Pig farmers, beware of swine fever

Peter Kamau | There is an outbreak of swine fever, a viral disease that affects pigs causing mass deaths and a big loss to farmers. The African Swine Fever (ASF) is incurable and so far, no vaccine has been developed to prevent it. This means that any pig infected by the disease has no chance of survival.

Farmers in Central Kenya are most affected by the outbreak. The disease has been reported in Thika, Juja, Ruiru, Isinya and Limuru in Kiambu and Kajiado Counties with Thika reporting the highest number of pig farms affected.

Symptoms of swine fever
Infected pigs become depressed, stop eating and huddle together. The pigs have difficulty walking, tending to lie down for long periods of time. They have difficulty in breathing, and experience diarrhoea or constipation with skin and eyes turning red (conjunctivitis) and have red spots or purple colour in the ears, abdomen, inner thigh or tail.

Highly contagious
The African Swine Fever is highly contagious, meaning it can only be transmitted through direct contact between infected and susceptible pigs, people, vehicles or even equipment transported from infected pig farms to other farms. In Kenya free-range pigs feeding in dumpsites or those that come into contact with wild pigs have been the major carriers of the disease. The disease does not affect humans.

How to prevent the disease from spreading
Other methods of the disease transmission include:
- Direct pig-to-pig contact.
- Consumption of contaminated feed especially leftover food that is fed to pigs.
- Vehicles that enter pig farms without disinfection such as passing through a disinfection bath which contains an effective disinfectant such as Magadi soda (sodium bicarbonate) or jik solution.
- All feed given to pigs must come from reputable companies.
- Pig buyers and traders should not be allowed into pig farms unless they change clothing or are disinfected.
- Maintain a high level of hygiene in pig sheds.
- All farm workers should provide with disinfected overalls, gumboots, hand washing and foot bath facilities to ensure they do not infect the pigs.
- Veterinary personnel should be disinfected before they are allowed into the pig shed.
- All dead pigs should be buried or burned to stop the virus from spreading.

For more reading: http://www.info-net-biovision.org/AnimalHealth/Pigs

Value addition could help farmers to get good returns from their agricultural activities when more food is stored up for future use reducing wastage. More than 50 years after independence, many countries in Sub-Saharan Africa including Kenya are yet to fully take advantage of the opportunities available in the agricultural sector such as value addition to industrialise. Many countries still remain producers of raw materials which are exported to the industrialised countries where the products are processed and then sold to the developing countries at prices almost 10 times the buying price of the raw materials.

Value addition is now the next big step that African governments need to take to support farmers’ earnings and generate more revenue for development. Governments can regulate and create a conducive environment and the right incentives for the farmers to support industrialization.

In Kenya for instance, since the establishment of counties after the new constitution was passed in the year 2010, agriculture became a devolved function. This means that County governments should plan and develop needs around the identified agricultural value chains in their respective regions. The reason given by many County governments for a lack of progress is the revenue shortage. The counties have not obtained any form of financial support from their county government. Instead they have come together, put up their own structures and try to get more funds for development.

In this issue, we have featured a farmers’ group from Laikipia, which has started production and processing of stinging nettle, which they grow organically. They have produced nettle feed from this enterprise are quite good and have not obtained any form of financial support from their county government. Instead they have come together, put up their own structures and try to get more funds for development.

We would encourage other farmers’ groups to embrace value-addition. All they need is to survey the market where they can sell the product, identify a niche market, and explore a simple method for processing. They should then seek ways to upscale their production and work hard to ensure they meet their customer needs. Farmers should stop waiting for the government to do everything for them.
Young farmer discovers the benefit of bees in farming

When Lemond Koome first planted tomatoes in a greenhouse, lack of pollination reduced his yields and income. Now he has embraced beekeeping to benefit from their pollination services and honey.

Clifford Gikanda | When 29-year-old Lemond Koome decided to try out agriculture, he never thought of the many challenges he would be faced with. As a young man doing online business or academic writing by then, he thought of doing farming which he thought was as easy as what he saw his mother do, “My mum had been practising agriculture for many years. I thought it would be as easy as the same way I saw her do it, little did I know it would be an uphill task,” Koome says.

