

The business in seed potato

By ISALAH ESIPISU *More by this Author*

In Summary

- The use of farm-saved seeds, which is the common practice throughout the country, comes with many challenges.
- Sugut is one of the more than 200 farmers who have been trained by CIP while working with the county governments in the North Rift and Meru counties to multiply disease-free potato planting materials for local distribution.
- Farmers get a chance to multiply clean potato planting materials that they can sell to others for at least Sh2,500 for a 50kg bag.
- In the North Rift, farmers multiplying the seeds have focused on Shangi, Unica, which is a new high-yielding and drought-tolerant variety from Peru, and the Dutch Robjin, which is for processing.

Advertisement

In the quiet Kipsirigo village in Nandi County, a new agribusiness is picking up.

Samuel Kibet Sugut is among those who have embraced the new agribusiness, which involves the multiplication of Irish potato planting materials, having abandoned dairy farming to concentrate on the cash cow.

Sugut, who was a dairy farmer for 15 years, has seen a bright future in the production of the disease-free materials that many farmers are turning to.

As he prepares his small piece of land for planting, his phone keeps ringing every few minutes, with nearly all the callers enquiring about the availability of seeds given that the short rain season is just around the corner.

Sugut says that all farmers who planted his clean seeds last season realised more than a double harvest compared to what they usually get from on-farm recycled tubers, the reason why the appetite for more clean planting materials is high.

“This is a new agribusiness for me, which in the last two-and-a-half years has proved to be a worthy investment,” says the farmer, who sold three of his dairy cattle in 2016 to raise capital for the informal potato seed production using rooted apical cuttings.

Dr Dinah Borus, an agronomist and the North Rift Field Coordinator for ‘Centro Internacional de la Papa (CIP)’ or International Potato Centre, explains that an apical cutting is similar to a nursery-grown seedling except that it is produced through vegetative means and does not originate from a seed.

Sugut is one of the more than 200 farmers who have been trained by CIP while working with the county governments in the North Rift and Meru counties to multiply disease-free potato planting materials for local distribution.

The initiative is supported by the ‘Feed the Future Accelerated Value Chain Development (AVCD),’ a US government food security initiative in Kenya.

“Most of the potato farmers in the country have been planting inferior seeds, which is mainly leftovers from their harvests, and because of this, the yields have been very poor in terms of

FARM-MADE SEED

The use of farm-made seeds, which is the common practice throughout the country, comes with many challenges.

“Some of them have bacterial seed-borne diseases, others viral or fungal such as late potato blight,” Dr Borus tells Seeds of Gold.

A survey by CIP in 2016 revealed that yields averaged 10.9 tonnes per hectare (t/ha) for many farmers, much below realistic yields of 20-30 t/ha.



Farmers plant potato seedlings for multiplication in a farm in Nandi County. Most of the potato farmers in the country have been planting inferior seeds, which is mainly leftovers from their harvests, and because of this, the yields have been very poor in terms of quality and quantity.

PHOTO | ISALAH ESIPISU | NMG

So far, there are only two main centres in Kenya that produce certified disease-free rooted apical potato seeds commercially, and they can only supply up to five per cent of the farmers across the country, according to CIP.

And because of the vast distance, say from Nandi County to the nearest seed producing centre, which is Agricultural Development Cooperation in Molo for example, many farmers have never had a chance to plant a certified seed in their lifetime.

“This is what informed our project, through which we started producing apical cuttings using tissue culture technology in laboratories, and since 2016, we have trained several farmers from Nandi, Elgeyo Marakwet, Uasin Gishu and Meru counties on seed multiplication,” says Dr Borus.

The apical cutting technology has been endorsed by the Kenya Plant Health Inspectorate Service (Kephis), and it has been incorporated in the seed system as starter materials to produce certified potato seeds.

The CIP research scientists are working with private companies in Nairobi and Naivasha, which have facilities for tissue culture technology. The companies produce the cuttings and sell them to

To do this, desired varieties are identified and the vegetative materials are taken to a laboratory for a tissue culture process, through which cuttings that are similar to seedlings are produced.

The cuttings are then sold to seed multipliers at a cost of Sh10 each.

CLEAN PLANTING MATERIALS

The seed multipliers then carefully transport the cuttings to their farms.

The ideal site for planting the cuttings must be where no potato or any other crop in the potato family has been planted for the past four seasons. This is to ensure that the place is disease-free, according to Borus.

As well, all the tools that are used for planting must first be disinfected.

The seed multipliers are advised to plant tubers from the first harvest for only two more seasons, and the third generation can now be sold as seeds to farmers.

Sugut sells a 50kg bag of potato seeds from Sh2,500 -Sh3,000, depending on demand, which is much higher than what farmers sell a 100kg bag of potatoes.

“And the price does not fluctuate, which makes the business much profitable,” he says.

In the North Rift, farmers multiplying the seeds have focused on Shangi, Unica, which is a new high-yielding and drought-tolerant variety from Peru, and the Dutch Robjin, which is for processing.



Samuel Kibet Sugut a seed potato farmer, in his farm in Nandi County. The farmer is among those who have embraced the new agribusiness, which involves the multiplication of Irish potato planting materials. PHOTO | ISALAH ESIPISU | NMG

Potato is the second most consumed food crop by Kenyans after maize, and is cultivated by more than 800,000 smallholder farmers countrywide.

Dr Borus says before getting into potato seed multiplication, one needs training, after which they must have the initial capital to buy the cuttings, farm inputs and to construct a tuber seed storage facility.

Step by step guide to getting potato seeds

Julius Muchiri of Stokman Rozen Kenya says to produce a rooted apical cutting, vegetative materials from desired plants are collected and grown within a screenhouse in a laboratory under sterile conditions in a nutrient culture medium of known as cocopeat.

They produce roots, stem and leaves so that they grow like any other plant. Once ready, they are transferred to the farm, where they are planted just like any other seedling.

After three to four months, the rooted cuttings produce up to 15 tubers. The tubers are then replanted for multiplication, and the resultant tubers can further be planted.

One cutting will produce up to 15 tubers. For the first season after the apical cutting, each tuber will also produce up to 15 tubers to give the farmer a total of 225 tubers.

If the second planting of the tubers is equally successful, then the farmer will have some 3,375 tubers all to be sold as seed, and all from just one apical cutting, but in three seasons.

Related Stories

24/2/2017

[To reuse potato seeds, pick the best](#)



Potatoes are a good source of nutrients such as Vitamins C, B1, B3 and B6, zinc and potassium hence they are nutritious and their consumption should be improved.