

Tinlot Production Formation International



Animal Production 2026

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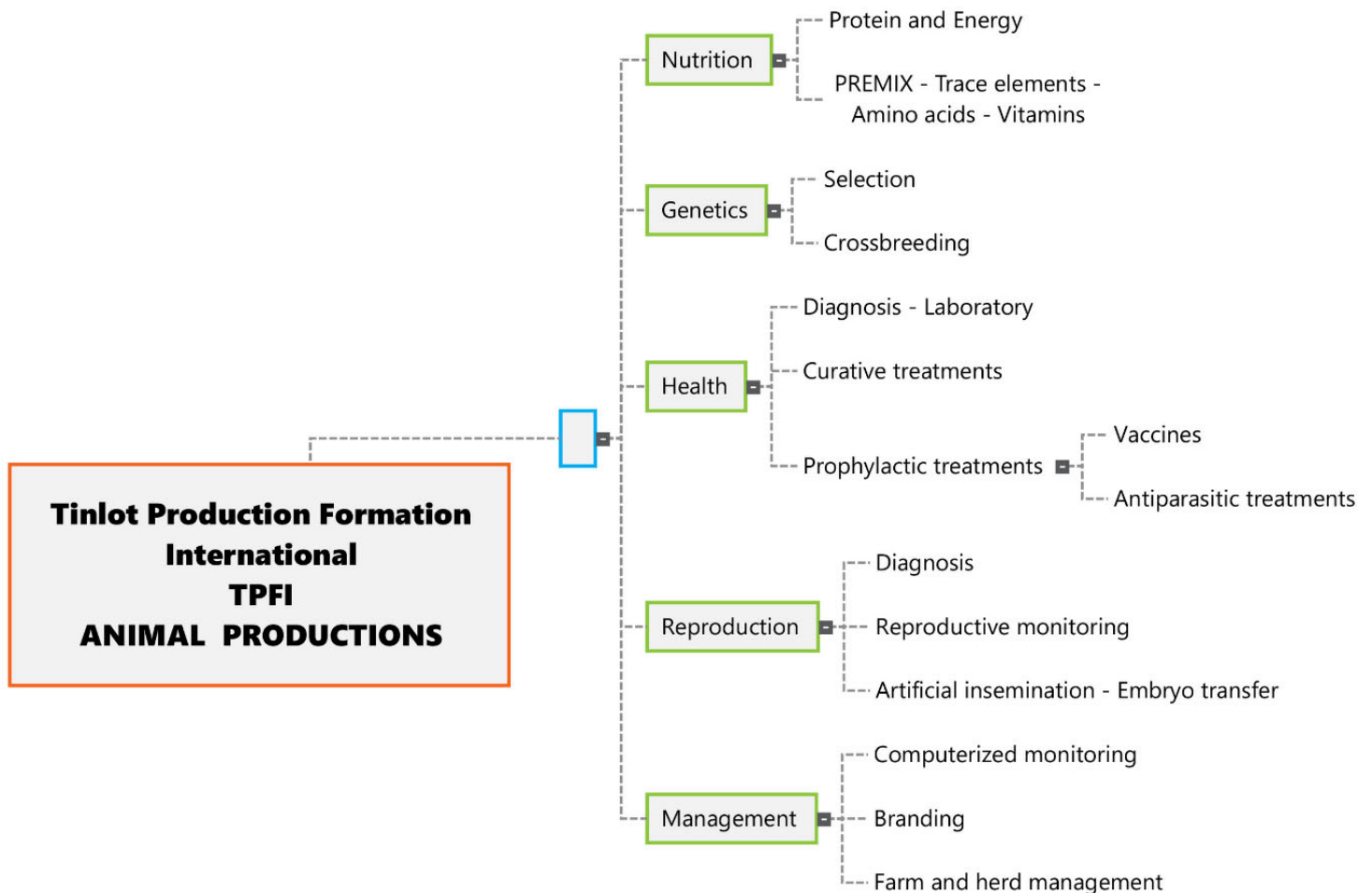
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Tinlot Production Formation International (TPFI)

TPFI is a Belgian company active across several sectors, with a strong specialization in animal production.