Started with greenhouse
With a wide variety of crops to choose from, Koome decided to go for greenhouse farming. He believed it would be his gateway to not only financial freedom but also independence and a very successful enterprise. He would practise farming activities right from his village of Muchicha-Kihiku in Abothuguchi, Imenti Central. This region is predominantly a tea growing zone where horticulture crops like potatoes, kales, cabbages, coriander and carrots among others are grown. The diseases posed problems.

His farm lies 1600m above sea-level. This makes it ideal for horticulture. In the year 2016, Mr Koome invested Ksh 100,000 to put up a greenhouse structure for optimum production, “I opted to go the greenhouse way because of many environmental factors that make agriculture very unprofitable in this region. One of the major challenges we face is bacterial wilt, fusarium and late blight. These diseases affect potatoes, tomatoes and fruits with great losses to farmers,” he says. “They are less risky to grow in a greenhouse environment,” or so he thought.

Tomatoes faced disease problems
Bacterial wilt is widespread in the potato growing areas and can lead to losses of up to 100% in seriously affected soils. It spreads through contaminated seed, farm implements or when crops are planted in infected soils. Late blight is more prevalent in the cold conditions when the disease-causing pathogen multiplies more rapidly leading to declined yields.

Pollination is difficult in a greenhouse environment and Koome had an issue with this forcing him to do the pollination manually by shaking the plants in the greenhouse from the top. By shaking the plants, he had been advised by experts that the pollination would take place and it worked. At harvest, he made Ksh 45,000 from sales of his French beans. As beneficial as it was, it was not to last.

“Bees are very important in food production because they are critical in pollination and therefore should be integrated into farming systems as a companion to a farmer,” says Dr. Lusike Wasilwa Assistant Director in charge of crop protection at the Kenya Agriculture and Livestock Research Organization (KALRO).

Started beekeeping
On learning the important role bees play in horticultural crop production, young Koome took a very unlikely route taken by few farmers. He decided to go for beekeeping, not only to get honey but also to ensure his crops were well pollinated. He bought 30 beehives at Ksh 5,000 each and had them placed on one part of the farm.

“While we visited the farm recently, the hives were full of activity and the buzzing bees were busy in search of pollen and manufacturing the brown gold product naturally- honey.

Additional reading: http://www.infonet-biovision.org/Animal-Health/Beekeeping
How FAMEWS works to monitor fall armyworm

In the last issue (TOF No. 159 August) we introduced a Fall Armyworm (FAW), application that has been launched by the United Nations Food and Agriculture Organisation (FAO) to help farmers, extension workers, community workers and anyone involved in the fight against the pest to identify, report and understand how the pest is spreading. The application will also help describe its natural enemies and take measures that are effective in managing it.

Beritah Mutune | The Fall Armyworm Early Warning (FAMEWS) application provides important information to help farmers understand how the pest changes over time and space, to improve farmers’ knowledge on its behaviour and guide them on the best way to control it before it causes the destruction of their maize crop.

Farmers who do not have smartphones can seek assistance from their sons or daughters, fellow farmers or any agricultural extension officer with a smartphone which runs on Android software to help them by downloading the FAMEWS application using the following step by step instructions:

Step 1: Open your phone and install the FAMEWS application by opening the following link: tiny.cc/FAMEWS_Android search and then go to downloads to install the application.

Step 2: Click INSTALL. Your phone will display the icon FAMEWS. Click on the icon FAMEWS which will display the icon.

Step 3: Click on the icon START SURVEY, the site will give you options of the general information you need to enter such as data collected (click on both field scouting and pheromone traps) the screen will show the date of survey, location, GPS position, planting date, irrigation or rainfed, pheromone trap etc. Enter all the information on the space provided.

Step 4: Once you have entered all the information, click NEXT.

Step 5: After clicking NEXT, the application will request you to start scouting your farm. Move in your maize field in a zigzag manner that imitates letter W (as shown in the green sketch as shown bottom of this page).

