African graingrowing challenge

Many farmers are flat out just making a living against a tide of variable seasonal conditions and gyrating prices, but one NSW farmer has decided to make his graingrowing even more challenging – in Kenya. ANDREW NORRIS reports.

AFTER years of being fed up with growing each year's crop just to grow the next one, Central West farmer and Nuffield scholar Stuart Barden and his family decided to pack up move to where they could enjoy a bit more of life.

Their destination was the fertile but dry plains of Kenya in East Africa.

Despite having a cropping enterprise spread over 12,000 hectares (half owned, half sharefarmed) Mr Barden and his wife Annie found it just didn't produce a big enough income margin, especially in tougher seasons.

For several years it was Mrs Barden's teaching income which had fed and clothed their family when cropping returns didn't add up.

"Although I love growing crops I was sick of the high pressure of just trying to make money so we could grow another crop," said Mr Barden, who has just notched up 12 months living just east Kenya's capital, Nairobi.

Warren farmer Stuart Barden has moved his family and his farm to Kenya where he is learning about low rainfall cropping.

"I didn't want to spend our lives just making money – money is just a trading token, nothing more."

Mr Barden grew up on the family wheat, sheep and cattle property between Gilgandra and Collie.

By the age of 17 he was working full time in agriculture, having completed two years at the Murrumbidgee College of Agriculture at Yanco.

A year on the family farm was followed by a stint in Western Australia wool classing before his return to the eastern States to share farm and buy his first small farm at Warren at 33.

More farmland was acquired at Condobolin and Collie during the next decade.

But farming took a new twist in 2009 when Mr Barden was a successful applicant for a Nuffield scholarship and travelled through 12 countries learning about graingrowing techniques in low rainfall environments.

His focus was on how to adapt grain production to areas which most would think unsuitable for farming.

This included exploring micro water harvesting (using the inter-row area as a water harvesting zone, aided by crop residue accumulation), financial risk assessment and biomass and residue management in low rainfall regions – skills that would later allow him to adapt to regions such as Kenya.

"Many people I meet look at Annie and I with disbelief when they find out we moved our children (James, 17, and Grace, 13) from Australia," he said.

The couple's eldest daughter Hannah is at the University of Western Australia in Perth studying agricultural science and international management.

"During my studies I saw incredible potential existing in Kenya, in particular in grain production on the heavy black soils the locals call 'cotton soils' in the areas considered too low in rainfall to successfully farm."

The family took a leap of faith and committed a great deal of financial, emotional and reputational capital into developing their new farm (or *shamba*) in a 500 millimetre a year annual rainfall area.

The 1000ha farm grows mainly sorghum, which is best suited to their climate at 1646 metres elevation, with the main sowing windows being late October and then again in March-April.

The Bardens' first 380ha white sorghum crop was planted on double skip rows at about 48,000 seeds a hectare (1.7kg/ha) with 50kg/ha of diammonium phosphate and 15kg/ha of sulphate of potash.

Mr Barden expects it to average about three tonnes/ha for his first crop, due to be in early December.

Sorghum was fetching about $A400/t on-farm, while wheat was bringing $420/t and maize $360/t.

A further 590ha of white sorghum has been sown and has just emerged.

Before sowing, Mr Barden aimed to have at least 60 centimetres of moisture in the profile as the time between rain events can be long.

All this has been sown using two Case IH 8900 series tractors with a nine metre Rogro planter using precision boxes manufactured specifically for their Kenyan farm by Chris Holland at Spring Ridge Engineering on the Liverpool Plains.

They have also imported a Case IH 2388 harvester imported second hand from Germany and a prime mover with a tipper from Ireland.

Mr Barden is also running 4ha trial plots, including of desi and kabuli chickpeas, mungbeans, sila white sorghum, two varieties of maize and red sorghum that will be harvested during the next week.

All the farming is zero till using tynes on a three metre centre controlled traffic regime.

Mr Barden said his plan was to set up on-farm storage facilities, but in the meantime the only option is to sell straight off the header.

■ Follow the Barden family's progress at stuartbardeninkenya.blogspot.com.au

Sharing modern farming practises

IN A bid to educate farmers on Africa's Kenyan plains in the ways of modern, sustainable farming practices, the Barden family has set up not just their own new farm, but a demonstration farm to help the cause.

Stuart Barden said the 16 hectare farm was not far from their main farm near Nairobi.

"Our hope is that we transfer some of the world's best practice to our commercial operation combined with the demonstration farm, showing current local small land holders best practice side-by-side against other ideas," Mr Barden said.

"Hopefully we will find much better ways to grow grain and reduce the feast/famine nature of the current production systems."

A lot of the Kenyan farmers owned small farms and usually sold their crops direct to the end users.

In the area near the Barden's farm, land typically cost $8000-$10,000 an acre ($19,770-$24,710/hectare) with some small blocks as much as ($123,550/ha).

With 40 million people in a country the size of NSW, Mr Barden (pictured with local farmers and government Department of Agriculture officers on the demonstration farm explaining a soil pit) said there were a lot of people and the traffic was "often crazy".

The machinery he used was often unsuitable for many farmers whose land area was as little as half a hectare.

"We just have to be creative – instead of running a $30,000 RTK guidance system, a small land holder can use a sisal string and a tape measure for $5," he said.

The Kenyan Department of Agriculture regularly sends agriculture officers to see what cropping opportunities are being explored by Mr Barden on "cotton soils" they have traditionally thought were useless for cropping.

"I explain water infiltration and how cultivation affects water infiltration, residues and their benefit in the system," he said.

"We dig soil pits to demonstrate the root exploration of crops on different row architecture, and I explain the bucket principle of filling the 'soil' bucket with water.

"Kenyans are very smart – they're teaching me certain things as well."

Guarding assets in the Kenyan wilderness

THE Barden's Kenyan farming operation is quite a contrast to their neighbours, one of whom is considered progressive for the area because he has a cow and a plough.

However, labour is relatively easy to come by, and some is relatively skilled, Stuart Barden said.

"At the moment we have 41 people, mainly ladies, working on scaring millions of red billed quialia birds off the sorghum," he said.

"They earn $3.60 a day, that's the going rate."

The Bardens also employ eight *foondees* (builders/stonemasons), two asset managers (night watchmen armed with bows and arrows), a gardener, a house manager, a farm foreman and a farmhand.

"A few weeks ago one of our night watchmen told me he'd heard a lion while he was guarding bags fertiliser in the paddock, and he ran.

"I thought fair enough – can't argue with that.

"We have very few lions, but they are about."

They also have all the usual pests such as wire worms, cut worms and heliothis.