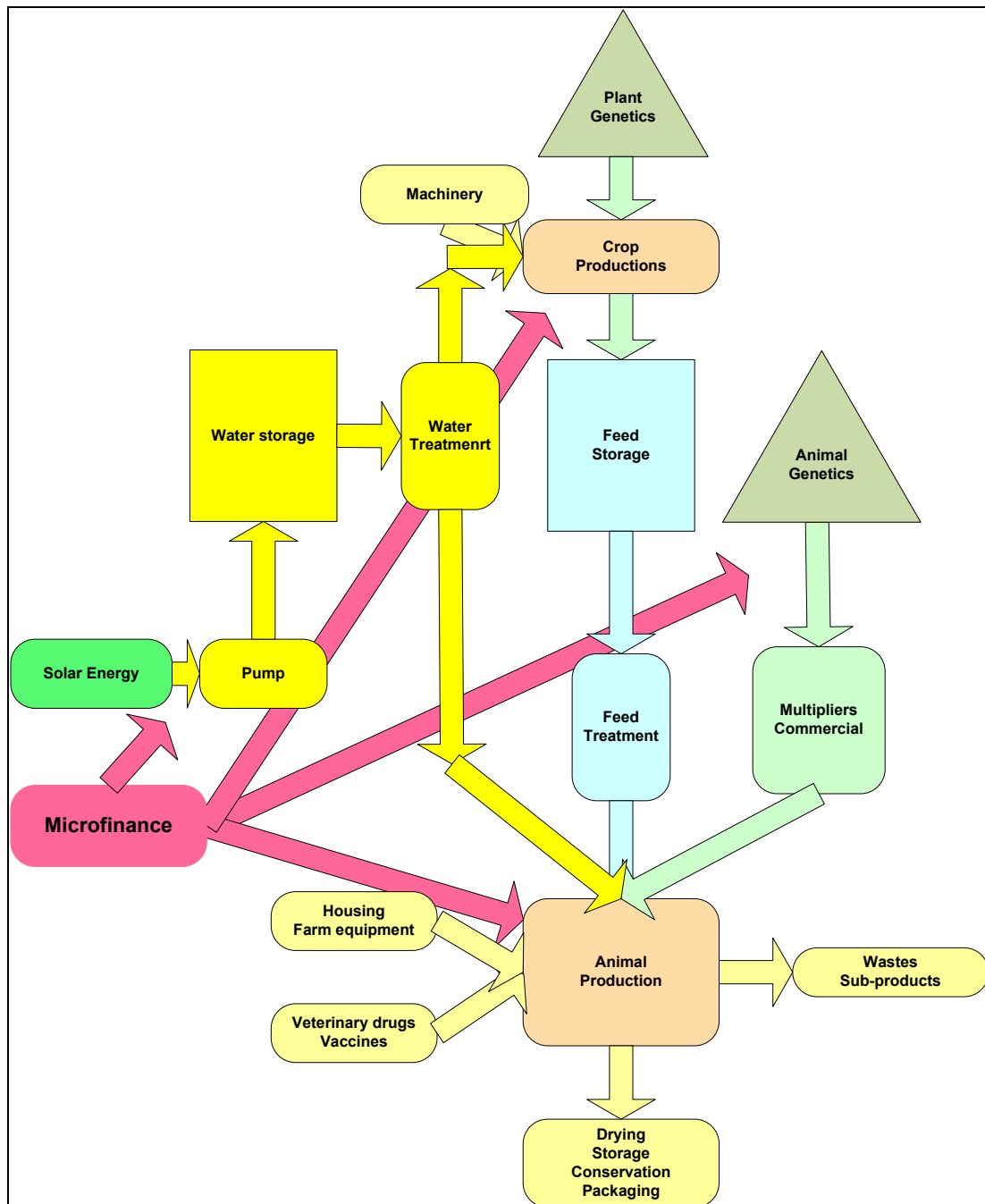
Livestock farming represents the core of TPFI's Animal Production operations.



Comprehensive Approach to Productions

TPFi promotes the Comprehensive Approach to Production (CAP), which integrates all key components of livestock systems, including nutrition, health, reproduction, management, welfare, the environment, and animal genetics and breeding.

The diagram should be read from top to bottom, starting with the green triangles in the upper right corner, which represent plant genetics and animal genetics.



Pilot Farm

The pilot farm is an educational structure in which the principles of sustainable agriculture and animal husbandry are applied and taught.

