



INITIATIVE ON
Sustainable Animal
Productivity

UGANDA MOREPORK PROGRAM

Emily Ouma and Ben Lukuyu

Presented on 12th August 2024

Serena Hotel

Alliance



In the beginning



Provided a voice to VC actors

Built trusted partnerships

Uganda's pig sector was neglected

Demand for pork was rising

Value chain approach in Livestock & fish

Built the evidence on constraints, opportunities and best bets

MorePork country program

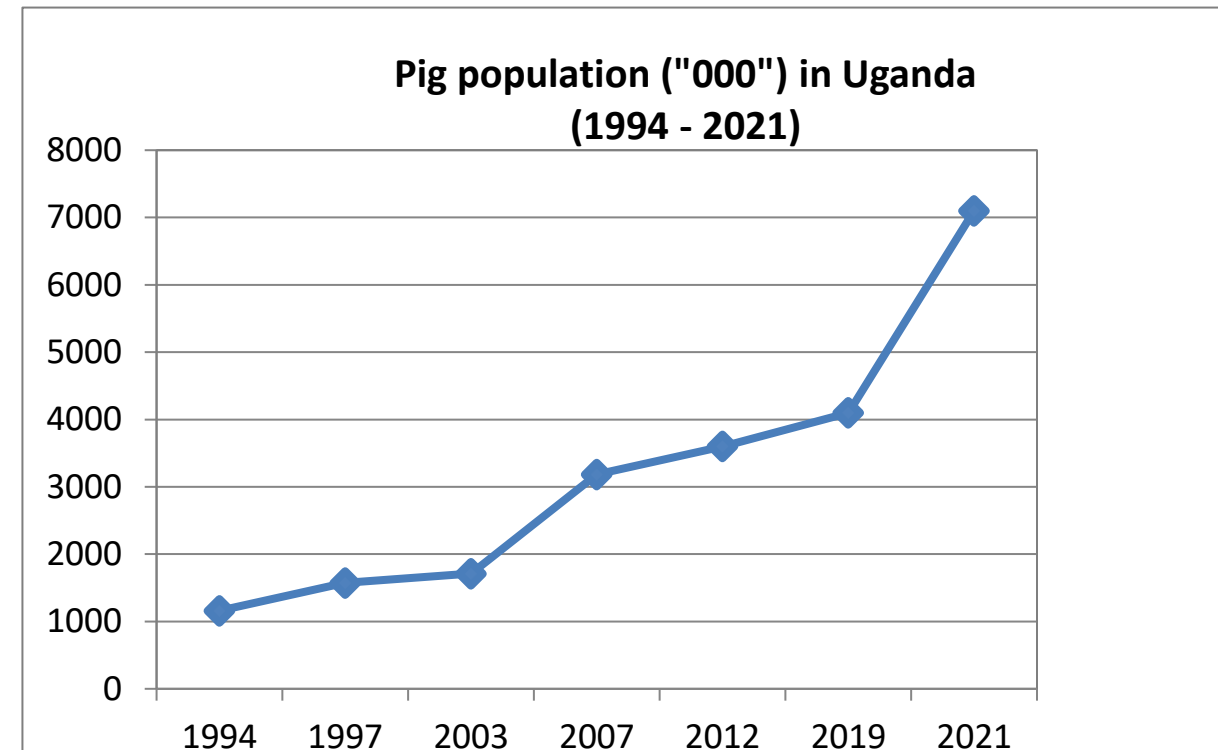
We developed training materials on feeding, disease control, among others

Sustainable Animal Productivity

We co-created innovations with partners to deliver integrated innovation package to improve productivity through market systems approach

Our Journey

- Largely informal, dominated by smallholders – pig population growth
- From 2012-current the CGIAR and its partners in Uganda have implemented the MorePork project
- High potential to translate research into interventions that generate benefits at scale
- Process:
 - Diagnostic studies to identify constraints and opportunities in the value chains
 - Co-design, and pilot testing of integrated intervention packages
 - Building partnerships



