

FAO-CHINA SOUTH-SOUTH AND TRIANGULAR COOPERATION

INSPIRATION, INCLUSION, INNOVATION





MINISTERIAL STATEMENT



Hon. Vincent Bamulangaki Ssempijja Minister of Agriculture, Animal Industry and Fisheries Republic of Uganda

Following the elevation of the bilateral relationship between China and Uganda to a comprehensive and cooperative partnership, the Presidents of the two Countries agreed to strengthen and advance the Agricultural Technical Cooperation relationship between Uganda and the People's Republic of China. The aim is to support transformative agricultural value chains for export to Chinese markets through technology, skills and knowledge transfer from China to Uganda. The Agricultural Technical Cooperation is implemented through the China Uganda South to South Cooperation Project Program (SSCP). The 'South-South Cooperation' refers to exchange of resources, technology, and knowledge between developing countries, also known as countries of the Global south.

The Republic of Uganda through the Ministry of Agriculture Animal Industry and Fisheries (MAAIF) and the Ministry of Finance, Planning and Economic Development (MoFPED) has been implementing a South – South Cooperation Tripartite program with the People's Republic of China and the Food and Agriculture Organization of the United Nations (FAO) over the last ten years.



PROJECT AID

Over the years, China has made significant contributions to Uganda's Agricultural sector development including provision of project aid to Uganda in form of interest-free loans and grants. Notable ones include the China-Uganda South-South Cooperation Project now in its 3rd phase, the Kibimba and Doho rice schemes, Wakawaka Fish landing site, Kajjansi Aquaculture Training Centre, Hydropower Stations and Road Construction. Trade has included leather, coffee, fish and food products among others.

STRENGTHENED BILATERAL RELATIONS

The China Uganda South to South Cooperation Project (SSCP) remains a major pillar in the bilateral relationship between China and Uganda and continues to be the leading channel through which large Chinese agricultural investments are attracted to Uganda including establishment of high value agro-industrial parks in various parts of the country.

Through the South-South Cooperation (SSC) program, China has been leveraging the learnings from its own achievements at home on rural and agricultural development to support other Southern countries including Uganda. Over the years, 450 agricultural technologies and about 300 varieties of crops have been transferred and applied to host countries including Uganda. The Chinese Government has also fielded 1,057 experts and technicians to 37 host countries including Uganda to provide technical guidance in crop, livestock and fisheries sub-sectors. In addition, over 1,000 high-level officials and experts from over 100 countries (Uganda inclusive) have benefitted from capacity development activities including workshops, trainings and study tours in China.

10-Year Anniversary of the FAO-China South-South Cooperation and Triangular Cooperation. As a flagship beneficiary, Uganda has been chosen to host the 10th Anniversary of the FAO-China South – South Cooperation Program and Triangular Cooperation. The 10th Anniversary of the FAO-China South – South Cooperation Program and Triangular Cooperation will run from 25th – 27th November 2019 under the theme "Inspiration, Inclusion, and Innovation'. The event will seek to highlight pathways forward to advance the South-South and Triangular Cooperation (SSTC) to achieve the Sustainable Development Goals (SDGs) of the 2030 Agenda.

The one week brainstorming and experience sharing gathering will form a consensus of the future of agriculture in promoting agro-industrialization and value addition for increased income, food and nutrition security and poverty reduction in Uganda. The brainstorming and experience sharing will also inform the future of the Cooperation with China.

I would like at this juncture to appreciate all those that have traveled from far and wide to Uganda to be a part of this conference.



UGANDA-CHINA SOUTH-SOUTH COOPERATION BOOSTS FOOD SECURITY



he Uganda-China South-South Cooperation was a Technical Assistance under the South-South Cooperation (SSC) with the People's Republic of China in Support of the Agricultural Sector Strategy Plan (ASSP) in Uganda. Phase 1 of The Uganda-China South-South Cooperation (SSC) was successfully implemented between 2012 and 2014. Nevertheless, after reviewing the successful results and lessons learnt from SSC Phase 1 Project, the Government of Uganda identified that insufficiency of capacity was still the main constraint in its agricultural development and food security. It is on this basis that The SSC Phase 2 Project supported the implementation of ASSP, Country Programming Framework and other agricultural policies aimed at enhancing capacity development, national food security and household incomes in Uganda, as well as promoting

trade and investment in agriculture.

