



# Reducing Climate-Induced Heat Stress in Pigs in Uganda: Training of Trainers Report

Following preparation of training manuals, trainings of trainers' events were organized in Mukono and Masaka on 12<sup>th</sup> and 14<sup>th</sup> October 2021 respectively.

Focal persons for More Pork project in each district selected and invited the participants with guidance from the trainer. Mukono and Masaka had 20 and 19 participants respectively.

## Objectives of the trainings included to:

1. Increase awareness about climate change and livestock interactions among extension workers and stakeholders in Uganda
2. Share knowledge, learnings, key insights about heat stress risks, effects, and adaptation options
3. Develop action plans for empowering pig farmers to adapt to heat stress

## About More Pork Project

Participants were briefed about More Pork project highlighting the history and flagships. The More Pork Project coordinator wrapped up with a brief about actions of Environment flagship.



Figure: Pius sharing about More Project

### Basic terms

Participants brainstormed on key terms and the trainer wrapped by explaining the terms. The terms included: Weather, Climate, Climate Variability, Climate Change, Climate Change Mitigation and Climate Change Adaptation. Please refer to the presentation for detailed definition of the terms.

### Climate change and livestock interactions

The participants brainstormed on the how climate change impacts livestock and how livestock impacts climate change. Illustrations were shown to participants by the trainer to show the interaction between climate change and livestock. Notably, climate change induced heat stress leads to heat stress in livestock.

### Importance of pig sector

Participants brainstormed on the importance of pig sector in Uganda. The trainer wrapped with other reasons why pig sector is essential in Uganda. Notably, pigs are important source of income, source of food, decreasing land sizes, easily translated into cash, source of manure, generally grows faster than other animals, it's a delicacy, source of dowry, compared to meat from other animals, pork takes the 2nd place of consumption in Uganda.

### Heat stress

The trainer explained and illustrated to the participants that climate change has caused heat stress in a way that the climate has become hotter. The trainer explained how pigs have a double threat because of heat from metabolism (due to shift to more productive pigs) and environment (due to climate change). It reaches a moment where the temperature is above ideal temperature required for the pig to function well. This situation is referred to as heat stress.

**Veterinary doctors can identify heat stress:** The trainer explained how heat stress can be measured and as well indicated the indicator thresholds for the participants to be able to know a heat stressed pig. These included vaginal temperature, rectal temperature, skin temperature, pulse rate (heart), respiratory rate, and tympanic temperature.

**Farmers can identify heat stress in pigs:** The trainer as well indicated that farmers can be able to see a heat stressed pig through visible symptoms and signs of heat stress. These include seeking shade, drinking more water, loss of appetite, body weakness, death, and increased body temperature.

**Pig is vulnerable:** The trainer explained why pigs more vulnerable. This was mainly because of: 1) Fat; the body loses heat through convection or conduction and that's from the body to outer surfaces and because of the fat the chances of heat loss will be lower. 2) Inability to sweat; they don't sweat; pigs have sweat glands, but they don't function. 3) Small lungs; they have small lungs relative to their body size.

**Some pigs are riskier:** The trainer elaborated which pigs are riskier and why.

**Effects of heat stress to pigs:** The trainer categorized effects of heat stress to pigs into 3 including reduced growth, reduced reproduction, and increased diseases. The trainer explained the science how heat stress affects pigs including loss of appetite, increases gut permeability, affected distribution of fats and proteins, etc. All these lead to economic losses.

### Group work in Mukono

Participants were grouped and instructed to brainstorm and present the effects of heat stress to pigs.



Figure 1: Group members discussing in Masaka

#### Group 1 in Mukono

In Group 1 they discussed the effects of heat stress on growth which included, reduced feed intake, reduced body metabolism and increased susceptibility to diseases.

#### Group 2 in Mukono

Group 2 discussed the effects of heat stress on reproduction which included reduces food intake, leads to poor conception, delayed return on heat, failure to maintain pregnancy, leads to difficulty in fallowing and weak animals also cannot mate efficiently.

#### Group 3 in Mukono

Group 3 members also discussed on how heat stress makes pigs susceptible to diseases which included the following: ill health, leads to emaciation, makes the pigs resort to wallowing.

## Group work in Masaka

### Group 1 in Masaka

1. How does heat stress affect pig growth?
  - Reduced feed intake (loss of appetite) hence reduced body weight
  - Reduced nutritional uptake leading to poor growth
  - It expends a lot of energy in trying to cool itself (panting, restlessness)
  - Increased worm burden hence parasitic gastro enteritis which leads to intestinal incapacity to absorb nutrients hence less growth
  - Parasites also compete for the less food taken in with the animal hence reduced growth.
  - Excessive intake of water leads to diarrhea and loss of electrolytes hence reduced growth.