Step 6: Indicate the number of Fall Armyworm (FAW) and other species of insects you see in 10 maize plants at each of the five location sites as you moved in the W pattern.

Step 7: Enter the number of plants with the Fall Armyworm you have seen in the field scouting page. Indicate what you see in the plants you have selected such as eggs, larvae, pupa or adult pupa and even any natural enemy you see in the 10 maize plants.

Step 8: Click NEXT. If you click NEXT, the screen will display the pheromone trap. In the space provided, fill in the type of pheromone trap you have placed in your shamba, including its name (ID), trap location, number of catches in the bait (or lure used) and the condition of the trap. Indicate if the trap and lure have been replaced.

Step 9: Click the icon SUBMIT to send the information you have gathered.

All the information you have collected will be sent to the country Fall Armyworm (FAW) national focal person, who will verify the information and submit it to FAO headquarters in Rome, Italy. FAO will then contact the country FAW coordinator who will receive the information and find the best way to assist you and other farmers in your locality affected by the fall armyworm.

NOTE: The smartphone user must have its GPS turned ON to help show the exact location of your farm when using the FAMEWS application. Farmers without smart phones can seek help from anybody with such a phone to help them do the survey.
The Laikipia Organic Farmers’ Group chose to grow and add value to their stinging nettle. Now they are reaping good returns after certification, which has made the product popular with consumers.

### Beritah Mutune

The medicinal and nutritional benefits of stinging nettle (*Urtica dioica*) are recognized by many communities in East Africa. For communities in Central Kenya, the plant (called *thabai*) has many uses and it was traditionally used as a vegetable for making popular traditional dishes such as *Mukimo* (mashed potatoes mixed with vegetables). In every homestead, stinging nettle would be grown around the kitchen garden where farmers would use goat or sheep manure to fertilize it. It was also harvested in the wild where it would be used for blending with other herbs and used to cure various ailments or address nutritional deficiencies.

### Started commercial production

When members of the Laikipia Organic Farmers Association wanted to start an income generating activity back in the year 2011, stinging nettle became an obvious choice. The group, which is based Ruai village in Ngobit location in Laikipia County decided to commercialise stinging nettle by planting it in their farms and later processing it for sale to consumers in major towns in the country.

The members decided that all the stinging nettle would be organically produced to enable the association to provide a healthy product to consumers that would fetch more money in the market as a niche product.

### Contribution from members

The members contributed funds for the purchase of material for a drying shed and drying racks. Since they did not have funds for the purchase of a milling machine, they would take the dried stinging nettle leaf to local posho mills for grinding into powder. Members are also trained on how to prepare compost and slurry for use as fertilizer. Members are also trained on organic production and improve their knowledge of stinging nettle including how to manage and handle stinging nettle during and after harvest.

### Demand increased after certification

As consumer demand increased, the group produced more stinging nettle products and made more money that eventually enabled them to buy a milling machine. Mr David Kiruhi, the group’s Chairman says that their next move was to have their stinging nettle certified as organic. He says the group approached the Kenya Organic Agriculture Network (KOAN), which trained them on organic certification requirements. After certification, they are now able to sell their product as organic under the Kilimohai Organic certification mark. The product also bears the Kenya Bureau of Standards (Keb) mark of quality.

### Supplying supermarkets

When the group got organic certification in 2016, the demand for organic stinging nettle increased, this enabled them to get supply contracts with Clean Shelf Supermarkets and other retail outlets in Nairobi, Nyahururu and Kerugoya. The supply contracts have increased the group’s earnings. They have invested in better drying shed which has improved the packaging to make the product more appealing to customers.

Stinging nettle sales have increased boosting income for group members, except for the recent financial problems at Uchumi supermarket which led to non-payment of some of their deliveries to the retail chain.

“We had taken a bank loan to be able to buy processing and packaging equipment to expand our operations but non-payment for deliveries has delayed the loan repayments. We hope this will be sorted out soon when the supermarket starts paying the suppliers,” says Kiruhi.

