

# ORYLUX varieties Aromatic Rice for Africa

Local African aromatic rice



AfricaRice

**Africa Rice Center**  
Sali Atanga Ndindeng

This technology is all about growing special types of delicious-smelling rice in Africa. These rice varieties are designed to grow well in African conditions. They taste really good and are in high demand. Right now, not enough of this rice is grown in Africa, so a lot of it has to be imported.

This technology is **TAAT1 validated**.

**7·7** Scaling readiness: idea maturity 7/9; level of use 7/9

Gender assessment **4**

Climate impact **7**

## Problem

- Low production of aromatic rice in Sub-Saharan Africa (SSA)
- High dependence on imports from Asia
- Limited access of farmers to seeds suited to prevalent growing conditions
- Lack of aromatic rice varieties adapted to SSA's conditions
- Need to improve yields, quality, and resistance of rice crops
- Insufficient connections between stakeholders for commercialization

## Solution

- Development of aromatic rice varieties tailored to SSA's agroecosystems
- Crossbreeding with elite lines to maintain high yields and beneficial traits
- Utilization of genetic mapping and molecular tools for faster breeding
- Dissemination of ORYLUX seeds in local markets to increase availability
- Establishment of connections between farmers, processors, and consumers for value maximization

Technology originally documented by

ProPAS

Commodities

Rice

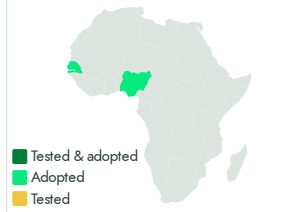
Sustainable Development Goals



Categories

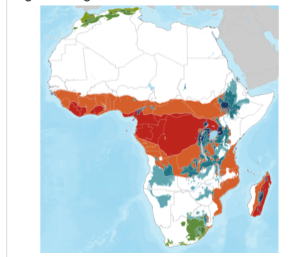
Production, Improved varieties, Quality improvement

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Farmers, Seed companies, Sellers

## Key points to design your project

1. Identify suitable ORYLUX varieties.
2. Raise awareness about its benefits.
3. Ensure access to seeds and support.
4. Estimate seed quantity and costs.
5. Provide training and communication support.
6. Collaborate with institutes and companies for implementation.

Cost: \$\$\$ **1,3 USD**

A Seed cost per kg

**10—12 Kg**  
per Ha  
Planting densities

**51 USD per Ha**  
Labour costs for planting

**105 USD per Ha**  
Fertilizer inputs

**200 USD per Ha**  
Harvesting and winnowing of grain

IP  
Unknown



ORYLUX varieties

<https://e-catalogs.taatafrica.org/gov/technologies/orylux-varieties-aromatic-rice-for-africa>

Last updated on 22 May 2024, printed on 22 May 2024

Enquiries [techs@taatafrica.org](mailto:techs@taatafrica.org)

# NERICA New rice for Africa varieties

NERICA: Higher Yields, Resilience, and Profitability for African Farmers.



AfricaRice

**Africa Rice Center**  
Sali Atanga Ndindeng

Technology originally documented by

ProPAS

Commodities

Rice

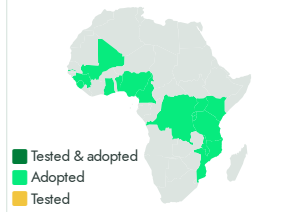
Sustainable Development Goals



Categories

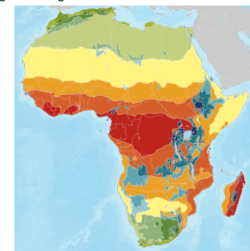
Production, Improved varieties,  
Yield improvement, Drought tolerance

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Farmers, Seed companies

This technology is **TAAT1 validated**.

**8·8**



Scaling readiness: idea maturity 8/9; level of use 8/9

Gender assessment **4**

Climate impact **7**

## Problem

- Traditional rice varieties often yield less, impacting food security and farmers' income.
- Conventional varieties are more susceptible to pests and diseases, leading to yield losses.
- Many varieties struggle in nutrient-poor soils and under erratic rainfall.
- Insufficient local production leads to heavy reliance on imported rice, affecting economic stability.