Key constraints and entry points

- Pig health – poor biosecurity practices along the value chain → ASF outbreaks and other disease-causing pathogens
- Feed availability and quality
- Genetic quality of breeding pigs
- Access to advisory services
- Market systems:
 - Lack of pork inspection in unregulated slaughter facilities, poor waste management
 - Weak value chain linkages and collaboration of actors, coupled with poor transparency in transactions
- Environmental sustainability – rise in temperature increase pig heat stress and reduce productivity
- Value chain actors and stakeholders lack voice to advocate for the sector

Highlight of interventions implemented



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Herd health: capacitating district veterinarians

- Training of district herd health champions (started through collaboration with the Swedish University of Agricultural Sciences – SLU): **20** district herd health champions trained
 - The trained champions have shared knowledge gained and built capacities of farmers and other vets in AMR, biosecurity and herd health management
- Setting up pig model farms in Mukono and Wakiso districts to demonstrate the benefits of integrated herd health package + pig smart extension package



Model pig farmer in Wakiso



Piglet crib box

Rails – separation of sow from piglets

Biosecurity measures – footbath with disinfectant and fencing

Improving and diversifying planted forages in Uganda - Experimental trials with NARO

- Experimental trials in NARO's ZARDIs in Ngetta ZARDI and MBAZARDI



Technician measuring plant height



Local cowpea

Sun hemp

Pig genetics: capacitating and linking actors in the pig genetics value chain



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AI service providers:
Skills in AI technique;
Skills in business management /
entrepreneurship
(30 trained AI service providers –
15 currently undergoing business
incubation)

Pig farmers / farmer groups:
Skills in breeds, breeding and
artificial insemination

Exposure to AI:
subsidized AI;
Model farms

Linking actors in the pig
genetics value-chain

Policy influence (MUK
collaboration):
regulations

Technical issues around
AI:
semen extension; semen
depots;
boar pheromones

Example of extension material available



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Pig artificial insemination factsheet for Uganda



Pig artificial insemination is a technique to make female pigs pregnant. Semen with living sperm is collected from the boar and manually placed in the female reproductive tract by a trained artificial insemination service provider. Pig artificial is available in Uganda and has been successfully used by many pig keepers.

The advantages of using pig artificial insemination include:

- It is cheaper to pay for artificial insemination than rearing a boar.
- Artificial insemination provides farmers with a choice of boar breeds.
- Artificial insemination allows for superior boar genetics to be used on many sows.
- Artificial insemination can reduce the spread of diseases in the herd, including African Swine Fever, due to the lack of physical mating.
- Artificial insemination allows smaller sows to become pregnant to larger sized boars.
- Litter size from artificial insemination is the same as that for natural mating.



Photo: D. Kugonza, Makerere University

Artificial insemination being performed by a qualified service provider.



Photo: D. Kugonza, Makerere University

A large litter born from artificial insemination.

Pig artificial insemination fact sheet for Uganda, English | Nov 2020

Large White breed of pig



(photo credit: MU/Donald Kugonza)

Characteristics

- Entirely white in colour.
- Long, level and wide back.
- Moderately long head, have a slightly dishd face and a broad snout.
- Ears stand upright on the head.

Performance

- Sows are good mothers and have large litter sizes and high milk production.
- The pigs usually have sound legs and feet and live long lives.
- Piglets are fast growing.
- They are an efficient feed utilizer but must be fed well.
- Carcass quality is good, with the carcasses being lean.
- A mature sow weighs between 250 kg and 350 kg and a mature boar weighs between 300kg and 450 kg.



(photo credits: Esau Galukande)



Use

- A good breed to keep as a sow if properly managed with good housing, health-care and feeding.
- Large White sows are usually crossed to Large White boars or Landrace boars but can be crossed with any exotic breed boar.
- Sows that are already a cross of Large White and Landrace are often crossed to Duroc boars.