Mr Kiruhi says the group’s 103 members are able to supply stinging nettle worth more than Ksh 200,000 per month. Members are later paid according to the quantity of stinging nettle delivered. He says the group is recruiting more members to increase stinging nettle production in order to meet the increasing consumer demand for the herbal powder.

### Group maintains quality

He says new members are trained on organic production of stinging nettle including how to prepare compost and slurry for use as fertilizer. Members are also trained on how to manage and handle stinging nettle during and after harvest to ensure it is clean and is good quality for processing.

After harvest, stinging nettle is delivered to the groups processing facility where it is graded, sorted and dried to a moisture level of 10 per cent. It is then ground into powder and put into packages of between 50g to 500g according to the requirements of various customers who place orders with the group.

### Plans to diversify

Mr Kiruhi says the group’s 103 members are able to sell other products apart from stinging nettle. He says the group is exploring the possibility of selling stinging nettle in the export market once they meet local demand and improve their knowledge of stinging nettle production and processing.

He says the group is exploring the possibility of selling stinging nettle in the export market once they meet local demand to increase member’s earnings and also diversify their operations to be able to sell other products apart from stinging nettle.

### Additional reading

[http://www.infonet-biovision.org/processing_and_value_addition](http://www.infonet-biovision.org/processing_and_value_addition)
Stevia is a good sweetener that can replace sugar

With uncertainty in the quality of sugar in the market, farmers can grow and use stevia. Stevia is healthy and easily grown. It can be used by people with diabetes since it has no calories.

** Nobert Okare**

Stevia (*Stevia rebaudiana*) is a sturdy green plant whose leaves contain a unique source of natural sweetness. It’s grown all over the world and is fast becoming one of the most popular crops on the market as more food and drink manufacturers look to use stevia plant extract as a zero-calorie sweetener to reduce the amount of sugar in their products. A no-calorie source of sweetness is an obvious diet solution in theory. But a few studies show that replacing sugar with artificial or low-calorie sweeteners may not ultimately lead to weight loss in real life.

Stevia is very low in calories. Its dry leaves possess roughly 40 times more sweetness than sugar. This sweetness quality in stevia is due to several compounds including stevioside, steviolbioside, rebaudioside A-E, and dulcoside. Stevioside is a non-carbohydrate sweetener that can be used by people with diabetes.

**Sweeter than sugar**

Stevia has no sucrose that other carbohydrates possess. It has been found to be 300 times sweeter than sugar. Besides being a near-zero-calorie food ingredient, stevia extracts have several unique properties such as long shelf-life, high-temperature tolerance, non-fermentative. All the parts of the plant are sweet; however, the sweet glycosides are typically concentrated in its dark green serrated leaves.

**Preparation:** Farm fresh stevia plant leaves can be used directly in drinks as a sweetener. However, most often its dried powder or stevia syrup can be used in cooking.

Remember to use dried stevia sugar in small proportions, as it is nearly 300 times sweeter than cane sugar. Roughly, one teaspoonful of dried leaves powder is equivalent to one cup of sugar; therefore, use it in small quantities, adjusting the amount to achieve your desired levels of sweetness.

You can also make stevia syrup by adding a cup of hot water to 1/4 cup of fresh, finely-crushed leaves. This mixture is allowed to settle down for 24 hours, filtered, and then refrigerated. You may also want to buy stevia sugar rebaudioside-A which is a white, crystalline powder, approximately 300 times sweeter than cane sugar.

**Plants:** While it is relatively easy to cultivate stevia, it is also easy to get planting material. Usually, the plants are propagated as cuttings, but if you cannot find any in your *shamba*, you can use seeds as well. As the seeds are rather small, it is advisable to germinate them in pots before you transfer them to your *shamba*.

If you want to cultivate more than just a few plants for your own use, plant them in rows with a spacing of 40cm between rows and 25cm between plants.

