

New improved cassava varieties starting to benefit small-holder farmers in Nzau district

Project update: April 2011



Background: For many decades, farmers in Nzau district have experienced periodic hunger. The district experiences low and poorly-distributed rainfall and soil fertility has become poor.

Cassava is a drought-tolerant crop that can perform well in Nzau district. However, local varieties have become unproductive due to infection by the Cassava Mosaic Virus disease.

FIPS-Africa in partnership with KARI's KASAL Programme established a network of 14 self-employed Village-based Advisors to assist farmers in their Villages to gain access to the appropriate farm inputs and information on their best management. Inputs included new varieties of cassava developed by KARI which are more tolerant to the CMV, and mature earlier than their local varieties. New varieties included *Msherishi*, *Ndoro*, *990005i* and *990132*. These take one year to mature unlike the traditional variety (*Kikwa*) that matures after 2 years.

In May 2011, farmers were visited and interviewed to determine the performance of the new varieties and their impact on their livelihoods. Some testimonials follow.

1. Pascalia Mwikali, Mbeletu Village, Kyemundu Location; 1345m, S01.97970°, E037.49384°



In August 2010, Pascalia purchased 150 cassava cuttings of *Msherishi* variety from her local VBA, Peter Muoki. The tubers only took 7 months to mature. She started harvesting them in March 2011 and has been using them to prepare meals, which saves her money. Her entire harvest is likely to last her two years. *Msherishi* variety matures faster and produces larger tubers unlike the traditional *Kikwa* variety that takes 15 months to mature.

2. Ann Nduku, Mbeletu Village, Kyemundu Location; 1330m, S01.98143°, E037.49574°



Ann purchased 200 cassava cuttings of *Ndoro* variety in July 2009, from her VBA, Peter Muoki. In March 2010, she harvested over 800 kg. She sold 700 kg for KES 28,000; KES 40 per kilo. She used part of the money to purchase a cow that has since given birth to a calf. Ann had also planted the traditional cassava variety which unfortunately didn't yield much as a result of cassava mosaic attack. She has been using the cassava tubers to feed her family on which has saved her a lot of money. She also adds that the new variety is much sweeter, early maturing and resistant to diseases.

3. Ruth Muluki, Mbeletu Village, Kyemundu Location; 1358m, S01.98325°, E037.49101°



Ruth purchased 50 cassava cuttings of *Msherisheri* variety from her VBA Peter Muoki in November 2009. She sold 200 kg for KES 6,000 in August 2010. She intends to save the rest of the harvest as food for her family for the next 2 years.

4. Judith Mutuku, Katiini Village, Kyemundu Location; 1386m, S01.98325°, E037.49101°



In November 2010, Judith purchased 50 cassava cuttings of *Msherisheri* variety from Peter Muoki, her local VBA. Although the tubers are not yet ready for harvesting, their size is much bigger than those of a fully grown traditional cassava variety.

5. Bernard Ndeti, Kavutu Village, Kyemundu Location; 1507m, S01.96938°, E037.48532°



Bernard, a FIPS-Africa VBA in Nzau district planted 20 cassava cuttings of 990005 variety in August 2010. He harvested the tubers in March 2011; six months later.

6. Agnes Mwikali, Yumbani Village, Kyemundu Location; 1374m, S01.98324°, E037.49077°



In April 2010, Agnes purchased 100 cassava cuttings of *Msherisheri* variety from Peter Muoki, a FIPS-Africa VBA. She harvested the tubers after seven months and sold some for KES 6,000. She used the money to offset her children's pending school fees. The crop has enabled her save since she no longer has to buy 2 loaves of bread daily for breakfast

7. Stephen Ndunda, Kavutu Village, Kyemundu Location; 1532m, S01.96846°, E037.47923°



In March 2010, Stephen bought 20 cassava cuttings of *Msherishi* variety from Bernard Ndeti. He started harvesting them for food in October

8. John Musau, Utuneni village, Kyemundu Village; 1521m, S01.95885°, E037.48918°



In May 2010, John purchased 50 cassava cuttings of *Ndoro* variety from Richard Muli, his local VBA. He harvested the crop in December. Each cutting produced 8-10 large tubers. The traditional varieties only produce 2-3 tubers. One tuber feeds his family of six for two days.

9. Stephen Kikumbi, Matha Village, Matiliku Location; 1120m, S01.99435°, E037.54163°



In November 2009, Stephen purchased 1,000 cassava cuttings of the 990005i variety from Maundu, the District coordinator. He has already sold 300 kg for KES 9,000 and intends to sell an extra 1,000 kg for KES 40,000.

10. Catherine Ndunge, Yumbani Village, Kyemundu Location; 1626m, S01.98989°, E037.51276°



During the month of March 2010, Catherine purchased 20 cassava cuttings of *Ndoro* variety from her local VBA, Richard Muli. She started harvesting in December. She says that she saves over KES 600 weekly that she would otherwise have used to bread for breakfast and other foods.

11. Mary Mutindi, linyoni Village, Kwebwani Location; 1469m, S01.94026°, E037.58859°



In December 2009, Mary purchased 50 cassava cuttings of *Msherisheri* variety. She harvested her first tubers in July 2010. Later on in December, she harvested 100 kg which she sold for KES 4,000. The cassava tubers have saved her a lot of money on buying food.

12. Ann Nduleve, Kituvyu Village, Kyemundu Location; 1675m, S01.95905°, E037.49582°



Ann showing the failed traditional cassava variety affected by cassava mosaic (left) and the new Msherisheri variety (right)

Ann had never grown any other cassava variety rather than the traditional *Kikwa* variety. Richard Muli, a her VBA introduced her to *Msherisheri* variety in March 2010. She bought 20 cuttings. She started harvesting the crop nine months later. She says she uses one tuber to prepare meals which last for three days.

13. Richard Muli, Kituvyu Village, Kyemundu Location; 1596m, S01.98991°, E037.61186°



Richard, a VBA planted 20 cassava cuttings of *Msherishi* variety in March 2010. He started harvesting the tubers in December. He saves KES 40 daily that he would normally use to use to buy bread for breakfast. He intends to plant more cassava cuttings of the same variety soon, but on a larger piece of land.

14. Lillian Mueni, Vuka Village, Kyemundu Location; 1436m, S01.97366°, E037. 49360°



Lillian showing the traditional Kikwa variety affected by Cassava mosaic virus (left) and tubers from the 990005 variety (right)

Lillian purchased 250 cassava cuttings of the 990005 variety from her VBA Peter Muoki in November 2009. Seven months later, she harvested over 1,000 kg. In June 2010, she sold 800 kg for KES 24,000. Lillian used the money to buy 7 goats, each for KES 3,000. She uses the cassava for breakfast and to also prepare other meals.

15. Mwau Kioko, Chamusoi Village, Ikingavya Location; 1487m, S01.98096°, E037.69123°



Mwau purchased 50 cassava cuttings of *Ndoro* variety in December 2009. He has been harvesting the tubers since August 2010, most of which he uses to prepare food for his family. He also has sold over 200 kg for KES 6,000. The money earned helped him buy new school uniforms and stationery for his children.

16. Pauline Mukeko, Kwakukui Village, Ikingavya Location



In December 2009, Pauline purchased 600 cassava cuttings of *Msherishi* variety. She started harvesting in August 2010. She has just sold 200 kg for KES 8,000 and intends to sell a further 500 kg for KES 20,000.

17. Nicodemus Chalo, Utuneni Village, Kyemundu Location; 1496m, S01.99884°, E037.65918°



Nicodemus showing the failed traditional cassava variety affected by cassava mosaic (left) and the tubers of the newly improved Ndoro variety (right)

Nicodemus had always grown the traditional varieties of cassava. He was introduced to the new *Ndoro* cassava variety by his local VBA, Peter Muoki. He purchased 50 cuttings which he grew alongside the traditional *Kikwa* variety. The traditional variety died as a result of the cassava mosaic virus disease. He harvested the crop in December 2010 and has stored it for home consumption.

18. Amos Maomo, Mutiti Village, Kalaba Location; 1171m, S01.87408°, E037.49190°



Amos showing the difference between the improved Msherishi variety (right) and the failed traditional 'Kikwa' variety (left)

Amos bought 40 cuttings of the *Msherishi* variety in November 2010. He had also planted the traditional *Kikwa* variety a year before - in November 2009. The traditional variety has failed to produce tubers, but the *Msherishi* variety has proved to be high-yielding.

19. Thomas Mbilika, linyoni Village, Ikangavya Location



Thomas had always practised subsistence farming and never thought that he could make money out of his small piece of land. In December 2009, he bought t100 cassava cuttings of the 990132 variety. He harvested the tubers in August 2010. He sold 200 kg for KES 8,000 and intends to sell an extra 300 kg for KES 12,000. Thomas used the money to pay for his son's school fees and plans to invest the rest on his farm.

20. Purity Ndunda, Kituvyu Village, Kyemundu Location



Purity had never liked the bitter taste of cassava. Richard Muli, her local VBA, convinced her to try out the new *Ndoro* variety. She purchased 20 cuttings in May 2010. She harvested the tubers in December and has been feeding on them ever since. She testifies that the new variety has a much sweeter taste, takes less time to mature and also, produces a higher yield than the traditional varieties.

21. Rose Kuthangua, Kwavutu Village, Kyemundu Location; 1646m, S01.99951°, E037.58928°



Rose purchased 15 cassava cuttings in March 2010 from her local VBA, Bernard Ndeti. She has been harvesting the tubers since December and uses them to prepare her meals. She has also donated some of the tubers to her neighbors who hadn't grown the improved cassava varieties.

22. Ann Kioko, Kwavutu Village, Kyemundu Location



In March 2010, Ann purchased 30 cassava cuttings of the *Ndoro* variety from her VBA, Bernard Ndeti. The crop matured earlier than anticipated and eight months later, she started harvesting. She has so far sold 20 kg for KES 800. Her budget has greatly reduced since she no longer has to buy bread for breakfast.

23. Daisy Kamuli, Yumbani Village, Kyemundu Location; 1445m, S01.95979°, E037.49176°



Daisy purchased 30 cassava cuttings of the *Ndoro* variety from her local VBA, Richard Muli, in March 2010. She started harvesting the crop nine months later. She boils the tubers for breakfast and also uses them in preparing other meals. The entire harvest is bound to last for over a year.