The main beneficiaries of the project were small-scale farmers and agribusiness enterprises in production, processing and marketing of agricultural products. Producers were able to increase production productivity and in horticulture, cereals, aquaculture, livestock and cross-cutting technologies through capacity development and trade and investment linkages were established.

Below we look at the key focus areas and the achievements registered in these areas.





HORTICULTURE



Here, the project was to carry out demonstration training of 200 vegetable (tomatoes, carrots, onions, cabbages, cucumber, hot pepper and sweet pepper) farmers on Chinese agronomic practices such as the use of slurry, irrigation and green house technology.

The project was to also set up demonstration technologies and training of at least 400 apple farmers, 200 citrus and mango farmers on pest and disease management (fruit covering, use of pheromone traps, integrated pest management) and nursery operations. Also on the list was the training of at least 50 farmers on mushroom production and marketing using Chinese technologies, as well as facilitating importation of Chinese apple rootstock, new apple varieties, table grapes and cherry tomatoes.

At the end of it all, an Agricultural Technology Demonstration hub was established in the districts of Kabale for Horticulture.

Ten other horticulture demonstrations centers were established in the districts

of Kabale (3 apple, 2 vegetables, 1 mushroom), Kisoro district (1 Apple). Wakiso (1 table grapes), Luwero (1 table grapes) and Kampala (1 mushroom). In capacity development, over 80 extension staff were trained in horticulture. Livestock, hybrid rice. foxtail millet and aquaculture production, and biogas construction.

CEREALS

Here, the project was to support the identification, dissemination and adoption of appropriate proven improved cereal production technologies, undertake baseline study on the status of new rice, maize and foxtail millet production as well as farmer and consumer preference and major production constraints.

Another goal of the project was conducting evaluation of new rice, maize and foxtail millet varieties for adaptability and consumer preference, present new promising varieties of rice, maize and foxtail millet for official release, as well as setting up a bulk breeder and foundation seed of preferred crops, such as rice, maize and foxtail millet varieties and liaise with seed companies for seed multiplication.

The project was to also document and distribute success stories demonstrated in the course of the project period, as well as participate in knowledge and skills development visits.





LIVESTOCK



he project was to encourage livestock feed processing from locally available feed resources for sustainable utilization thus grazing, forage, cut and carry, feed conservation (hay, silage making) as well as fodder treatment (ammonification).

The project was to also look at feed formulation and processing (pelleting) from crop residues (rice straw or maize stover or fruit processing by-products (fruit peelings) or industrial waste (brewer's yeast).

Another area of interest was the importation of new germplasm of goats,

sheep, and pigs from China in form of live animals, embryos, ova and semen as well as promoting production of Chinese big ear goats for meat and milk and Chinese pigs which are thought to have resistance to African Swine Fever (ASF) that is endemic in Uganda;

The other focus area was the planting of pastures for the different animal breeds, importation of feed processing equipment, training of about 12 technical staff in feed formulation using locally available materials (fodder treatment/ ammonification, pelleting), and training about 800 farmers in feed processing and utilization.



The project was to also perfect and promote wooden cage poultry technologies for adoption, training of 12 technical staff in reproductive technologies (Artificial Insemination [AI], multiple ovulation and embryo transfer [MOET]), infrastructural development at the hub, and characterization of on-station performance of the animals as well as the characterization of on-farm performance of the animals.

AQUACULTURE



In aquaculture, the project was to among others increase fingerings availability through improving hatcheries, improve ponds, improve fish feeding, practice and up-scale rice-fish culture, train at least 100 farmers on Chinese fish production technologies, train at least 2 aquaculture staff in China, as well as training of at least 20 aquaculture local government staff on production technologies and feeding technologies.

The project also focused on the preparation of fish production training manuals, capacity building of technical staff at local and central government levels, provide water quality testing equipment to the district fisheries offices where host farmers are selected, provision of agro-processing machinery for promoting on-farm feed formulation and processings, provision of artemia decysting equipment to five regional fish hatcheries, procurement of start-up fingerlings for at least 100 fish farmers as well as supporting development and construction of at least 100 pond based production systems.

ACHIEVEMENTS REGISTERED

The project registered quite a number of achievements in the areas of demonstration and training, capacity development, and as well as trade and investment. Below, we look at each of the area.



Pius W. Kasajja, The Permanent Secretary Of The Agriculture Ministry



DEMONSTRATIONS AND TRAINING



Trainees at one of the Chinese model biogas demonstration units.

even Agricultural Technology Demonstration hubs were established in the districts of Kabale for horticulture, Mbarara for livestock, Wakiso (Entebbe) for agribusiness, Luwero for Agricultural Industrial Park, Nakaseke (Kapeka)

for integrated ecological agriculture farm, Budaka and Butaleja for rice–fish culture, hybrid rice, fox tail millet and agro-machinery as well as Amuria for aquaculture and rice-fish culture.

Still, ten horticulture demonstrations centers were established in the districts of Kabale (3 apple, 2 vegetables, 1 mushroom), Kisoro district for Apple, Wakiso for table grapes, Luwero for table grapes and Kampala for mushrooms.

Five livestock demonstrations were established in the districts of Mbarara (1 ammonification, 2 forage grass planting and silage making,), Isingiro for forage grass planting and silage making,) and Kiruhura for silage making.

Nine cereal demonstrations sites for hybrid rice and fox tail millet were established in the districts of Kibuku, Budaka, Luwero,

> Lira, Oyam, Apac, Nakaseke district, and Butaleja, and Bugiri. The project also set up six aquaculture rice-fish demonstrations established in the districts of Amuria, Budaka, Nakaseke and Butaleja. A fish

feed small scale processing factory for demonstration was also established in Kapeka Nakaseke district.





Three Chinese model and two local type biogas units for demonstration were built in Nakaseke, Wakiso and Kabale districts. And Agro-machinery for field preparations including rotovator, mushroom substrate chopper, rice threshers, three solar insect traps were provided for demonstration in Budaka, Kabale, Butaleja and Amuria districts respectively.

Still, one Sweet potato processing smallscalefactory demonstration unit was established in Kapeka, Nakaseke district, a processed beef jerky suitable for Chinese market was developed, three

sustainable business models were developed in Gulu district, Butaleja district and Nakaseke district.

And over 3,000 farmers were trained in horticulture, livestock, hybrid rice, foxtail millet and aquaculture production, and biogas construction.

Staff trained in horticulture, livestock, hybrid rice, foxtail millet, aquaculture production and biogas construction

CAPACITY DEVELOPMENT

Here, through the project, over 80 extension staff were trained in horticulture, Livestock, hybrid rice, foxtail millet and aquaculture production, as well as biogas construction. Capacity development study tours were also carried out in China

with upto 18 officials benefiting from the project.

Still on capacity building, eight trainers in agricultural technologies were trained in various disciplines including

planting techniques of paddy rice, hybrid rice seed production technology intensification, vegetable breeding and cultivation technology, fruit tree planting techniques, new technologies of tropical Agriculture and tilapia breeding and high yield farming.

ESTABLISHMENT OF SMALL-SCALE AGRO-MACHINERY

- Establishing base line in the project districts
- Establishment of demonstrations at each hub (feed mills for animals and fish, small-scale tillage machinery for crops, processing and packaging machinery for fish, livestock and crop products, promote small-scale irrigation and water harvesting)
- Promoting agriculture water management best practices
- Training on improved technologies for agro-machinery or adoption of simple and appropriate technologies for the country.
- Conducting a demonstration on use of labour-saving technologies: including walking tractors, hydro tillers, seedling planters, drum seeders and weeders
- Technical backstopping, monitoring and evaluation
- Integrating aquaculture with irrigation





Ministry of Agriculture, Animal Industry and Fisheries and Kehong to promote Agricultural Development to ensure food security and income generation.