**Soil Preparation:** Prepare the soil with some compost, allowing it to settle down for 24 hours, filtered, and then refrigerated. You may also want to buy stevia sugar rebaudioside-A which is a white, crystalline powder, approximately 300 times sweeter than cane sugar.

**Planting:** While it is relatively easy to cultivate stevia, it is also easy to get planting material. Usually, the plants are propagated as cuttings, but if you cannot find any in your *shamba*, you can use seeds as well. As the seeds are rather small, it is advisable to germinate them in pots before you transfer them to your *shamba*.

If you want to cultivate more than just a few plants for your own use, plant them in rows with a spacing of 40cm between rows and 25cm between plants.

Stevia is a good sweetener that can replace sugar because most insects hate its taste. The sweet leaves can be harvested continuously.

**Maturity:** However, if you want to sell stevia, you will get the best harvest if you wait for about three months and cut all the branches, cut from about 10cm from the base.

The plants will subsequently re-grow. You should only redo the heaps around the plants before the rainy season to avoid standing water, which can damage the roots. As such, the plants only need to be replaced after a few years when they lose their growth vigour.

**Harvesting:** At the end of September or beginning of October, harvest the entire plant once flower buds have appeared but before they’ve opened. Ideally, harvest in the morning when the plant is at its highest in sugar content. Also, be sure to harvest before many flowers (four to five buds) have opened. If most of the flowers have blossomed, they will leave behind a bitter aftertaste throughout the entire plant.

In general, fresh leaves can be sundried (to 10 per cent moisture content), ground into powder and stored in an air-tight container for future use. To store, place it in cool, dark, humid-free place like the one you do for other dried herbs where it will stay fresh for several months.

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Storage bag reduces post harvest losses

Farmers in Africa lose between 10 to 40 per cent of their maize, beans and other cereals after harvest. New chemical-free technologies such as the PICs bag can now be used to store grains for up to 2 years.

Mary Mutisya | Once again the farmers are approaching the harvesting season especially in maize growing areas in Rift Valley’s Uasin Gishu and Trans-Nzoia Counties where the bulk of the country’s maize is grown. One of the major challenges that farmers face every year is storage, which leads to huge post-harvest losses.

Post-harvest losses do not only pose a serious threat to food security at the household level but also to the countries food security. It is the dream of every farmer to obtain a bumper harvest and thereafter be able to sell it at a reasonable price or keep it for later consumption. Food traders also maximize on the profits by buying the product in bulk quantities during harvesting, preserve it and then wait for favourable conditions at the same time trying to maintain the commodity in good condition.

Huge post harvest losses
Many times, this is not achievable as the available indigenous cereal preservation methods, and poor storage conditions often fail to prevent wastage from pests and diseases. Harvested food losses occur throughout the food chain, from the farmers level all the way to the consumption stage. The losses occur during harvesting, threshing, shelling, drying, storage and in the transportation process.

New technology
For many years, many cereal farmers have struggled with cereal insects majorly maize weevil (Sitophilus zeamais) and Larger Grain Borer (Prostephanus truncates or LGB). These insects have led to huge losses which affect the quality and quantity of cereals. To reduce the damage, the Hermetic Storage Technology (HST) or Purdue Improved Crop Storage (PICs) bag is the latest innovation that has been made in an effort to reduce post-harvest losses and raise the income of small-scale farmers to increase food security.

How the PICs bag works
The principle behind this technology is that, once the product is adequately dried, and kept in the bags and proper closing done, no gaseous exchange occurs between the inside of the bag and the outside. This ends up suffocating any insects pests in the bag at whatever stage of growth they could be in. Eventually, all the insects die and are unable to cause any further damage to the grain. The shelf life of the cereals stored in the bag is prolonged enabling the farmers to sell or use the grains when they need it. Farmers can also wait and sell their grains when market prices are favourable.

Reduces use of harmful chemicals used for storage
Hermetic bags do not use any chemicals, and it has been proven to be safe and cost-effective at the household level. The bags can be used to store maize, beans, cowpeas, green grams, sorghum, millet, chickpeas among many other bowls of cereals. The stored products can last for over two years if the grains are dried properly before storage in the bags. Other than just insects, hermetic bags can protect grains from birds, rodents and fungi.