The pilot farm also aims to become a local research Center where adequate and feasible solutions are found to the concrete constraints faced by smallholders.

A role in the organization of producers and information must also be played through the pyramidal structuring of farmers in their contact with the pilot farm, allowing continuous interaction between researchers, technicians, microfinance agents and farmers.



The organization operates through a structured field-based system designed to support poor or smallholder farmers. At the core are the farmers themselves, who rely on agriculture as their main source of income and often face limited access to technology, training, and markets. To bridge this gap, the organization employs liaison officers who act as the direct link between the farmers and the institution. These officers provide guidance, technical advice, and regular follow-up, ensuring that information, resources, and innovations reach even the most remote communities.

A pilot farm serves as the organization's demonstration and training hub. These farm tests improved practices, technologies, and production models under real conditions. It also hosts practical workshops where farmers can observe, learn, and build confidence before applying new techniques on their own land. Together, the poor farmers, liaison officers, and pilot farm create an integrated system that accelerates knowledge transfer, strengthens local capacities, and promotes sustainable agricultural development.



Characteristics of Livestock Farming in Belgium

Belgian farmers have taken advantage of natural genetic mutations, including the myostatin gene, present in the Belgian Blanc-Bleu cattle and the Belgian Texel sheep, as well as other genes present in the Piétrain pig. On an international scale, Belgian livestock farming enjoys a great reputation. These breeds have become world references in animal performance. They are exported as purebred breeds or used in crossbreeds, which allows local females to be preserved while improving productivity.



Bull of the Belgian Blue Breed (BBB)



Pietrain pig breed



Belgian Texel sheep

The cross-breeding approach contributes to the preservation of biodiversity as well as to the valuable qualities of local breeds, such as their resistance to heat and infectious agents (parasites, bacteria, viruses). This is why, in tropical regions, crossbreeding with these hyper-muscular breeds arouses great interest: it makes it possible to improve production while protecting the local genetic heritage. Belgium is renowned for having selected and bred some of the most muscular animal breeds in the world; these are the Belgian Blanc-Bleu cattle, the Piétrain pig and the Belgian Texel sheep.

Crossbreeding of Beef cattle in hot climates



We propose to present the results obtained in various countries, generally warm regions, in order to convince you of the interest of using the genetic material from our region that you can have through the TPFi company. The results concern Africa, South America and Asia. Below we will give the results obtained in several countries, mainly the Brazil, Burundi, Congo, DRC, Indonesia and Colombia. As you will see, all the results concern the crossing of the Belgian White-Blue breed with zebu-type animals. We have indeed found that BBB x Zebu crossbred calves never cause difficulties during calving.

Achievements in Africa – Burundi

Belgian Blue Bull x Ankole breed cow



BBB x Ankole breed



Burundi ISABU – Station de MAHWA



Achievements in Indonesia



BBB x Zebu Brahman –
in Klaten (Java Central - Indonesia) collaboration with UGM University of Yogyakarta



From calf (<30 Kg) to

Young bull (200 Kg)



Adult 800 Kg at 2 years



Achievements in Colombia



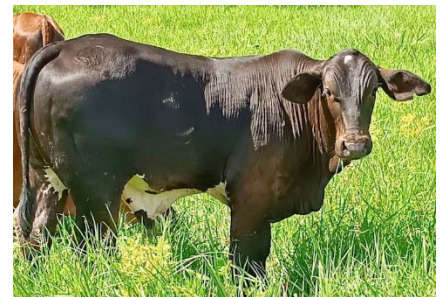
BBB x Zebu Brahman

Empresa Blanc Bleu Adama S.A.S, Medellin, Colombia collaboration with University of Liege Belgium



From calf (<30 Kg) to

Young bull (4 month)