Still, a China Uganda Agricultural Cooperation Industrial Park by Kehong was maintained in Luwero and Kalungu districts, and seven Chinese Companies invested in Uganda under the guidance and support of SSCP2.

A MoU was signed in August 2017 between MAAIF and the Ministry of Agriculture (MoA) of the People's Republic of China to expand China agricultural development cooperation. In the same vein, a MoU was signed in August 2017 between Uganda and FAO on future agricultural development cooperation and triangulation.

Another achievement was the coming to Uganda of the two high level South-South Cooperation Global leaders, Carlos Watson and Dongxin Feng from Food and Agricultural headquarters in Rome.

The two, who came in April and October 2017 respectively, were conducted around project sites including hybrid cultivation, rice-fish culture and agro-machinery demonstrations in Butaleja district and Livestock production technologies in Mbarara and Kiruhura districts.

SUSTAINABILITY

In order to ensure sustainability of the project, a number of interventions were identified, notably in capacity development where Ugandan counterparts worked with the Chinese experts and technicians and acquired the much needed experience to continue with the new Chinese technologies.

On gender equality, the project was open to all gender categories, and on environmental sustainability, the project included technologies such as integrated ecological farm and renewable energy such as biogas and solar insect traps that are environmentally friendly.

The project also had a Human Rightsbased Approach with its aim being improving food security and income generation.

On technological sustainability, the SSCP2 project was integrated in the ongoing country programmes to ensure technical sustainability while on economic sustainability, farmers that have adopted the introduced Chinese technologies will have increased incomes through the sales of the produce and products.

Chinese agricultural trade and investments which gives job and market opportunities to Ugandan farmers reinforce economic sustainability.



KAMOKAMOGA REAPS BIG FROM RICE



AMAN KAMOGA

Aman Kamoga, a family man with two children, has benefitted tremendously from the adoption of hybrid rice, which the SSC project to his cooperative.

"As a group, we used to plant our local rice by broadcasting. The Chinese experts taught us improved methods for rice cultivation starting with planting the seed in a nursery bed, transplanting after 14 days to the main field, planting in lines with a spacing of (30×30) cm, application of DAP fertilizer before planting, NPK 21 days after planting, proper weed control and harvesting. We were also told to dry our harvested rice on tarpaulins to minimise contamination before milling," he recalls.

Before the SSC project, members of the group used to plant 5 kg of local rice seed and harvest 100 kg of grain. Individually, Kamoga was harvesting 150 kg of grain from planting the same amount of seed. When the group planted hybrid rice using the improved techniques, the average harvest was 450 kg of grain from two kilos of seed. Kamoga on the other hand planted 12 kg of seed and harvested 3000 kg of grain.

Through improved rice yields, within one year, Kamoga, who used to sleep in a grass-thatched mud and wattle house, constructed a brick house. He also now uses solar power, an improvement from a kerosene lamp. Additionally, courtesy of his improved income, his children who used to study in fully funded Universal Primary Education (UPE) schools, are currently enrolled in private boarding schools in Jinja and Mukono. He is planning to upgrade from a bicycle to a motorcycle in the next season.



The enrollment of the cooperative has also risen from 600 before SSC project to 2,745 comprising 1400 females, 700 youth and 645 men. The group also sells their produce collectively and rents a store and office in Nasanga sub-county. Savings have also become the norm for the members. The women in the group have become empowered and more involved in the rice business using their income to purchase mobile phones, television sets and pay school fees for their children. In September, the cooperative received equipment and inputs comprising a walking tractor, a rice huller, a mouldboard plough, a water pump, five litres of engine oil, four bags each of NPK, Urea and DAP fertilisers as well as three bags of hybrid rice seed

The cooperative has started training other rice farmers in the neighbouring subcounties using the techniques acquired from the Chinese cooperants. Kamoga said there was need for more training for the cooperatives in the rice value chain and access to mechanisation and banking services in the next phase of the project to address the challenges of flooding in the rice fields, insufficient training in agribusiness and lack of capital.

