integrated farming framework

Barfoots conducted trials with Cranfield University which enabled them to reduce water consumption for their sweetcorn crop by 32%. This resulted in a 12% Nitrogen saving and highlights the potential efficiency improvements that can be achieved. Such savings can sometimes be difficult however, as “everything is so integrated”. Soil fertility has also been improved via the introduction green beans and other crops, which adjusts their rotation practices:

“Peanut is a good example when you lift the peanut crop out it helps break the nematode life cycle, which improves the yields on export crops with less use of nematicides.”

In the context of soil; building organic matter is a challenge in Senegal:

“Soil Organic Matter (SOM) is very difficult to increase given the high temperatures and the sandy soils. We build soil health through minimum tillage, better crop rotations, the use of summer cover crops in order to make a long-term difference to the soil health, fertility and structure.”

Similarly, the importance of soil biodiversity is apparent but requires more research to understand its impact on crop health:

“We are involved in an Innovate UK project with James Hutton Institute to try to create a measure of soil biological health. This is a [measurement] system where we are monitoring beneficial nematode populations to correlate soil management practices with certain nematode species, this will help quantify the benefits of certain improvement strategies.”

Gaston Berger University in Saint-Louis, Senegal plays a role in helping establish biodiversity levels and understanding what are the beneficial local plants for biodiversity areas and in monitoring flora and fauna levels on the farm:

“We collaborate with the university for wildlife surveys; they visit every year and make recommendations for improvements that can be made, which will be within the interests of local wildlife and our farming system as well.”

Meeting customer requirements

The role that LEAF Marque plays in this package of innovation and experience is to provide a framework under which the requirements of customers can be organised:

“Historically, environmental concerns were often changing and we have since found that LEAF Marque has given us a framework to manage the complete sustainability agenda across a very complicated international supply base. If we say this farm is LEAF Marque certified, then we know that it is working to improve energy efficiency, reduce fertiliser use, improve soil structure and working with IPM strategies – it just captures everything that a farm needs to do.”

This push for efficiency and integration has required effort and investment on the part of Barfoots:

“GlobalGap, for example, means that you have tackled the basics with food safety, whereas to achieve LEAF Marque requires much more effort and understanding across the supply base – so Barfoots have had to support and train our over-seas growers in Integrated Farm Management.”

Among the benefits are that it provides customers with the confidence that these issues are being addressed, and provides a platform for co-operating with other suppliers:

“LEAF encourages us to cooperate and help other growers too. We have held demonstration days for other growers in Senegal and Peru to help them understand the requirements and practicalities of achieving LEAF Marque.”

Harry Wilder describes the process of staff training as one wherein everyone plays an important role. By ensuring that all staff feel empowered and are directly responsible for their actions, they also feel that they are responsible for success of the business:

“That awareness and culture is ingrained partly because of LEAF Marque, employing such a large number of staff in Senegal, over 2000 people at peak season; it can make a very big difference if you can get your staff understanding the message.”