### Group 2 in Masaka



Figure 2: Group 2 members presenting group work

2. How does heat stress affect pig reproduction?
  - ✚ A stressed boar cannot mount
  - ✚ Reduces libido in mates due to stress hormones
  - ✚ Females will not show signs of heat
  - ✚ Abortions
  - ✚ Affects fertility rate due to less feeding that affects ovulation
  - ✚ Spermatogenesis is affected by high temperatures
  - ✚ Susceptibility to disease due to lowered immunity e.g., leptospirosis and parvo

- ✚ Neonatal death due to extreme temperatures
- ✚ Inability of mother to synthesize milk due to affected feeding ability. When an animal is stressed, the body produces stress hormones that counteract the other hormones that would help in the process of milk production which will directly affect the piglets will suffer from malnutrition or even starve to death.
- ✚ Deregulation of the hormonal systems
- ✚ Sometimes over feeding a pig that's about to farrow is bad cause it can kill the unborn piglets
- ✚ Reduction of piglet size
- ✚ Reduction of milk production
- ✚ Milk quality reduction
- ✚ Low weight at weaning stage because of heat stress

### Group 3 in Masaka

3. How does heat stress affect pig diseases?
  - ✚ Low feed absorption resulting into low immune system
  - ✚ Wallowing in dirty environment may lead to entry of microorganisms which may lead to infection
  - ✚ Intake of dirty water may lead to diarrhea
  - ✚ Rapid breathing may lead to lack of oxygen and the animal collapses
  - ✚ Excessive drinking of water which reduces electrolytes which cause diarrhea
  - ✚ Increase in worm burden during the dry season

### Strategies to mitigate heat stress in pigs

Participants brainstormed on strategies to mitigate heat stress in pigs. The trainer shared with the participants about the strategies and as well photos were shown.

- ✚ Proper housing by using grass thatched houses which are very cool compared to other housing
- ✚ Farmers should be taught how to protect the environment e.g., planting trees
- ✚ Adequate supply of clean water
- ✚ Use of roofing tiles because they are cool
- ✚ Constructing pig sties under shade
- ✚ Selecting for heat stress resistant breeds. We encourage cross breeds because of the production purpose too
- ✚ Increasing the height between the roof and wall
- ✚ Construction of wallows in clean water and in a good way
- ✚ Feeding during cool times of the day e.g., morning and evening
- ✚ Pouring water on them but you should be careful because it may cause shock to pigs
- ✚ Ample space/enough space
- ✚ Fanning
- ✚ IMO system
- ✚ Proper hygiene
- ✚ Type of feeds i.e., mixing some feeds with water
- ✚ Pigsties should be constructed with its longest axis in an east and west direction (protected from the afternoon sun; only allow morning and evening sunlight to enter)
- ✚ Time and method of pig transportation i.e., morning, evening, night.

### Action plans in Mukono

### **Group 1 in Mukono**

Farmers should have standard pigsty, they should have identification on knowledge gaps, displaying posters to farmers, engaging courses to farmers. A discussion by group 1 members on the current situation which included No records, poor feeding resumes, high mortality rate and lack of training. This group went ahead and discussed on what should be done within the six months which included base line survey, training farmers and drafting of the implementation plan. The group also discussed on what should be done in the desired future. This included good management system and well-trained farmers.

### **Group 2 in Mukono**

Group 2 also discussed the following on the current situation; farmers cannot identify heat stress signs and farmers also lack knowledge of constructing standard pig-stys. They also discussed on what should be done six months from now. They also discussed on what should be done in the desired future which included farmers should know heat stressed pigs, they should also have knowledge on adoptable pig breeds, all farmers should have standard pig-stys, farmers should have knowledge on how to mix feeds with water.

### **Group 3 in Mukono**

Group 3 had the following discussion on current situation; No feeding and water troughs, non-cemented floors, poorly ventilated piggery structures, poor hygiene conditions, self-medication practices by farmers on their pigs and poor-quality breeds and they also talked about what should be done within the six months from now which included mobilization, sensitization, good hygiene, discouraging of self-medication, and monitoring and evaluation. They also discussed on what should be done in the desired future which included Increased income from piggery returns, health gig stock, and good household.