Adult 800 Kg at 2 years



Poultry

Poultry Pilot farm

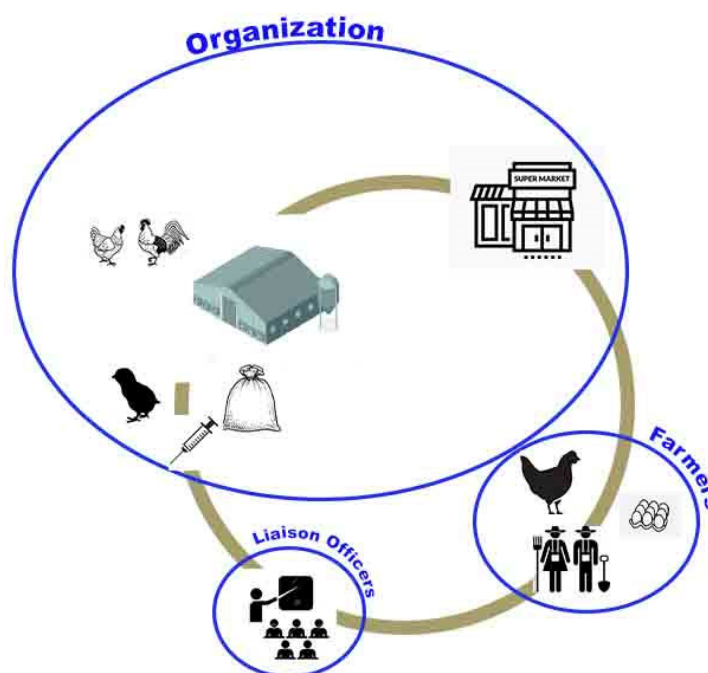
Organization

The organization is defined as a structure set up with the aim of bringing together small farmers to enable them to collectively access broiler chicks, laying hens, or both, in quantities suited to their production capacity. This organization also provides vaccination and health monitoring for the animals and supports farmers until they obtain the final products, namely eggs and/or poultry meat. Once these products have been collected in sufficient volumes, they can be marketed more effectively.

So, the organization provides genetics, in this case broiler or layer chicks. It also provides feed and veterinary products, ensures vaccination, and collects the finished products, whether eggs or chickens.

Theoretically, if the system can be established, the organization provides the chicks, feed, and other inputs, and when the eggs or chickens are collected, it reimburses the difference between what was paid on behalf of the farmer and what is sold.

Another approach could be to establish a microfinance system providing access to loans, but generally this type of process, unless organized on a non-profit basis, leads to high interest rates that significantly reduce the profits that should accrue to farmers.



Liaison Officers

Liaison officers are young trainers who have themselves been trained within the organization to achieve the objectives set in terms of nutrition, health, management, genetics, and selection. Their teaching is varied and adapted to the technical management level of the learners, who are grouped according to their level of knowledge of the subject being taught.



Broilers

With regard to broiler chickens, we work with three types of chickens:

1. local chickens (slow-growing, never reaching 2 kg live weight),
2. intermediate-growing chickens (improved tropical breeds reaching 2 kg or more live weight),
3. fast-growing chickens (generally Ross308 and Cobb500).

Local breeds

In **Kenya**, the most commonly cited local poultry breeds are the Kienyeji (Indigenous Chicken) and the Naked Neck Chicken.

The **Kienyeji** is found across the whole country, highly resistant to disease with slow growth but low management costs.

The **Naked Neck** Chicken is characterized by a featherless neck, highly heat tolerant and considered good for meat and egg production.

Intermediate-growing

In the context of intermediate breeds, we propose two types of breeds, which we will initially refer to as TPFi 01 and TPFi 02.

It can be said that these two breeds are also dual-purpose breeds, as they have a significant egg-laying capacity (approximately 180 to 220 eggs per year).



TPFi 01



TPFi 02

Performances

		Final weight	Feed efficiency
TPFi 01	Natural range	1.5–1.8 kg	2.9 – 3
TPFi 02	Compound feed and Semi-intensive rations	1.8–2.2 kg	2.5 – 2.8



Fast growing breeds

The main fast-growing chicken breeds use par TPFi are: Cobb, Ross and Hubbard.



Our results were obtained with Cobb500 in Africa : 3 Kg after 45 days



Broiler strains					
Items ²	Cobb	Hubbard	Ross	SEM ³	P-value
Initial BW (g/bird)	46.27	43.07	44.40	0.126	0.128
Final BW (g/bird)	2766.67 ^a	2505.67 ^b	2511.34 ^b	17.23	0.015
TFI (g/bird)	4459.17	4350.40	4312.86	31.64	0.135
BWG (g/bird)	2720.40 ^a	2462.60 ^b	2466.94 ^b	14.76	0.011
FCR (feed:gain)	1.64 ^b	1.77 ^a	1.75 ^a	0.019	0.009
PEF (%)	389.61 ^a	330.31 ^b	331.43 ^b	9.341	0.034
Mortality rate (%)	3.00	2.00	3.00	0.271	0.632

Means bearing different superscripts within the same row are significantly different ($P < 0.05$).

¹Results are presented as the means of 5 replicate pens with 20 birds per pen.

²BW: Body weight, TFI: Total feed intake, BWG: Body weight gain, FCR: Feed conversion ratio, PEF: Production efficiency factor.

³SEM: Standard error of the mean.

Hassan, F., Atallah, S., & Reda, R. (2021). Comparison of the performance, meat quality, and profitability of Cobb, Hubbard, and Ross broiler strains. *Archiv Für Geflügelkunde*, 85, 1–13. <https://doi.org/10.1399/eps.2021.332>





Fact growing broilers in conventional barns



Layers

Semi intensive

As previously mentioned, we offer two types of hens, which we will initially refer to as TPFi01 and TPFi02, which have a significant laying capacity of 180 to 220 eggs per year.

Intensive

Depending on the context of intervention and consumer preferences, breeds producing brown or white shelled eggs are available.



Meat goats

In the case of meat goats, we propose crossing local goats, which are very prolific and generally well adapted to the local environment and climate, with South African bucks (Boer breed), which have higher growth rates and slaughter yields.



South African Boer buck



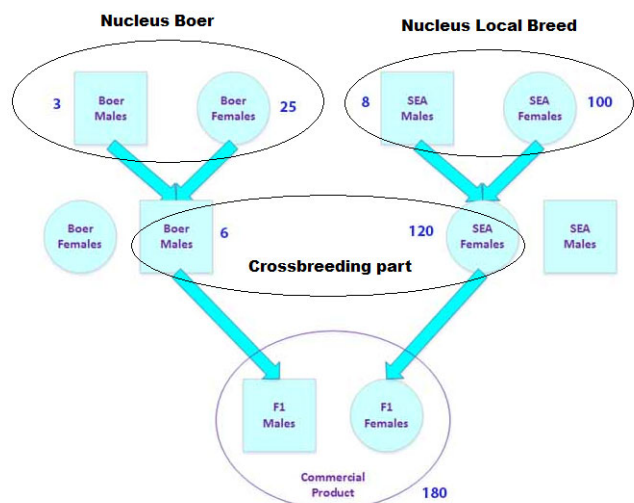
Local goats (SEA)

The SEA (Small East African) is a local indigenous breed widely found in East Africa (Kenya, Uganda, Tanzania, Ethiopia). It is not an “improved” breed, but a collection of local populations adapted to the conditions of the region.

The main characteristics of the SEA goats are as follows:

- Small size, adult weight $\approx$ 25–35 kg
- Very hardy and disease resistant
- Well adapted to arid and semi-arid areas
- Low feed requirements
- Relatively fast reproduction

An example of a crossbreeding scheme is given in the attached figure. This example illustrates the number of animals needed to produce continuously approximately 200 commercial animals.



Animal Nutrition

The company builds livestock and animal feed facilities and participates in the formulation and development of balanced feed rations for domestic animals. Species, physiological stages, and locally available feed resources are taken into account, integrating nutritional requirements and local production constraints.



Premix 2.5% for broilers and layers



Roasted soybeans, soybean meal, corn, and shells



In sub-Saharan **Africa**

Rations are mainly based on corn, protein meals (soybean) and cereal by-products.

In **Asia**

Rations are made from rice, cassava and protein meal by-products, which are widely available in regional agricultural systems.

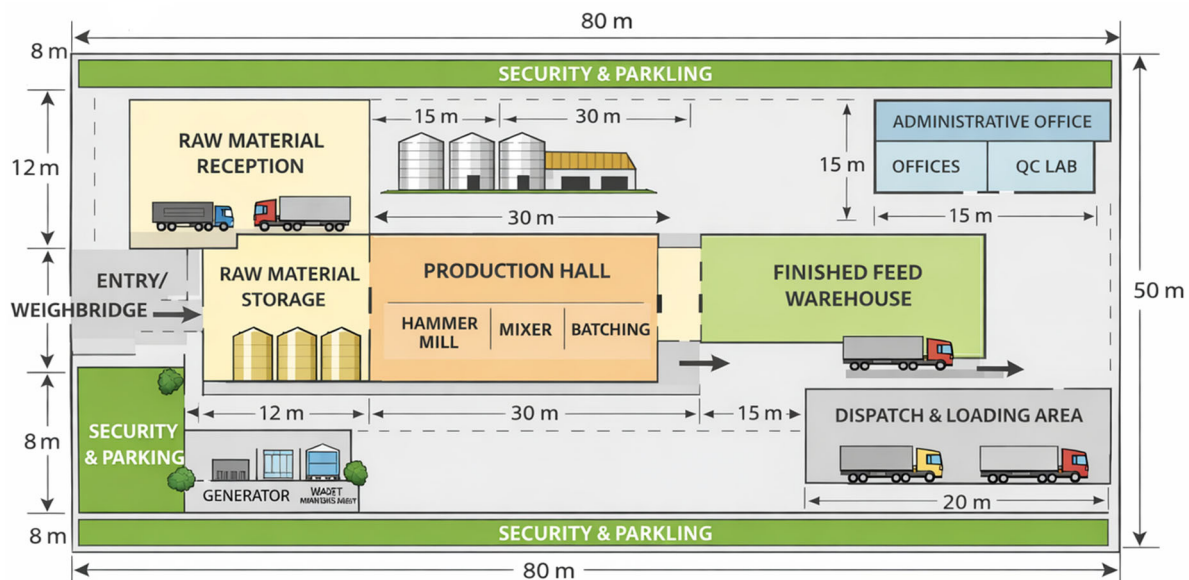
In South America, animal feeding systems are based mainly on corn, soybeans, sorghum, and various agro-industrial by-products.

In **Europe**, animal feed rations are based mainly on cereals (corn, wheat, barley), protein meals (soybeans, rapeseed, sunflower), as well as preserved fodder and various agro-industrial by-products.



Feed mill – Production animal feed

The proposed poultry feed mill will be equipped with modern, efficient machinery designed to support the installed production capacity of 5 tons per hour. The selection of equipment prioritizes durability, ease of maintenance, energy efficiency, and consistency of output quality.



Hammer Mill

The hammer mill is used for grinding grains and other coarse raw materials into the required particle size. Uniform grinding improves digestibility and ensures better mixing efficiency. The hammer mill will be fitted with interchangeable screens to allow flexibility in particle size depending on feed type.

Horizontal Mixer

The horizontal mixer ensures thorough and homogeneous blending of all feed ingredients, including micro-components such as vitamins, minerals and essential amino acids (the three main components of the Premix). This equipment is critical for maintaining consistent nutrient distribution and overall feed quality across batches.

Batching and Weighing System

An accurate batching and weighing system is essential for precise ingredient measurement according to feed formulations. Automated or semi-automated systems reduce human error, improve consistency, and enhance production efficiency.

Bagging Machine

The bagging machine is used for packing finished feed into **25 kg and 50 kg bags**. It ensures accurate bag weights, improves packaging speed, and enhances product presentation for commercial distribution.



Industrial Scales

Industrial scales are installed at key points in the production line to monitor raw material intake, batching accuracy, and finished product weights. Regular calibration ensures compliance with quality and regulatory standards.

Generator Set

Given the unreliability of grid power in many parts of Nigeria, a generator set is required to ensure uninterrupted production. The generator will be sized to support all critical equipment and maintain operational continuity during power outages.

The estimated cost of machinery and equipment for the proposed poultry feed mill is based on prevailing prices for medium-scale feed milling equipment.



Development of Mobile laboratories



View of the interior of the mobile laboratories

Objective: Extend diagnostic and bio surveillance capacity to field and border areas, strengthening One Health resilience.

Key Actions:

- Design and equip mobile laboratories capable of performing molecular and microbiological analyses (bacteria, viruses, parasites).
- Establish BSL-2/3-level safety standards for mobile operations.
- Deploy multidisciplinary teams for field missions and outbreak response.
- Integrate real-time data reporting into national biosecurity and animal health systems.
- Provide training for veterinarians and technicians on-site.

Expected Outputs:

- Enhanced zoonotic and infectious disease surveillance.
- Improved coordination between veterinary and public health sectors.