Pig breed factsheet for Uganda: Large White breed of pig, English / June 2022



Contact: Karen Marshall
International Livestock Research Institute
P.O. Box 24384, Kampala, Uganda
k.marshall@cgiar.org

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<http://www.cgiar.org/funders/>

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Pig breeding information for Ugandan pig keepers



IDENTIFICATION OF GOOD BREEDING SOWS

If you need a replacement gilt from your piglets, keep the strongest, healthiest and fastest growing piglets born from a large litter. Be careful not to sell all your best piglets if you need a replacement gilt.

To select a breeding gilt from your piglets, keep the best 2-4 female piglets from weaning and then make the final selection of the gilt from these when they are about six months of age.

Newly introduced gilts should come from the best sows that are good mothers, have large litters with most piglets surviving to weaning, have good milk supply, have an age at first litter of 12 months, and a time period between litters of five months. Additionally, they should have at least 12 normal well aligned teats, have no defects such as hernia and must have good body conformation.

Gilts should be mated when they are seven to eight months of age and with a good weight at least 70% of maturity weight.

Sows that are bad mothers do not easily get pregnant, have small litters, low milk supply and lose many of their piglets before weaning. These should be sold for slaughter and not be used for breeding.



Photo: Esau Galukande, Makerere University



Photo: Makerere University, Donald Kagame



Contact: Karen Marshall
International Livestock Research Institute
P.O. Box 24384, Kampala, Uganda
k.marshall@cgiar.org

The More PORK project is led by the International Livestock Research Institute (ILRI) with funding from CGIAR Research Program on Livestock. The breeding component of More PORK is co-led by Makerere University (MU) and ILRI.

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Pig Breeding Information for Uganda Pig Keepers: Identification of good breeding sows, English

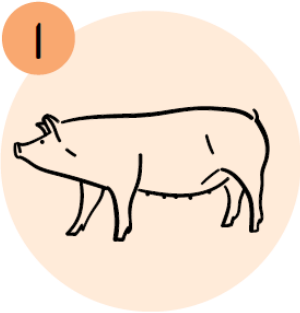
Luganda, Lusoga, Runyakitara, English

Pig weigh-band to enhance transparency in trade

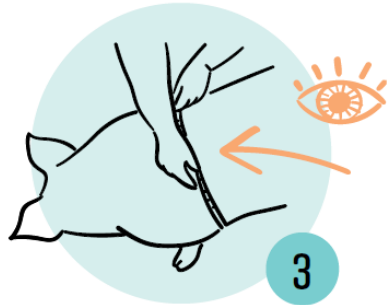


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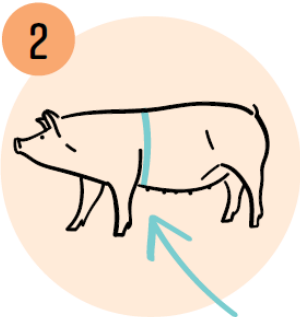
USING THE WEIGH BAND



Ensure the pig is standing well.



Read the weight from the weigh band. The weight is in kg.



Place the weigh band around the pig's heart girth, just behind the front leg.



Record the weight by writing it down.