## **Actions plans in Masaka**

### **GROUP 1**

# GROUP 3 ACTION PLAN

2025  
FUTURE

General goals for the year  
General strategy  
General objectives  
General measures  
General staffs  
General structure  
General strategy  
General measures  
General staffs  
General structure

6 MONTHS

MOBILISATION  
SENSITIZATION  
TRAINING  
OF STAFFS

Structure  
Use of money  
- General staffs  
- General structure  
- General strategy  
- General measures

General staffs  
General structure  
General strategy  
General measures

Monitoring  
of  
progress  
of  
work

CURRENT SITUATION

General staffs  
General structure  
General strategy  
General measures

General staffs  
General structure  
General strategy  
General measures

General staffs  
General structure  
General strategy  
General measures

General staffs  
General structure  
General strategy  
General measures

General staffs  
General structure  
General strategy  
General measures

General staffs  
General structure  
General strategy  
General measures

Figure 3: Action plan based on theory of change developed by group 3 members in Masaka

### **CURRENT SITUATION**

- ✚ Lack of structures
- ✚ Lack of water sources
- ✚ Lack of enough land
- ✚ Ignorance/Lack of information
- ✚ Climate change e.g., high temperatures
- ✚ High prices of materials to construct sties
- ✚ Lack of designs for constructing farm structures
- ✚ Heat stress.

### **Between 0-6 months**

- ✚ Extension services to farmers especially on pigsty construction.
- ✚ Trainings to farmers (at farm level)
- ✚ Improve on designs to fit in the available small land
- ✚ Appropriate structural designs should be developed and passed on to extension workers so that they can teach farmers
- ✚ Use locally available materials i.e., grass, papyrus instead of using expensive materials like iron sheets
- ✚ Use of Stake holders like farmers (30), Private vet doctors, CBF.

### **Between 6-12 months**

- ✚ Livestock shows and exhibitions
- ✚ Due to lack of water, water harvesting (rainwater, underground water) should be done to help during dry seasons
- ✚ More training should be given to farmers at farm level
- ✚ Establishment of demonstration farms
- ✚ Planting more trees to cope up with climate change.

### **Desired future**

- ✚ Establishment of farmer field schools to train farmers
- ✚ Plant more trees
- ✚ Investing in water for production by the government
- ✚ More quality pork.

### **GROUP 2**



# GROUP 2

## DESIGN

500 Jan  
14 on line

1. ...  
2. ...  
3. ...  
4. ...

## 6 MONTHS

1. ...  
2. ...  
3. ...  
4. ...

## CURRENT SITUATION

1. ...  
2. ...  
3. ...  
4. ...

Figure 4: Action plan based on theory of change developed by group 2 members in Masaka

### **Current situation**

- ✚ Lack of knowledge on heat stress
- ✚ Lack of ideal housing materials
- ✚ Inappropriate management system e.g., tethering, free range
- ✚ Lack of sufficient knowledge on appropriate housing designs
- ✚ Lack of feeding routine/timetable
- ✚ Insufficient knowledge on feed rations and composition 7. Poor husbandry practices e.g., poor hygiene
- ✚ Insufficient water supply for both drinking and cleaning

### **Between 0-6 months**

- ✚ Training on heat stress effects, causes and mitigation measures
- ✚ Training on proper housing using locally available construction materials
- ✚ Equip farmers with knowledge on feeding timetables and feed rations
- ✚ Training farmers on importance of providing adequate clean water to pigs.

### **Between 0-6 months**

- ✚ Setting up a demonstration site
- ✚ Identification of farmer model
- ✚ Population of about 100 farmers
- ✚ Stake holders like farmers, technical staff, Private practitioners, Opinion leaders, Service provider for feeds.

### **Desired future**

- ✚ We want our farmers to be well equipped with knowledge on heat stress management.

## GROUP 3



Figure 5: Some participants in Masaka making a group work presentation

### Current situation

- ✚ Feeding time
- ✚ Proper housing
- ✚ Knowledge gap
- ✚ Financial constraints
- ✚ Animal movement policy
- ✚ Farmers' attitude
- ✚ Inadequate space
- ✚ Land ownership
- ✚ Lack of enough labor
- ✚ Lack of shade

### Between 0-6 months

- ✚ Improve on feeding mechanism (time to feed and feed quality) 2. Carry out farm visits and give on spot technical advice
- ✚ Encourage village saving schemes for farmers
- ✚ Conduct training to address knowledge gap and attitude.

### Between 0-6 months

- ✚ Growing supplementary feeds
- ✚ Trainings and farm visits
- ✚ Encourage farmers to form saving groups
- ✚ Continuous monitoring

## Desired future

- ✚ Heat stress free pigs
- ✚ Increased income
- ✚ Improved pigsty
- ✚ Availability of shade through planting trees
- ✚ Work with pig farmers, technical staff
- ✚ Considering pig farmers (20)
- ✚ Improved farmer attitude
- ✚ Improved knowledge in pig management practices



Figure 6: Some participants in Masaka holding the posters and training manual

### Change in knowledge/Skills/Experiences

There was a general increase in knowledge, skills, and experiences according to participants' perceptions as shown in graphs below.

