



The Sale of Napier Seedlings, Pellets and Silage

Invest ₦13,054,000 to produce napier grass seedlings and pellets, to achieve a cumulative profit of ₦3,821,000 after 3 years.

Type of Investor

This investment is suitable for large dairy farms, farmers with access to land (minimum 5 – 10 ha), and agricultural investors.

Market Opportunity

- The national demand for milk is currently in excess of 1,700,000 metric tons per year. Current availability from domestic sources, however, is just 560,000 metric tons, thus leaving a demand gap of 1,100,000 metric tons
- This gap can be gradually addressed by feeding cows with improved quality pastures like hybrid napier grass, which has the ability to increase the milk yield per cow from 0.7-1 litre per day, to 2.3-3 litres (single milking)
- There is a huge demand gap to be filled by selling napier seedlings, as currently only 5% of dairy farms are using napier grass and there are only few commercial nursery producers.

Business Model

Overview	Investors can make a significant return by planting napier grass, and selling the seedlings to livestock farmers to enable them to greatly increase their yields. The cultivation of napier grass as fodder for cows, requires the seedlings to be planted during rainy season or irrigated during dry season. The napier will be ready as fodder for feeding animals 100 – 120 days post planting; once it is cut, it regrows after 45 – 50 days. You can therefore have 3 cuttings for fodder within the raining season in Nigeria. Investors can further enhance their profit by investing in machinery to produce napier pellets and silage in vacuum plastics bags, that can be sold and used by farmers as fodder during the dry season.
Setup and Operating Costs	<p>Setup Costs:</p> <ul style="list-style-type: none"> – Purchasing 1 Ha of land: ₦500,000 (depending on region & area) – Pelletization Machinery: ₦5,600,000 (producing 0.5 – 1 ton per hour) <p>Operating Costs:</p> <ul style="list-style-type: none"> – Napier seedlings: ₦2,318,000
Revenue Streams	<ul style="list-style-type: none"> – Sale of fresh napier seedlings (in the rainy season) – