

## Small-holder farmers in Makueni County produce more maize through the adoption of the DKC80-33 variety and improved soil management practices

*Project update: July 2016*

With the support of the Seeds of Change Foundation and POET, FIPS-Africa is helping small-holder farmers in Makueni County to become food secure through the use of the appropriate farm inputs and information on their best utilisation. By the start of the 1<sup>st</sup> season of 2016, FIPS-Africa had recruited 136 self-employed *Village-based Advisors* (VBAs) in the County to teach many more farmers the value of using improved crop varieties, and improved soil management practices.

Farmers in Makueni County conventionally use an ox-drawn mouldboard plough to prepare their land, and scatter their limited amounts of manure over the field before ploughing. Continued use of the mouldboard plough over many years has resulted in a soil hard pan at plough depth, while the nutrients in the manure bare not accessible to maize roots.

Through the use of small seed packs, VBAs have been encouraging ALL small-holder farmers in their Villages to experiment with improved maize varieties on small plots on their own farms in a low risk way. VBAs teach farmers to maximize the benefits from the improved seed by also training on deep tillage (using the “spring jembe” or “spring plough”), which increases rain water infiltration into deeper soil layers, and by placing manure in the planting lines.

In 2016, the short rain season in Makueni County was extremely poor. Rains started late at the end of April and had finished within a month (by the end of May). As a result, farmers all over the County have harvested very little using conventional management practices (image 1).

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Despite the poor rainfall, farmers who adopted the DKC80-33 variety, deep tillage using the spring plough and manure placement were able to achieve a harvest in many areas.

Jacinta Musembi (image 2) of Kyamwani village purchased 2 kg seed of the DKC80-33 maize variety and planted using the spring plough. She planted in April and expects to harvest at least 4 (90 kg) bags [360 kg in total].

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2. Jacinta further said, “this was not a good season because the rains ended too early thus leaving most crops struggling but my family will not go hungry this season because I prepared land using deep tillage with an improved variety.”

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3. Kilungu Mutiso and Florence Mutiso of Kalimanzalu village in Kee ward are happy they will harvest this season despite the poor rains.

“This is largely because we deep tilled our land using a spring plough. My neighbor planted a hybrid but used the normal ox-plough. He is not going to harvest as much as he anticipated,” said Mutiso.

Mutiso planted 2 kg seed of the DKC80-33 variety. He harvested four (90 kg) bags [360 kg] of maize. This was 9 times more than what he had harvested in 2014 from the same plot.

“I harvested only 40 kg from this plot in 2014,” says Mutiso.

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4. Susan Msyoka of Mathuni village in Kee Ward planted 2 kg seed of the DKC80-33 variety in April.

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5. John Nzovia of Nzeeni village in Kisau Kiteta ward planted 4 kg seed of the DKC80-33 variety. He harvested 6 bags from the plot

6. Onesmus Muthama of Muthuni village showing his plants of the DKC80-33 variety. Onesmus, also a VBA, demonstrated deep tillage using thr spring plough across the village.

7. Agnes Ndunda of Kyandumbe village in Ukia ward showing cobs from her DKC80-33 crop. This season she expects to harvest 3.5 (90 kg) bags [315 kg].

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8. Patricia Mboya of Utaati village in Ukia ward with the DKC80-33 variety.

“We did not have enough rains this season but this variety performed much better than the local varieties.”

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9. Sarah Mutiso of Utaati village in Ukia ward with her DKC80-33 crop.

“My plot is by the roadside and it attracted many passers-by who asked me where I bought this variety, I always refer them to the VBA.”

After demonstrating that the DKC80-33 variety can give good yields with deep tillage and better manure management, even when the rains are poor, VBAs are encouraged that they will sell more seed in the coming seasons.