### Mukono

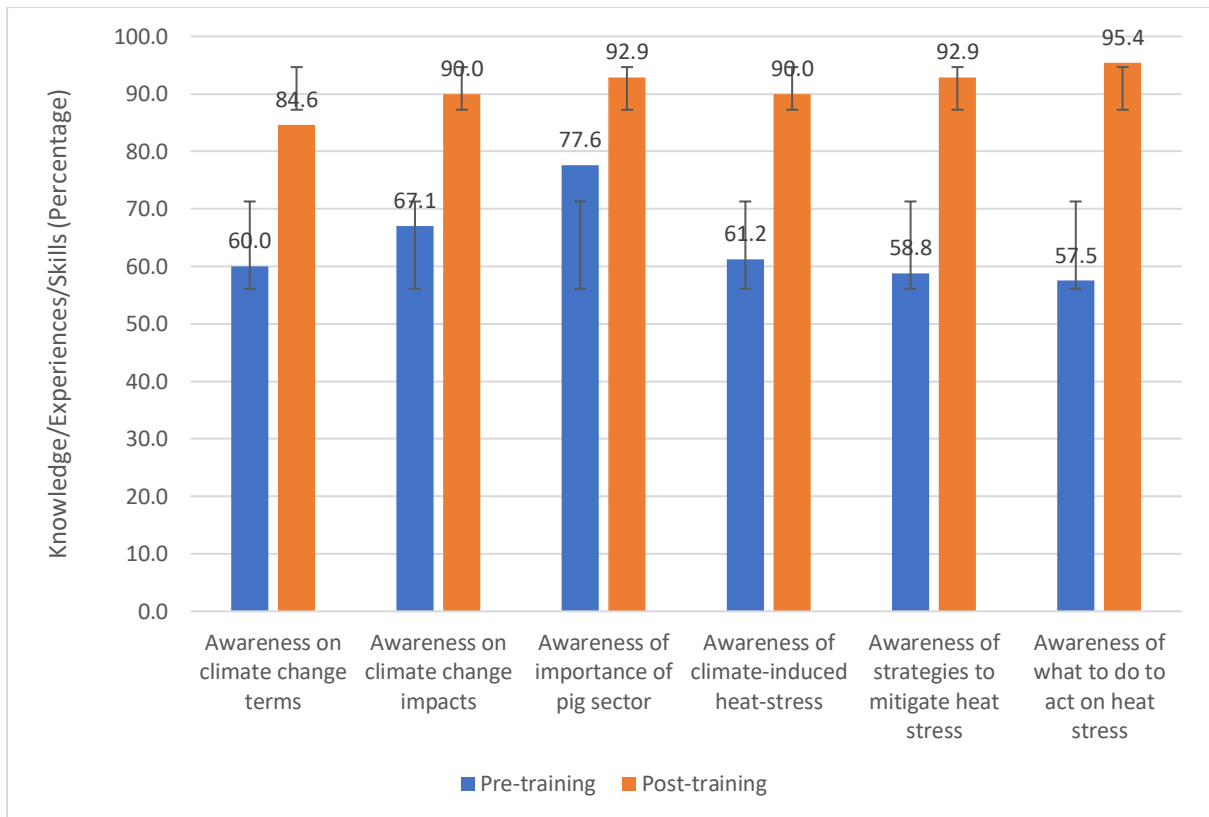


Figure 7: Graph of showing rating of knowledge/skill/experience pre and post training in each of the training areas according to Mukono participants' perception

Masaka

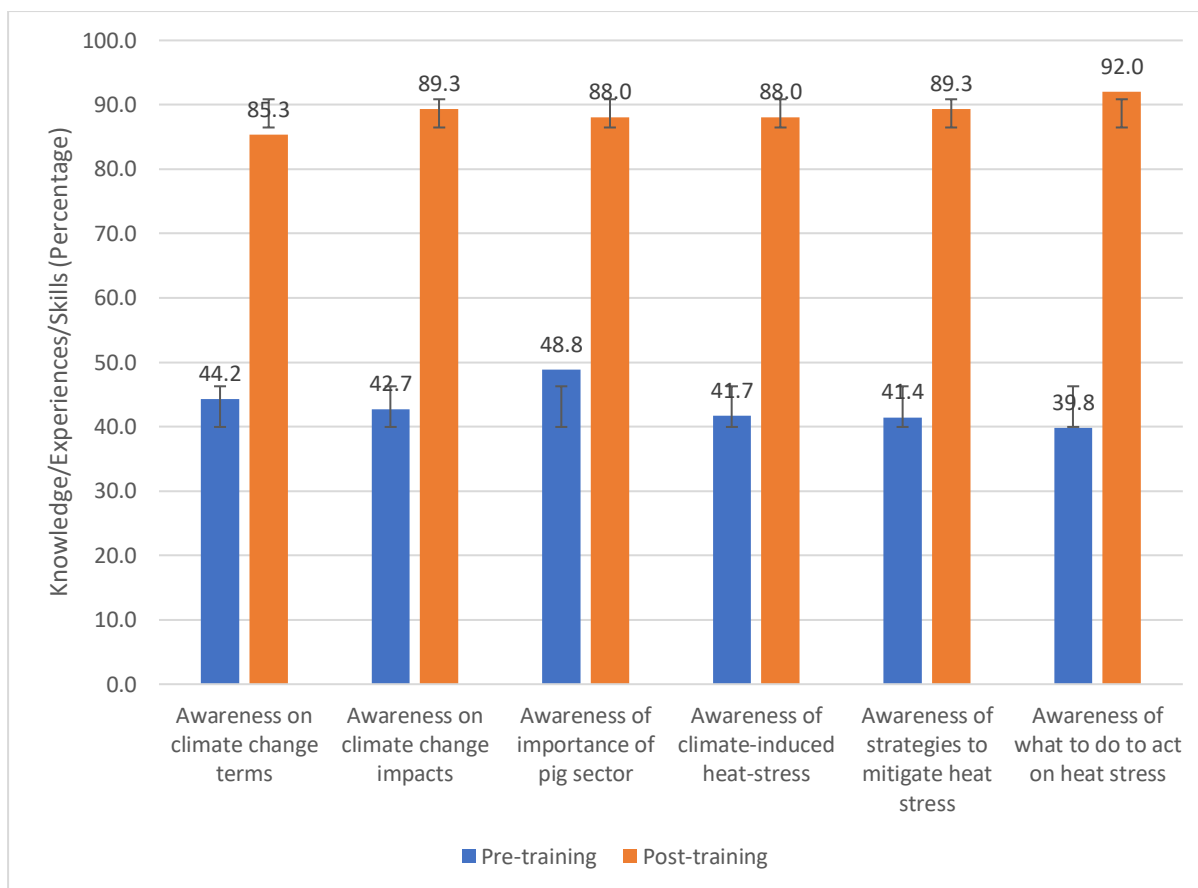


Figure 8: Graph of showing rating of knowledge/skill/experience pre and post training in each of the training areas according to Masaka participants' perception

### Pre-training in Mukono

#### 1. What profession do you have?

- Artificial insemination/Lab technologist
- Veterinary officer
- AI Technician/breeder
- Veterinary practitioner
- Vet and AI services
- Animal production officer
- Animal husbandry office
- Manager

#### 2. Write a brief description of your current role and responsibilities related to the subject matter/topic of the training; you may also refer to previous roles.

- Being an inseminator, I interact a lot with farmers when doing insemination. I advise them on breeding related topics.
- Offer on farm trainings on better management practices
- Treatment and diagnosis of diseases on pig farms.
- Guide farmers in designing and constructing pig houses
- Training farmers in animal production chain
- Being an AI technician in pigs, my work mainly goes on breeding. Training farmers in different aspects of farming in pigs
- Herd health management to ensure maximum productivity
- To advise livestock farmers on management practices based on scientific principles i.e., feeding, housing, breeding, disease prevention etc.
- My pig farmers have incurred loss in their projects caused by heat stress outcomes.

- I do not take heat stress as very important topic. In Uganda so long as the pigsty is proper, and the pig is not tied on a hope in the seen.
- I take feed and feeds, hygiene, disease control and prevention
- Sensitize people on pig production, feed formula
- Reduce disease occurrence in herds of farmers
- To train farmers in biosecurity, breeding/genetics, detecting signs of heat
- Help my fellow farmers on market for the animals i.e., pork and piglets
- Give advice to farmers on disease control and prevention, how to boost production, better management practices
- Training farmers on modern pig farming methods, assisting farmers in selecting better pig breeds, training farmers on pig breeding.
- Training farmers in rearing of pigs and breeding

**3. What are your expectations in this training met, if yes how?**

- To know how to overcome /mitigate heat stress in pigs
- Learn more about how climate change affects productivity
- Find out on market(better) possibilities for farmers for pork as this is the major challenge currently through the (more pork) organization
- Enrich my experience in guiding farmers on reducing heat stress in pigs
- Getting more information concerning heat stress
- More connections to market since farmers are not satisfied with the prices when selling pigs at farms.
- Mitigation parameters
- To acquire for more knowledge on; heat stress, causes and control measures, climate changes (effects on livestock and control measures)
- To know all about heat stress
- To learn more on heat stress in pigs
- Get better knowledge on heat stress
- To know my roles in the topic of heat stress
- To know what to train farmers about heat stress
- Understanding more on heat stress, details on more pork project
- Good interaction with my fellow vets
- To acquire more knowledge related to pork production and heat stress.
- Description of heat stress on the side of both farmers and attendants
- Acquiring more skills and knowledge
- Acquire more skills on other challenging issues in pig farming as a business
- Skills in relative pig rearing
- To learn more about heat stress

**4. What are the key and important areas you need more assistance and knowledge?**

- ❖ How to detect heat stress and how to prevent it.
- ❖ Feeding animals to attain lean meat which are cost effective.
- ❖ Strategies in case of heat stress
- ❖ Mitigation in combating heat stress
- ❖ Breeding, feeding
- ❖ Management of stress at farm level
- ❖ Feeds and feeding, breeding and value chain.
- ❖ How to help a heat stressed pig
- ❖ More knowledge on how to identify a heat stressed pig
- ❖ Feed, feeds and feeding
- ❖ More knowledge on heat stress in pigs
- ❖ Heat stress
- ❖ climatic changes and how they affect pig farmers

- ❖ more benefits of using IMO
- ❖ Knowledge on heat stress
- ❖ Feeding and disease control
- ❖ Technical and financial support during data collection in the field
- ❖ Management of pregnant sows
- ❖ Constructing facilities
- ❖ Awareness on strategies to mitigate heat stress in pigs

**5. How will the skills you learn benefit you in your role?**

- ✓ To continue advising farmers appropriately about heat stress
- ✓ Enhance my knowledge and skills on pig farming for better productivity thus enabling me to better help farmers in my area of jurisdiction.
- ✓ To bring more farmers on board as the enterprise will be profitable.
- ✓ Helping farmers to increase on their productivity by reducing on the effects of heat stress
- ✓ After gaining skills, better and healthy pigs thus more pork achieved.
- ✓ Enhance farmer handling of pigs
- ✓ Improves my competence level
- ✓ Transfer knowledge to farmers
- ✓ Will become a trainer of trainees.
- ✓ Train farmers on how to go about the heat stress in case it occurs
- ✓ To reduce on heat stress in piglets
- ✓ Have more knowledge to pass on to the farmers concerning heat stress
- ✓ Have better productivity in their herd
- ✓ More/advanced technology in pig farming
- ✓ Good housing / construction of pig houses
- ✓ Should be in time of training my farmers
- ✓ I shall be at a better position to advise my farmers more since I will have acquired more knowledge
- ✓ To use it and implement in the field to assist the pig farmers
- ✓ To expand my thinking capacity
- ✓ Transfer the knowledge and skills acquired to farmers
- ✓ Improve rearing conditions to stimulate productivity
- ✓ The skills will help me create my own business

**Post-training in Mukono**

**1. What profession do you have?**

- Animal production officer
- Veterinary practitioner
- Veterinary officer
- Animal husbandry officer

**2. Write a brief description of your current role and responsibilities related to the subject matter/topic of the training; you may also refer to previous roles.**

- Teach pig farmers what heat stress is and how to mitigate
- Training farmers in all aspects of livestock farming
- Am now at a better position to advise my farmers well especially issues to do with heat stress
- Sensitization of farmers, farms visits to pig farmers
- Advise farmers on heat stress



- Encourage farmers on maintaining good hygiene in pigs
- Extension officer responsible for training farmers on modern pig management practices
- Assisting farmers in diagnosis and treatment of livestock including pigs
- Training farmers in management practices
- Sensitize community on livestock farming
- Offering trainings and advisory services to farmers
- Training farmers
- Help farmers in mitigation to combat heat stress
- To advise livestock farmers on good management practices based on scientific principles (housing, feeding, breeding, parasite/disease control etc.)
- Implementation/expending skills and knowledge to the farmers

**3. Where your expectations in this training met, if yes how?**

- Parameters of piggery management at commercial level
- Beyond my expectations, I have achieved especially on the topic of heat stress in pigs
- I now have more knowledge on heat stress
- From today I have learnt what heat stress is, its effects and the possible mitigation measures
- Am equipped with knowledge on how to train farmers especially on heat stress
- Yes, the knowledge gap has been filled
- Yes, I learnt the effect of heat stress on pork quality and productivity
- Yes, it's now simple to differentiate heat stressed animal and ASF
- I have increased my knowledge in heat stress management
- To get training manuals
- To get knowledge and skills on heat stress and climate change
- Transport refund

**4. What are the key and important areas you need more assistance and knowledge?**

- ❖ More training on pig farming
- ❖ Sample collection, transportation, and storage facilities
- ❖ Pig diseases and management of ASF
- ❖ Pork inspection and sample collection for the lab
- ❖ More training on heat stress
- ❖ Capacity building in related fields
- ❖ Management of heat stress in lactating pigs
- ❖ Heat stress mitigation measures
- ❖ Collecting samples to differentiate between heat stress and ASF
- ❖ Differentiating heat stress and swine fever
- ❖ Related key points on feeding and environment
- ❖ More training
- ❖ Feeds and feeding
- ❖ Breeding
- ❖ Implement skills into actions
- ❖ Technical support

**5. How will the skills you learn benefit you in your role?**

- ✓ To train and sensitize pig farmers
- ✓ Enable the knowledge to be passed on to farmers to improve welfare of pigs
- ✓ I have become more knowledgeable and now able to train my farmers so well
- ✓ More knowledge and competence in the studied subject

- ✓ Advise farmers on how to manage heat stress
- ✓ Transferring the same knowledge to farmers
- ✓ Farmers will know how to identify heat stress, go about heat stress incase and avoid heat stress
- ✓ Approach farmers with confidence on the subject
- ✓ Increase my knowledge and efficiency of work
- ✓ I will have the capacity to adapt and get involved in value chain process
- ✓ Help farmers so that they can aim at high production and productivity
- ✓ Will improve on my competence
- ✓ Will enable mw train trainers and trainees
- ✓ To expand my research and knowledge of acquirements
- ✓ Training and providing services to farmers

### Pre-training in Masaka

#### 1. What profession do you have?

- Animal husbandry officer
- Veterinary/pig farmer
- Veterinary doctor
- Laboratory technologist
- Extension worker
- Veterinary officer
- Assistant animal husbandry officer
- Farmer

#### 2. Write a brief description of your current role and responsibilities related to the subject matter/ topic of the training; you may also refer to previous roles.

- Animal health worker provides services in knowledge of feeding construction, management, husbandry practices, treatment and taking samples, visitation etc.
- I oversee veterinary extension services targeted at ensuring good animal health, good welfare, and nutrition
- As a farmer responsible for day-to-day management of the pig farm
- As a vet responsible for disease control and extension services to farmers
- Offering technical extension advisory services to pig farmers
- In charge of veterinary extension services responsible for production
- I am a veterinary lab technologist working in vet lab where some of the samples handled are from pigs
- To give awareness to farmers about the effects of heat stress
- Am responsible for veterinary activities in my community.
- Extending information to the farmers in the field
- Through extension, I conduct trainings on proper housing, nutrition and feeding, disease control in pigs
- Train farmers in all aspects of animal husbandry
- Advise farmers on how to reduce heat while rearing pigs, feeding, housing and disease control
- To teach farmers how to prevent heat in their pigs
- Train farmers on the effect of heat in pigs
- As a farmer involved in pig rearing, I tell I will be in position to improve mainly certain problems i.e., losses due to heat stress
- Helping or guiding farmers on heat stress and climatic changes

#### 3. What are your expectations in this training?

- Possible ways, methods, and ideas of managing heat stress in pigs
- Clear understanding of heat stress and its impact on pig production
- To understand how policy guides on heat stress in animal health/welfare
- A refresher on the effects of heat stress on pig production or reproduction
- Status of policies addressing heat stress for livestock
- More elaboration of effect of heat stress
- I expect to know more how climate change can affect pig semen quality and reproduction in general
- To learn more about heat stress related effects
- To get more knowledge on how to avoid pig stress mostly due to heat
- To learn more about heat stress management
- To update my knowledge regarding heat stress, its effects and how it can be mitigated in pigs
- To be informed about reducing heat while rearing pigs through various strategies
- To know more on heat stress in pigs
- To know why pigs are riskier than other animals
- Get well informed about heat stress
- How to detect heat stress
- How to detect heat stress
- Improved pig management

**4. What are the key and important areas you need more assistance knowledge?**

- ❖ Climatic management
- ❖ Heat stress and cold stress management in piglets
- ❖ Pig breeding
- ❖ Mitigation of heat stress in pigs and policy for livestock movements
- ❖ Seasonal preparation of heat stress
- ❖ More knowledge on heat stress management in pigs
- ❖ Bio security
- ❖ Construction of pig structures(ideal) under Ugandan conditions
- ❖ Manure management/heat stress
- ❖ Mitigation measures of heat stress
- ❖ Strategies for reducing heat/mitigation measures
- ❖ Making pig rearing profitable
- ❖ Learning more about heat stress
- ❖ Getting skills and knowledge about heat stress