## Solution

- NERICA varieties yield more, ensuring food security and higher income.
- They resist pests and diseases, reducing chemical use.
- Thrives in poor soils and limited water, suitable for diverse environments.
- Boosts local production, enhancing economic stability.
- Accessible to small-scale growers, improving practices and income.

## Key points to design your project

To integrate NERICA technology into your project, consider the following steps:

- Develop NERICA varieties tailored to local growing conditions.
- Conduct awareness campaigns to highlight the benefits of planting improved rice varieties.
- Ensure equitable access and financial support for local suppliers and farmers.
- Estimate seed quantity needed, including technology costs and delivery expenses.
- Engage a team of trainers for installation support and develop communication materials.
- Consider optimizing NERICA with other agricultural practices like nitrogen management and weed control.
- Collaborate with agricultural institutes and seed companies for implementation.

Cost: \$\$\$ **0.8—1.2 USD**

Per kg of seeds

ROI: \$\$\$ **25—39 %**

**1.7—0.7 ton per ha**

with and without fertilizer



Open source / open access



NERICA

<https://e-catalogs.taatafrica.org/gov/technologies/nerica-new-rice-for-africa-varieties>

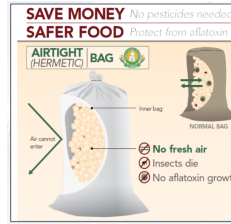
Last updated on 22 May 2024, printed on 22 May 2024

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# PICS Hermetic Bags for Safe Storage of grain

Low cost storage technologies for grain

Hermetic bags are like super-sealed containers that stop air and moisture from reaching the grains inside. This way, farmers can store their grains for up to two years without them getting bad. This is good for farmers because it means they always have enough food and can sell their grains for better prices.



This technology is **TAAT1 validated**.

**9-9** Scaling readiness: idea maturity 9/9; level of use 9/9

Gender assessment **4**

Climate impact **7**

## Problem

- Food insecurity and poor livelihoods for small-scale farmers
- High post-harvest grain losses due to inadequate storage techniques and pest infestations
- Sale of grains at low prices after the harvest

## Solution

- Kills insects and microbial organisms by stopping renewal of oxygen that is consumed by pests and by the grain and accumulating carbon dioxide
- Preserves grain quality and allows storage for up to two years
- No need to use fumigants and insecticides for conservation

## Key points to design your project

This technology is a eco-friendly solution supporting Sustainable Development Goals by addressing hunger and improving health. To integrate it, plan activities like estimating product quantity and costs, considering logistics, and accounting for training. Communication materials should be developed. Ensure grains are adequately dry before using hermetic bags.

Cost: \$\$\$ **2—3 USD**

Bag cost for suppliers

**50 or 100 Kg**

Bag capacity

ROI: \$\$\$ **90 %**

Reduction of loss

**2 year**

Life span



Trademark

Alliance



**The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT)**  
Laurie Kitch

Technology originally documented by

[ProPAS](#)

Commodities

Common bean, Rice, Wheat, Maize, Sorghum/Millet, Soybean

Sustainable Development Goals



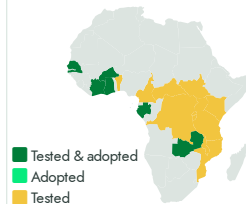
Categories

Prevention & storage, Equipment, Post-harvest handling

Best used with

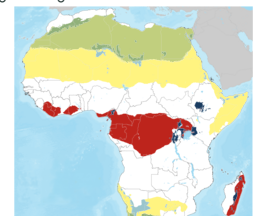
- [Mechanized Threshing Operations >](#)

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



PICS

<https://e-catalogs.taatafrica.org/gov/technologies/pics-hermetic-bags-for-safe-storage-of-grain>

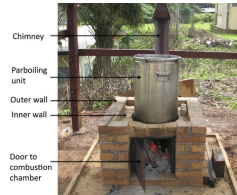
Last updated on 22 May 2024, printed on 22 May 2024

Enquiries [techs@taatafrica.org](mailto:techs@taatafrica.org)

# GEM parboiling system Parboiling and flour production equipment for rice

Reduce milling losses, enhance nutritional and organoleptic quality

The technology improves rice parboiling with a new design, replacing traditional methods prone to emissions. Tailored for small to medium-scale processors, it enhances efficiency and product quality, reducing steaming time and improving grain quality significantly.