"I thank the Government of Uganda under President Museveni for promoting the transfer of skills to farmers of Idudi Rice Farmers' Cooperative Society through project like the South-South Cooperation," he said.

Foxtail millet changes Ajura's fortunes Tom Ajura, is a farmer and LC 1 chairperson of Acegi village in Kwania district. For Ajura, the adoption of foxtail millet in his farming enterprise has brought tremendous changes, plus a better and more prosperous life. The 58-year-old local leader had been growing finger millet for years, sowing it through broadcasting and harvesting only once a year due to the long maturity period. In 2017 however, Ajura's fortunes changed for the better after he learnt about fox tail millet through a local community organization called Initiative Community Empowerment and Support (ICES).



Through ICES, a local implementing partner of the South-South Cooperation Project, he received five kilogrammes (kg) of the fast maturing and high-yielding open pollinated variety of foxtail millet seed. This he planted on a quarter of an acre and harvested 150 kg of grain in the first season. During the second season in the same year, with seed saved from the first season, he planted 10kg on one acre. This time he harvested 400kg which he sold to ICES at UGX 2000 per kg, much higher than UGX 1400 per kg which was the market price for finger millet. His bountiful harvest was boosted through the new knowledge and skills he acquired through interaction with the Chinese



cooperants on the Project. "I learnt to plant the foxtail millet in rows, apply fertilizer, timely weed control, seed preservation and pest and disease management", he says. "Unlike previously, I could now reuse seed for at least two seasons and be assured of high yield", Ajura adds.

Through the sale of foxtail millet, Ajura was able to buy 1 acre of land and has been able to pay his children's school fees. The family has also improved its nutrition and enhanced its food security. His wife Margaret attests that the millet is easy to thresh, cook and produces tasty porridge, with a good aroma and colour.



The Ajura family found it easy to adopt cultivation of fox tail millet because of its short twomonth maturity period as opposed to four months for finger millet, tolerance to drought, and high market value. However Ajura is weary of the sustainability of the choice of millet due to the difficulty in accessing foxtail millet seed and the need for further training and knowledge on the fox tail value chain and drudgery. He would like to get more training and also empower other farmers to adopt cultivation of fox tail millet. "We also need to learn about and adopt appropriate agro-technology in order to improve our farming and incomes", he appeals.



TOWARDS SUSTAINABILITY IN THE NEXT PHASE

he next phase will see the Government of Uganda assume more of the responsibility in maintaining the development and growth that has been realised thus far, moving towards co-funding the project. This is a mark of the strides Uganda has taken in agro-industrialisation and particularly in exploiting the opportunities afforded by the SSC project. And yet we have not maximized it to our fullest potential: now is the time for the private sector to confront the opportunities available within the agricultural sector, particularly when there is an approach in place that can provide maximum benefit for little to no cost. And whilst there are still constraints and issues to address, and solving issues on a grass-roots level has illuminated other areas that need to be addressed, from institutional development, capacity building, and training in other areas, such as post-harvest handling. The 10th Anniversary of the SSC serves not only as a commemoration of the project and all it has accomplished, but as a chance for all the 40+ countries involved in the South-South Triangular Cooperation to share, reflect and evaluate on the triumphs and learning curves of the project thus far. So much has been accomplished in the past ten years, and even more can be achieved in the coming decade. Get inspired. Get innovative. Get involved.



MOVING FROM SUBSISTENCE TO SUSTAINABLE AGRICULTURAL WEALTH

FAO-CHINA SOUTH-SOUTH AND TRIANGULAR COOPERATION