The hermetic bag’s design con-
Dear Farmer,

In our last article on protection of chickens against diseases arising from the above question from a farmer, we look at the importance of vaccination as the first step in keeping chickens free from diseases. Vaccinations should be done in the right way and time to offer effective protection.

Farmers should always learn how to vaccinate their chickens or seek the services of a qualified veterinarian to do it if they do not have the right skills.

Vaccination is the first line of defence against chicken diseases. A vaccine is a weak form of a viral or bacterial pathogen which when administered to a healthy animal helps to boost its immunity to fight the disease caused by the virus or bacteria. Vaccines help protect chickens from infectious diseases although they cannot treat the diseases. Particular vaccines protect chickens from particular diseases; this means that no one vaccine can protect chickens from all diseases.

Farmers are required to know all potential diseases and vaccinate their chickens against them. Apart from vaccinations, chicks from all diseases must be vaccinated against them.

Important facts about poultry vaccination

Disease-causing viruses, fungi and bacteria are always present in the environment. These disease-causing agents are difficult to control even with the best biosecurity measures. Vaccines help to reduce the chances of disease outbreaks and even death if they are given at the right time and in the right way.

Vaccinations can reduce the chances of poor egg and meat production and even deformities in eggs. Farmers should know that chickens can still fall sick from other diseases even if they are vaccinated against a particular disease. This is why it is important to vaccinate chickens against all diseases that can infect chickens. It is important for farmers to know that vaccinations cannot offer 100 per cent protection against diseases. Hence, other preventative measures such as hygiene and other biosecurity measures are equally important.

Note: Poultry farmers should never vaccinate chickens when they are already sick.

**How to handle vaccines**

Vaccines should be stored at between 4°C and 8°C (a cool and dry environment such as a cool box is required). They should be protected from heat or direct sunlight. All equipment used for vaccination need to be disinfected in boiling water.

Note: Farmers should never use chemicals to disinfect vaccination equipment. For each type of vaccine, read carefully the manufacturer’s advise or recommendations and take all necessary precautions in handling of vaccines.

- It is advisable to vaccinate chickens when it is cool, either in the morning or evening.
- All vaccines should be used within 1 hour (60 minutes) after preparation.
- Farmers should always consult a veterinarian when vaccinating their chickens.

**Important vaccination tools:** Vaccination tools include vaccines, distilled water, sterilised needles, syringes, a cool box, clean overalls and gumboots.

**Answers by Elkanah Isaboke**

Additional reading: [http://www.infonet-biovision.org/AnimalHealth/Nose-flu/][1]

- **Storage bag** reduces post harvest losses

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**Vaccinate your chickens to protect them from diseases**

How can I prevent diseases in my chickens to improve productivity?

**How to administer vaccinations**

**Eye drops**

- Mareks disease Injection Day-old chicks
- Newcastle disease Intra nasal (drop) At 2 to 3 weeks
- In the eye (drop) At 18 weeks and at 6 months
- In drinking water

**Injections (breast/thigh/neck muscle)**

- Gumboro In drinking water 14 days and at 28 days
- Fowl typhoid In drinking water At 8 weeks and at 6 months
- Intramuscular

**Orally (in feed or water)**

- Fowl pox Wing web method At 18 weeks

**Skin piercing (wing web)**

**Type of disease**

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<thead>
<tr>
<th>Type of disease</th>
<th>How vaccination is given</th>
<th>Age at vaccination</th>
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<tr>
<td>Mareks disease</td>
<td>Injection</td>
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Continued from page 6

Research has shown that rats cannot identify the maize in the bag since they sense their food through smell, which is always the fear of many farmers about rat damage. Farmers can buy it from any agrovet shops in their regions or in major towns.