AfricaRice

**Africa Rice Center**  
Ernest Asiedu

Technology originally documented by

ProPAS

Commodities

Rice

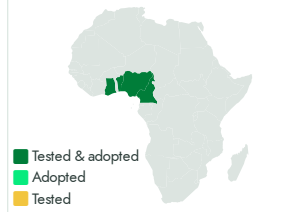
Sustainable Development Goals



Categories

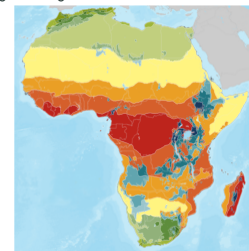
Transformation, Equipment,  
Agrifood processing

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Farmers, Processors

This technology is **TAAT1 validated**.

7·7

Scaling readiness: idea maturity 7/9; level of use 7/9

Gender assessment 4

Climate impact 7

## Problem

- High milling losses.
- Decreased nutritional quality of the rice.
- Undesirable texture, aroma, and appearance of the rice.
- Significant time and effort required for the process.

## Solution

- Reduces steaming time to 20-25 minutes, minimizing emissions exposure.
- Improves grain translucency, reduces chalkiness, and boosts nutritional value.
- Provides low glycemic index, increased fiber, and higher vitamin B availability.
- Allows longer storage as rice flour, aiding food security.
- Made from simple, locally available materials.

## Key points to design your project

To integrate it into your project, follow these steps:

- Raise awareness among processors and consumers about GEM parboiling systems.
- Assist in selecting the right system size and configuration.
- Ensure a steady supply of high-quality rice.
- Develop marketing strategies for rice flour and derived products.

Cost: \$\$\$ **400 USD**

equipment

ROI: \$\$\$ **70 %**

Internal rate of return for a GEM parboiling system

**0.64 USD**

firewood per 100kg of rice



Open source / open access



## GEM parboiling system

<https://e-catalogs.taatafrica.org/gov/technologies/gem-parboiling-system-parboiling-and-flour-production-equipment-for-rice>

Last updated on 22 May 2024, printed on 22 May 2024

Enquiries [techs@taat-africa.org](mailto:techs@taat-africa.org)

# Urea deep placement Nitrogen management for Efficient Rice Fertilization



**Africa Rice Center**  
Sali Atanga Ndindeng

Boost rice yields and save on fertilizer costs through efficient nitrogen management

Deep Urea Placement involves drilling urea granules into rice fields, optimizing nutrient uptake, soil fertility, and productivity. Placed 7 to 14 centimeters deep, it ensures consistent nitrogen supply, particularly suitable for lowland rice farming with clay soils.

This technology is **TAAT1 validated**. 8•8 Scaling readiness: idea maturity 8/9; level of use 8/9

Gender assessment 4

Climate impact 7

- ### Problem
- Inefficient Nitrogen Utilization.
  - Environmental Pollution due to traditional urea application.
  - Low Grain Productivity due to high nitrogen losses from current urea practices.
  - High production costs without proportional yield increases.
  - Limited irrigation in optimizing traditional urea application under varying rainfall.
  - Climate disturbances causing by greenhouse gas emissions from conventional urea application.

- ### Solution
- Large granules release nitrogen slowly, optimizing absorption by rice crops, reducing waste, preserving the environment and preventing contamination.
  - Direct nitrogen delivery enhances soil fertility, promoting healthier rice crops and higher yields.
  - Subsoil placement contributes to increased drought resilience in farming systems.
  - Single-season application reduces labor and overall production costs.
  - Suited for diverse agroecologies, benefiting both subsistence and commercial rice farmers.

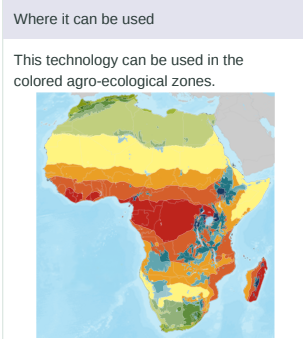
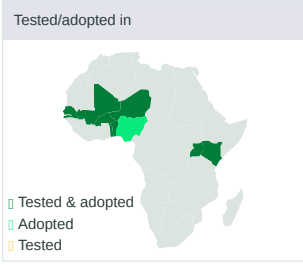
- ### Key points to design your project
1. Evaluate the required product quantity and cost, considering USD 0.4-0.8 per kilogram and a recommended rate of 0.25 tons per hectare.
  2. Consider the technology's supply location, factoring in delivery costs and potential import duties.
  3. Trainers can provide support during installation; budget for training and post-training assistance.
  4. Develop communication materials for technology promotion.
  5. Enhance the improved maize variety with companion planting, foliar micronutrient addition, engineered irrigation, motorized weeders, and RiceAdvice digital support.
  6. Collaborate with agricultural institutes and agro-dealers for nationwide implementation.