**5. How will the skills you learn benefit you in your role?**

- ✓ More knowledge to farmers especially the neighbors who are all pig keepers
- ✓ Distribution of visual aids to farmers
- ✓ It will improve my service delivery experience in the line with environmental management/climate change mitigation
- ✓ Skills will assist me in improving management at my pig farm
- ✓ Skills will be extended to farmers to assist them improve pig production
- ✓ Improvement in service delivery
- ✓ Understand standards for heat stress management in livestock production
- ✓ Seasonal preparation for temperature changes
- ✓ Will help me know how best semen from pigs can be kept viable and how to increase production in pigs
- ✓ Use local available materials to build pig structures
- ✓ I will transfer the knowledge to farmers in my area of work hence increased production

- ✓ It will help me extend information to our farmers
- ✓ Enable proper dissemination of extension knowledge to farmers
- ✓ I will become more informed on strategies to encounter climate change during pig rearing and pass on that information to farmers in my area of jurisdiction
- ✓ Become a better farmer
- ✓ Help fellow farmers to improve their ventures

### Post-training in Masaka

#### 1. What profession do you have?

- Animal husbandry officer
- Environmentalists
- Extension worker
- Veterinary/farmer
- Veterinarian
- Farmer
- Assistant animal husbandry officer
- Veterinary officer
- Laboratory technologist

#### 2. Write a brief description of your current role and responsibilities related to the subject matter/ topic of the training; you may also refer to previous roles.

- Training farmers on heat stress effects and the mitigation measures
- Provide extension services to farmers
- To extend heat stress information to farmers
- Extension services to farmers
- Better management of pig farm
- Extension service provider responsible for training farmers, ensuring good animal health and welfare
- Training fellow farmers on better heat stress management in pigs
- Training farmers on heat stress and mitigation
- Farm visits to advise farmers on mitigation of heat stress
- Training and advising framers and giving on spot support technical advice in pig management
- To mitigate the causes of heat stress in pigs
- Offering well harmonized material on heat stress in pigs
- Training farmers
- Training farmers on how to mitigate heat stress in pigs
- More training about biosecurity
- As a lab technologist I can know the reproduction status of pigs through semen analysis, hormone analysis etc.

#### 3. Where your expectations in this training?

- I now know how to advise farmers on the mitigation measures on heat stress
- I have learnt how to regulate heat stress in pigs
- Expectations achieved
- Refreshed on the effects of climate change especially heat stress on pig production
- I have understood the effects of heat stress and mitigation measures
- I have learnt new skills and hope to get more training or interaction in future

- I have received the knowledge, information regarding heat stress and I have generated action points as a way forward plan
- I can make an action plan to avoid heat stress
- I have learnt about heat stress and how to mitigate it
- There is increase in knowledge and skills to mitigate heat stress
- I managed to learn the different aspect of climate and to learn the effects of climate in pigs
- By understanding heat stress and how to mitigate it
- To improve on production of pigs to avoid losses during heat because some pigs may end up dying when heat is too much
- Learnt how to manage heat stress

**4. What are the key and important areas you need more assistance knowledge?**

- ❖ More facilitation especially transport to reach the remote areas
- ❖ Pig breeding
- ❖ Climate adaptation
- ❖ Feeding, biosecurity, breed and breeding
- ❖ Pig breeds and their resistance
- ❖ Mitigation measures for heat stress
- ❖ Pig feeding
- ❖ Policy amendments for livestock movement
- ❖ Climatic training
- ❖ Pig structural plans
- ❖ IMO knowledge

**5. How will the skills you learn benefit you in your role?**

- ✓ I have acquired the knowledge which will be passed on to the farmers towards heat stress management
- ✓ Encourage farmers to mitigate climate change and adaptation
- ✓ It has benefited me a lot and now am well equipped with the information on heat stress
- ✓ Shall now be able to pass on to farmers the knowledge and skills on construction of better pig sties
- ✓ Shall improve on pig management on the farm
- ✓ Extend knowledge to farmers and all stake holders
- ✓ By helping fellow farmers to manage heat stress on their farms
- ✓ It will help me in enriching my trainings during extension when tackling this practical challenge
- ✓ Am well equipped with mitigation measures to avoid heat stress in pigs
- ✓ I am going to correct all the problems that exist at my farm that encourage heat stress
- ✓ Through provision of good technical advisory services aimed at eliminating heat stress in pig
- ✓ By putting up demo farms in my community.