Additional reading: [http://www.infonet-biovision.org/PlantHealth/Pests/Storage-pests][2]

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[1]: http://www.infonet-biovision.org/AnimalHealth/Nose-flu/
[2]: http://www.infonet-biovision.org/PlantHealth/Pests/Storage-pests
Musdalafa Lyaga and Shanon Macharia | Maize production in Sub-Saharan Africa is largely affected by insect pests, notably stemborers, the parasitic weed known as Striga and poor soil fertility. Over the past 20 years, ICIEP and Rothamsted Research, United Kingdom, including the Biovision Foundation have developed the Push-Pull technology, which simultaneously addresses these challenges.

In the second part of the ongoing series on this technology, Musdalafa Lyaga of TOFRadio talks to Prof. Zeyaur R. Khan, ICIEP’s Principal Scientist from Mbita Point field station on the uptake of this technology by farmers in Zimbabwe and its efficacy in Fall Armyworm (FAW) control.

Q. How has been the uptake of Push-Pull technology by farmers in your project areas?

The adoption of the technology has been very high and recently we learned that there are more than 2,000 farmers who are practising this technology in Zimbabwe. Two years ago, we came to learn about Kushereketa Rural Development Organisation (KURDO), a farmers group from Zimbabwe who says they have immensely benefited from the technology. This caught us by surprise because of how the farmers’ group, through their leader Mr Jona Mutasa how he could be adopted by farmers in a far away country.

Q. What kind of support did ICIEP give these Zimbabwean farmers to enable them to set up, manage and upscale the Push-Pull technology in the country?

When I received a letter from the farmers’ group asking for our support in setting up the Push-Pull plots in their farms, I was very happy about it. I collected all the training materials we had developed on the Push-Pull technology, including farmer field school guides, comic books and brochures.

Q. Many farmers have told us that the Push-Pull technology has been quite a success in the fight against stemborers. Farmer now face a new threat, the fall armyworm. Do you have any plans to help farmers to address the emerging challenge of this destructive pest?

By surprise again we have learnt that farmers who practise the Push-Pull technology informed us that the destruction of their cereals was not as much as that of their neighbouring countries not practising the technology. We are investigating which chemicals in desmodium, Napier or brachiaria grasses will manage to repel fall armyworms (FAW). This is a new project we have started. But, I am optimistic that we will soon have an answer. At the moment, it seems that the desmodium is repelling the mustard moth from laying eggs. So, we are trying to select another type of grass which will not only control the stem borers but also trap the fall armyworm to help reduce on their damage to crops.

Q. What kind of challenges do you have with farmers’ adoption of the Push-Pull technology?

We have observed several challenges with the adoption of Push-Pull technology. However, I must say that there is no single technology that is adopted by everybody. There are people who are early adopters. They make a deliberate choice to adopt a technology while their next-door neighbours do not. Many of them say that Push-Pull technology is labour intensive while others have challenges in accessing the seeds. We are now working with farmers who have adopted this technology to help us pass the knowledge to fellow farmers in what we refer to as a farmer to farmer learning.

Q. How does it make you feel to see how Push-Pull technology has changed farmers livelihoods?

As far as impact is concerned, am very happy that our farmers have significantly increased their yields which have a profound impact on their families’ food security. There are farmers who used to harvest less than one tonne per acre and now they are able to harvest up to 3.5-4 tonnes of maize. This is a great improvement since these farmers didn’t even have enough to eat and now they are food secure.

We recently did a study on nutrition which showed that most of the farmers who have adopted the Push-Pull technology had very good nutrition status and their children’s health had improved tremendously. The research undertaken targeted both Push-Pull farmers and non-Push-Pull farmers’ families. It was such a joy for me to see how Push-Pull is addressing the food security especially food insecure households.

My aim is to take this technology to one million farmers’ households with more than 5 million people. But we can only do this with more partners on board. We have set up a Technology Transfer Unit (TTU) to convince partners and governments to work with us. I am happy that the Governments of Ethiopia, Uganda, Zimbabwe, Kenya and Malawi among others are taking the Push-Pull technology very seriously and have made a point to help in ensuring their farmers adopt this technology.

Additional Information from push-pull.net http://www.push-pull.net/1.shtml