Technology originally documented by  
**ProPAS**

Commodities  
Rice

Sustainable Development Goals

Categories  
Production, Practices, Soil fertility, Yield improvement



Target groups  
Farmers

Cost: \$\$\$ <b>0.4—0.8 USD</b> per Kg	ROI: \$\$\$ <b>30 %</b> increase in yield
<b>0.25 ton</b> Recommended rate per Ha	<b>100—200 USD</b> Equivalence cost for the recommended rate per Ha
<b>10 USD</b> plunger-type applicator	<b>IP</b> Open source / open access





## Rice Threshing and Polishing Machines Axial flow thresher and improved quality polishing

Efficient rice threshing and polishing for premium quality grains, boosting income and market access in african communities.

Axial flow threshers utilize a rotating drum to separate rice grain from the surrounding husk, while abrasive polishers remove outer bran layers. Key parts are made of stainless steel for durability and hygiene. These equipment can be powered by diesel/petrol generators or solar installations for easy use in rural areas.



AfricaRice

Africa Rice Center  
Sali Atanga Ndindeng

Technology originally documented by

ProPAS

Commodities

Rice

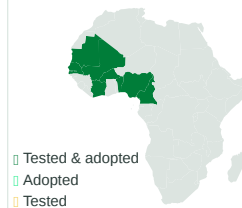
Sustainable Development Goals



Categories

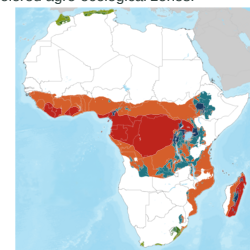
Harvest, Equipment,  
Post-harvest handling

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Farmers

This technology is **TAAT1 validated**.

8•8



Scaling readiness: idea maturity 8/9; level of use 8/9

Gender assessment

3

1

Climate impact

5

### Problem

- High grain losses due to manual threshing methods.
- Inefficiencies in the traditional polishing process, particularly manual rubbing.
- Time-consuming and labour-intensive artisanal practices.
- Difficulty in processing large volumes of rice in communities.

### Solution

- The motorized axial flow threshers reduces grain breakage and loss compared to traditional manual methods.
- The mechanized equipment drastically reduces the time and labour required for threshing and polishing.
- The mobile units are designed to be highly mobile and can be easily transported to even remote rural areas.

### Key points to design your project

The adoption of Axial flow thresher and improved quality polishing offers a solution to enhance agricultural efficiency and reduce labor-intensive tasks. Key steps to integrate this technology include:

- Inform rice farmers, cooperatives and millers about the benefits of motorized threshers and polishers for increasing value addition and market access, and reducing post-harvest costs and losses.
- Identify suitable setup and size of mobile rice processing equipment
- Establish reliable supply of rice by drawing up contracts and delivery schedules for farmers.
- Provide loans to community-based and commercial processors for acquiring mobile units.

Cost: \$ \$ 4500 USD

Local thresher

20 %

Losses reduced

15000—20000 USD

Advanced polishers and whiteners

3000 USD

Small bench-top polishers

IP

Patent granted



### Rice Threshing and Polishing Machines

<http://taatdb-web.gov/technologies/rice-threshing-and-polishing-machines-axial-flow-thresher-and-improved-quality-polishing>

Last updated on 31 May 2024, printed on 31 May 2024

Enquiries [techs@taat-africa.org](mailto:techs@taat-africa.org)

# GIFT "Genetically Improved Farmed Tilapia" All Male Tilapia Fingerlings with Greater Yield and Uniformity



**WorldFish**  
Bernadette Fregene

Technology originally documented by

[ProPAS](#)