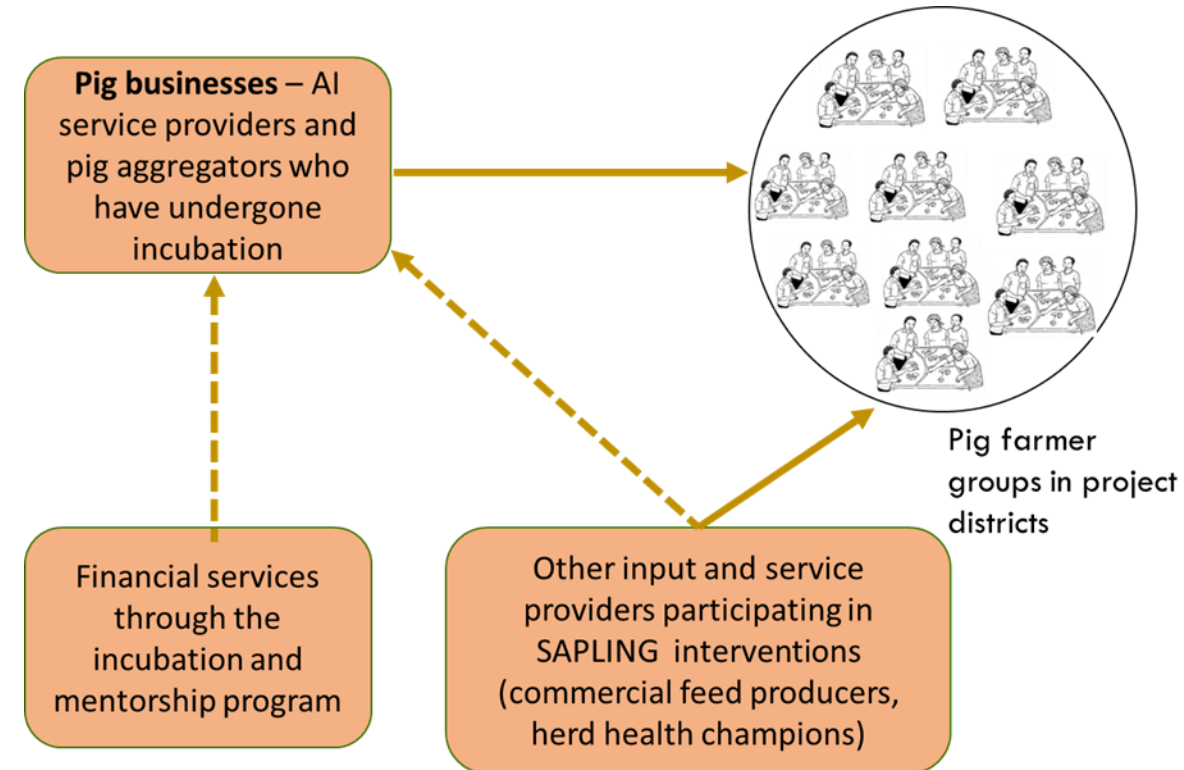


Other capacity development interventions

- Capacity development of 70 small-scale commercial feed producers, and 1500 pig farmers in feed formulation, mixing and feed safety and how to use the PigSmart feed calculator tool (Makerere University and Single Spark Co. Ltd)
- Trained more than 2000 pig farmers in on-farm biosecurity practices to control ASF + various actors in improved biosecurity protocols and practices. (District Veterinary Officers, Makerere University)
 - Enhanced awareness among farmers and uptake
 - Biosecurity practices coupled with market interventions that limit entry of traders on-farm has potential to improve farmer margins by 4% and reduce pig mortalities by 18%.

Business skill empowerment for agripreneurs

- Business incubation intervention in Masaka and Mukono districts from Oct 2023 – with E4Impact
- Business skill empowerment of pig agripreneurs (pig aggregators, AI service providers) through incubation and mentorship – 60 agripreneurs
- Customer focused and strengthens network with financial services + linkages with pig farmers and other service providers
- Light touch sensitization of pig farmer groups – 40 pig farmer groups (about 1200 pig farmers)



Policy engagement: actions and impact pathway



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Early 2020 **Heat stress evidence on livestock in Uganda finalized**

Feb 2020 **Stakeholder consultations**
Workshops held to validate results and harvest adaptation and policy recommendations regarding heat stress

Dec 2020 **High level policy briefing**
With guests Director of animal resources from MAAIF; Director from Ministry of Water and Environment and representative from the Office of the Prime Minister

Oct 2021 **Preliminary meeting with office of the prime minister**
Government representatives want to hear policy recommendations to improve the pig value chain in Uganda

2022 **Briefing with Commissioner for Animal Health - MAAIF**

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Did you know?

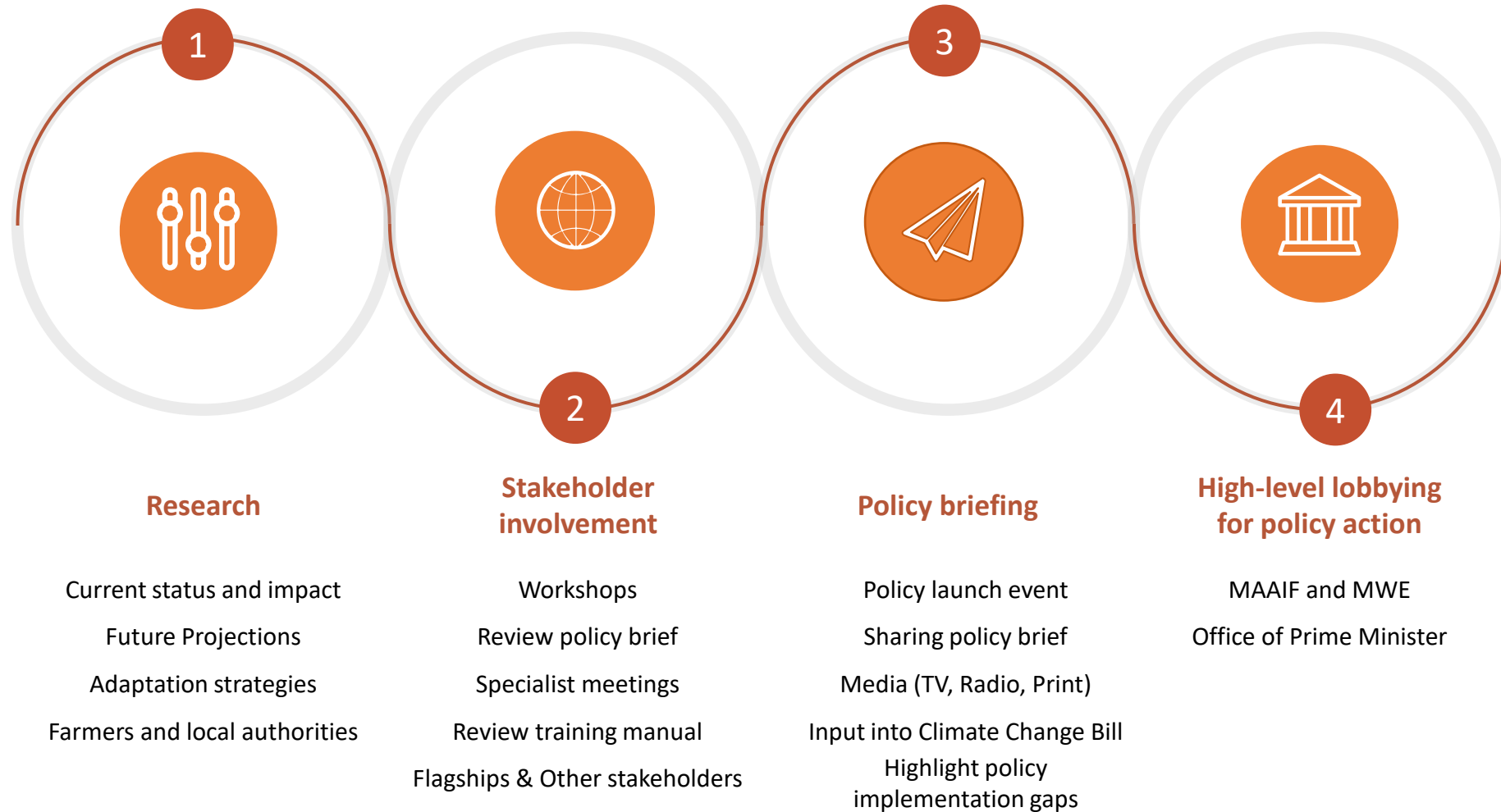
Pigs don't have sweat glands so they can't cool off efficiently.



Policy engagement: actions and impact pathway



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www.cgiar.org **Uniqueness: From research to action, through high-level decision makers**

POLICY RECOMMENDATIONS

- Categorized into two:
 - Actions to strengthen implementation of existing policies
 - Recommendations for policy revision
- Recommendations cut across several ministries
 - Ministry of Agriculture, Animal Industries and Fisheries (MAAIF)
 - Ministry of Water and Environment (MWE)
 - Ministry of Local Government (MLG)
 - Ministry of Works and Transport (MOWT)
 - Office of the Prime Minister (OPM)



Actions to strengthen implementation of existing policies

Policy gaps and recommendations – climate change adaptation and environment

Gaps in climate change mitigation and adaptation

Despite the pig sector's vulnerability to climate change, there is no inclusion of pigs in climate change and adaptation planning.

Proposed actions

- Update the National Adaptation Plan for the Agricultural Sector (2018) and the National Adaptation Programme of Action (NAPA, 2007) to explicitly include heat stress risk in pigs. **(MAAIF, MWE) Sensitize the Policy and Planning Department under MWE about the need for revision.**
- Enhance cross-ministry collaboration and de-centralization on adaptation planning and implementation to district level. Use NAPA to develop district adaptation plans of action (DAPAs).
- DAPAs should include strategies for alleviating heat stress in pigs **(Ministry of Local Government, MWE) Develop guidelines for implementation at district level. MLG and MWE to develop guidelines for developing DAPAs to alleviate heat stress**

Policy gaps and recommendations – climate change adaptation and environment

Gaps in CC mitigation and adaptation

Despite the pig sector's vulnerability to climate change, there is little to no inclusion of pigs in climate change and adaptation planning.

Proposed actions

- Operationalize the National Climate Change Monitoring, Reporting and Verification (MRV) system after a focal point at OPM has been appointed. **(OPM, MWE) - Appoint a focal person for MRV at the OPM and develop guidelines to operationalize MRV system**
- **MAAIF** (Commissioner of Animal Health) has revised the 'cattle trader's license' into a more general 'livestock traders' license' that includes pigs, the issue that still remain is to: (a) revise movement permits that restrict transportation of animals to daytime **(MAAIF, OPM, Ministry of Works and Transport, Ministry of Internal Affairs)**
- **Key considerations**
 - Movement permits are restricted to daytime transportation for security and safety reasons
 - Enforcement of animal health and welfare regulations is by Veterinary inspectors and officers whose working hours along stock routes range from 8 am to 6 pm expect for Points of Entry or Exit.



Recommendations for policy revision

Policy gaps and recommendations – climate change adaptation and environment

Gaps in CC mitigation and adaptation

Manure handling at farm level and the potential risk of transmission of zoonotic diseases and exposure to antimicrobial resistant pathogens is not addressed under the National Fertilizer Policy 2016.

Proposed actions

- **Revise the National Fertilizer Policy** to include guidelines for manure handling and storage at farm level to improve nutrient retention and reduce zoonotic disease transmission and antimicrobial resistant pathogens. **(MAAIF - crops directorate)**
- **Policy revision related to manure handling and management** - inclusion of manure management into national curricula of academics, extension workers, and farmer training centers **(MAAIF - livestock and crops directorate)**

Forage seed policy

Policy gaps

- Lack of a national forage seed policy that ensures the sustainable availability and use of affordable quality seeds and planting materials.
- The Animal Feeds Act 2024 is now a law in Uganda - The objective of the Animal Feeds Act is “to provide the legislative framework for the operationalization of the Animal Feeds Policy by regulating the production, distribution, trade, importation, exportation, use, and marking of animal feeds and by establishing the Animal Feeds Committee to regulate the production, distribution and trade of animal feeds”;

Proposed actions

- Either include a national forage seed policy into the existing National Animal Feeds Policy (2005) or have a separate one **(MAAIF)**
- **Develop forage seeds** framework and guidelines **(MAAIF)**

Our ask

- The proposed actions cut across several ministries. A high level interministerial workshop is necessary to articulate the issues and get buy-in for action.
- We request MAAIF to use its convening power to lead an interministerial workshop to action on recommendations to address policy related gaps
- CGIAR will provide backstopping whenever required

Thank You



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