Commodities

Fish

Sustainable Development Goals



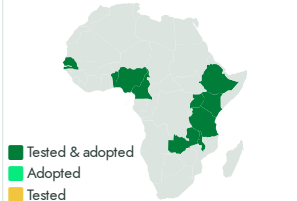
Categories

Production, Practices, Yield improvement

Best used with

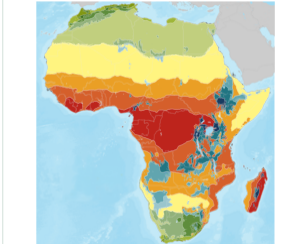
- [Hapa Nets for Fingerling](#)

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Breeders

Greater yield and uniformity in tilapia farming

The technology involves predominantly growing male tilapia. This can be achieved through various methods such as manual selection, hormone treatment, or natural techniques. Specifically bred tilapia (GIFT) is recommended for commercial farming.

This technology is **TAAT1 validated**.

Scaling readiness: idea maturity 8/9; level of use 8/9

Gender assessment 4

Climate impact 7

### Problem

- Mixed-sex tilapia culturing often leads to lower yields and non-uniform harvests.
- Manual sex selection at the beginning of the production cycle is time-consuming.
- Hormonal alteration of fry involves the application of  $\alpha$ -Methyltestosterone, which may pose concerns regarding its use in feed and its impact on fish health and the environment.

### Solution

- Utilizing improved lines of tilapia breeds can enhance the effectiveness of manual selection, hormonal treatment, YY male technology, and GIFT.
- Crossbreeding strategies can produce 100% male offspring, improving mono-sex tilapia production efficiency.
- Careful management of brood stock selection in hatcheries, focusing on younger brooders free from wounds and parasites, ensures high-quality and abundant fish seed production.

### Key points to design your project

The mono-sex male tilapia technology aligns with Sustainable Development Goals, promoting food security, gender equality, climate action, and marine life preservation. To integrate this technology, consider:

- Feasibility studies,
- Legal frameworks, and specialized training for farmers. Training costs and
- Communication support should be included.
- Accompanying solutions include Hapa Nets for Mass Fingerling Hatchery Production.

Cost: \$\$\$ **100 USD**      ROI: \$\$\$ **30 %**

Stocking rate of 1,000 fish per cubic meter of water      Harvest volume increased

IP  
Patent granted





# Hapa Nets for Fingerling

## Hapa Nets for Mass Fingerling Hatchery Production

The "Hapa Nets for Mass Fingerling Hatchery Production" technology is cage-like enclosures in ponds to manage fish breeding and growth. Made of affordable materials, these nets enhance fingerling production by protecting fish from predators and controlling breeding conditions. They are adaptable to various aquaculture species and water bodies, improving overall production efficiency.



Collection of fingerlings from hapa

**WorldFish**  
Bernadette Fregene

✓ This technology is **TAAT1 validated**.

**8-8** Scaling readiness: idea maturity 8/9; level of use 8/9

Gender assessment **4**

Climate impact **7**

Technology originally documented by  
**ProPAS**

Commodities  
Fish

### Problem

- Inadequate supply of high-grade fingerlings from improved fish breeds
- Poor and uneven growth rates, and high fingerling mortality in open ponds
- Predation by birds, reptiles, amphibians, and aquatic insects
- Difficulty in monitoring and managing brooders, hatchlings, and juveniles

### Solution

- Safeguarding brooders, hatchlings, and juveniles from predators and other fish.
- Easing the management of brooder, fry, and fingerlings, enabling closer monitoring and adjustment of breeding, feeding, or aeration regimes.
- Increasing fertilization rates, promoting even growth of fish seed, and reducing mortality, leading to higher production of fry and fingerlings per unit area.

Sustainable Development Goals

Categories  
Production, Equipment,  
Aquaculture Systems

Best used with

- [All Male Tilapia Fingerlings with Greater Yield and Uniformity >](#)
- [Fast Growing and Hybrid African Catfish >](#)

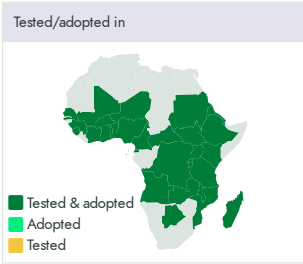
## Key points to design your project

The technology facilitates affordable mass production of fingerlings, benefiting fish farmers by boosting income and ensuring food security through increased fish availability. It empowers women in aquaculture, fosters rural economic growth, and advocates sustainable practices to minimize environmental impact.

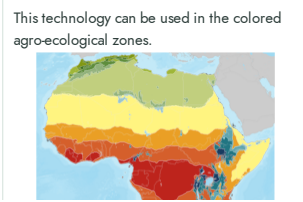
Key steps for incorporating the technology:

- Identify suitable pond locations and sizes.
- Procure appropriate net materials.
- Determine optimal stocking densities.
- Ensure access to high-quality, affordable feed.
- Promote the use of cultured fingerlings locally.

Allocate resources for training and support during implementation, collaborate with agricultural institutions, and consider integrating complementary technologies for optimization.



Where it can be used



Cost: **\$\$\$ 1 USD**  
Per square meter

**150—900** fingerlings per square meter  
Production in hapa

**8—20** fish farmers  
Number of fish farmers in a single hatchery

**IP**  
Open source / open access

# Cage Systems for Fish Culturing

Cage Culture: Dive Deep for a Sustainable Leap!

Cage Systems for Fish Culturing is a method where young fish are grown in submerged cages in large water bodies. The cages protect the fish, provide nourishment, and monitor their health. Once mature, the fish are harvested. This technique allows for natural, secure, and regulated fish farming, akin to a floating aquaculture facility.



Floating cage for tilapia farming inside Lake Victoria (Credit: Erick Ochieng Ogello)

**WorldFish**  
Bernadette Fregene

✓ This technology is **TAAT1 validated**.

8-8 Scaling readiness: idea maturity 8/9; level of use 8/9

Gender assessment **3**

Climate impact **1**

## Problem

- **Space and Control:** Traditional fish farming requires large, expensive land and lacks control in open waters, leading to losses from predators and disease.
- **Water Quality:** In other forms, especially in small ponds, water quality can deteriorate quickly causing problems like low oxygen levels and harmful substance buildup.
- **Environmental Impact:** Some methods can negatively impact the environment, such as causing pollution from waste products.
- **Unpredictable Events:** In open waters, upwelling events can drastically change conditions in the cage, affecting fish health.

## Solution

- **Space and Control:** Cage systems efficiently use water bodies, reducing the need for large land areas and providing a controlled environment for the fish.
- **Water Quality:** They help manage water quality issues common in other forms of aquaculture.
- **Environmental Impact:** Cage systems aim to minimize the environmental impact of aquaculture.
- **Upwelling Events:** High-tech solutions have emerged to predict and mitigate upwelling events.

## Key points to design your project

Cage aquaculture systems are transforming fish farming in Africa. They offer a scalable, eco-friendly solution that boosts income and aligns with sustainability goals.

Successful implementation requires farmer training, key partnerships (including cage system manufacturers, feed suppliers, aquatic veterinarians, certification bodies, and local fishermen communities), water source assessment, understanding of market demand, and logistics planning.

Research institutions play a crucial role in providing the latest research on cage system technologies and best practices. Each partner brings unique resources and expertise, ensuring the project's success and sustainability.

**150 USD**

Fish cage of 8 cubic meter



Open source / open access

Commodities

Fish

Sustainable Development Goals



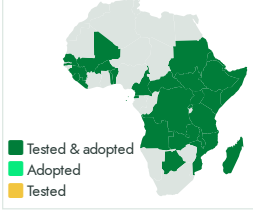
Categories

Production, Equipment, Aquaculture Systems

Best used with

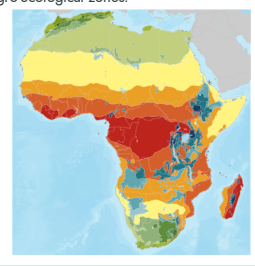
- [All Male Tilapia Fingerlings with Greater Yield and Uniformity >](#)
- [Fast Growing and Hybrid African Catfish >](#)

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Fish Farmers



## Cage Systems for Fish Culturing

<https://e-catalogs.taatafrica.org/gov/technologies/cage-systems-for-fish-culturing>  
Last updated on 22 May 2024, printed on 22 May 2024

Enquiries [techs@taatafrica.org](mailto:techs@taatafrica.org)

# Affordable Fish Feed Production Formulation and Pelleting of Low-Cost Feeds



**WorldFish**  
Bernadette Fregene

Empowering Aquaculture with Affordable Feeds

The technology "Formulation and Pelleting of Low-Cost Feeds" aims to reduce the cost of fish feeds in Sub-Saharan Africa, where fish farms spend about 60-70% of their budget on imported feed. It promotes the use of local resources to produce quality, cost-effective and balanced fish feeds. This innovation could enhance the profitability and sustainability of fish farming businesses.

This technology is **TAAT1 validated**.

**8·8** Scaling readiness: idea maturity 8/9; level of use 8/9

Gender assessment **4**

Climate impact **7**

### Problem

- Fish farming in Sub-Saharan Africa is costly due to expensive feeds.
- A large part of the cost is for imported feed ingredients.
- Simple, unprocessed grains used in feeds lead to poor nutrient transfer and pollution.
- High costs and inefficiencies limit the profitability of fish farming.

### Solution

- The technology makes affordable fish feeds using local products.
- Pelleted feeds improve nutrient transfer and reduce pollution.
- Pellets are easier to store and transport, reducing costs.
- The technology allows feed customization for different fish species.

### Key points to design your project

The "Formulation and Pelleting of Low-Cost Feeds" technology enables local production of affordable fish feeds in Sub-Saharan Africa, contributing to several SDGs. Implementation involves organizing raw ingredients, selecting a site, procuring equipment, packaging, marketing, and contracting. It requires understanding of fish species' nutrient requirements, local feed ingredients, and feed formulation. The technology can be combined with other aquaculture technologies and requires collaboration with key partners like research institutions, local farmers, and government agencies.

Cost: **\$\$\$ 1,200 USD**  
Production of 1 ton

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**85,000 USD**  
Equipment of production

Technology originally documented by

ProPAS

Commodities

Fish

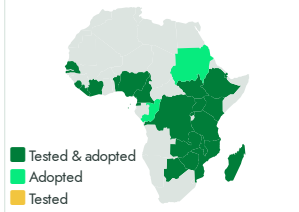
Sustainable Development Goals



Categories

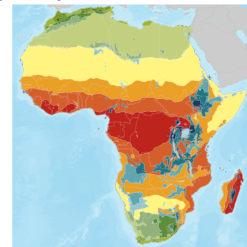
Production, Inputs, Fertilizer

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Breeders



## Affordable Fish Feed Production

<https://e-catalogs.taatafrica.org/gov/technologies/affordable-fish-feed-production-formulation-and-pelleting-of-low-cost-feeds>

Enquiries [techs@taat-africa.org](mailto:techs@taat-africa.org)

Last updated on 22 May 2024, printed on 22 May 2024

# Special Chicken Breed Dual-Purpose Chicken for Small-Scale Producers

High-Performance Breeding Chicken Breed

The "Dual-Purpose Chicken for Small-Scale Producers" technology focuses on developing and distributing chicken breeds suitable for both high egg production and meat yield. These specialized chickens possess traits like low cost, disease resistance, and efficient feed utilization.



A young farmer rearing improved dual-purpose chickens



**International Livestock Research Institute (ILRI)**  
Tunde Amole

Technology originally documented by

[ProPAS](#)

Commodities

Poultry

Sustainable Development Goals



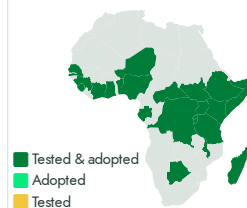
Categories

Production, Improved varieties, Yield improvement

Best used with

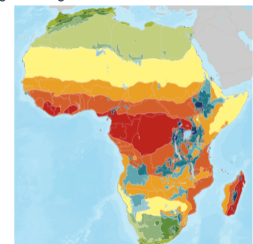
- [Artificial Hatching >](#)

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



This technology is **TAAT1 validated**.

**7·7** Scaling readiness: idea maturity 7/9; level of use 7/9

Gender assessment **4**

Climate impact **6**

## Problem

- Low Egg and Meat Productivity in Indigenous Chickens
- High Mortality Rate in Indigenous Chickens
- Limited Performance and Adaptability of Indigenous Breeds
- Challenges in Rearing and Distribution for Small-Scale Farmers
- Need for Adaptation and Regional Adjustments

## Solution

- Introduction of dual-purpose chicken breeds addressing low productivity and high mortality.
- Establishment of parent stock farms and hatcheries for consistent supply.
- Distribution through brooder units for proper chick care.
- Enhanced performance in free-range systems with adaptability to local conditions.
- Technical support and empowerment for operators.

## Key points to design your project

- Enhances poultry productivity for rural poverty alleviation and food security
- Empowers women, creates jobs, and supports economic growth in rural areas
- Improves poultry industry through innovative breeding and distribution
- Fosters sustainable agriculture and conserves biodiversity
- Requires building infrastructure, acquiring equipment, and estimating costs for integration
- Collaboration with agricultural institutes and consideration of complementary technologies recommended

**930 USD**

Purchase and rear 1000 birds for five weeks

**30 %**

Per batch in Nigeria

**1.5–2.0 kg**

Weight of chickens in 3 months

**120–180 eggs**

Production by chickens per year



Open source / open access



## Special Chicken Breed

<https://e-catalogs.taatafrica.org/gov/technologies/special-chicken-breed-dual-purpose-chicken-for-small-scale-producers>

Last updated on 22 May 2024, printed on 22 May 2024

Enquiries [techs@taatafrica.org](mailto:techs@taatafrica.org)

# OFSP Orange-Fleshed Sweet Potato (High provitamin A)

Orange Sweetness, Nutrient Richness, and Farmer's Success - Embrace OFSP!

Orange Fleshed Sweet Potato (OFSP) is a biofortified crop rich in beta-carotene, particularly in comparison to light-colored flesh cultivars. Upon consumption, the beta-carotene converts into vitamin A, enhancing nutrition and supplementing diets. OFSP holds significant potential for improving food and nutritional security throughout Africa.



**International Potato Center (CIP)**

Kwikiriza Norman

This technology is **TAAT1 validated**.

**8-9** Scaling readiness: idea maturity 8/9; level of use 9/9

Gender assessment **5**

Climate impact **6** **1**

### Problem

- Widespread vitamin A deficiency contributes to malnourishment,
- Traditional sweet potato varieties yield only 3-7 tons per hectare, resulting in limited food availability and income for farmers.
- The lack of diverse and nutrient-rich crops hampers overall nutrition, posing a challenge to addressing dietary deficiencies and promoting sustainable agriculture.

### Solution

- It addresses vitamin A deficiency by providing a rich source of this essential nutrient, promoting better health and nutrition.
- OFSP's improved varieties yield 25 tons per hectare, significantly surpassing traditional varieties, thereby enhancing food security and increasing farmers' income.
- OFSP offers a versatile and nutrient-rich crop, diversifying nutrient sources and contributing to overall nutrition, promoting a sustainable and healthier agricultural ecosystem.

Technology originally documented by

ProPAS

Commodities

Sweet Potato

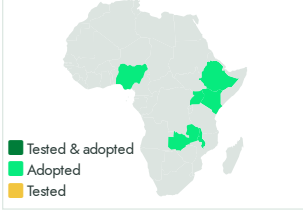
Sustainable Development Goals



Categories

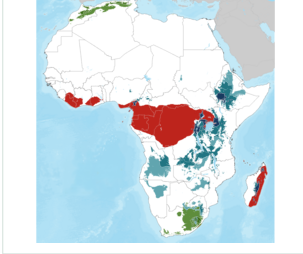
Production, Improved varieties, Yield improvement

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Farmers, Seed companies

### Key points to design your project

This technology promotes gender inclusion by improving nutrition, food security, and aligning with Sustainable Development Goals, particularly benefiting women and children in Africa.

To integrate it into your project, estimate vine quantity needed, factor in delivery costs and import duties, provide training and support, develop communication materials, and optimize with related technologies. Collaborate with agricultural institutes and seed companies for implementation.

Cost: **20 USD**

10kg vines

**200 kg**

vines for 1 acre (0.3 hectare)

**25 tons**

per hectare



Open source / open access



**OFSP**  
<https://e-catalogs.taatafrica.org/gov/technologies/ofsp-orange-fleshed-sweet-potato-high-provitamin-a>

Enquiries [techs@taatafrica.org](mailto:techs@taatafrica.org)

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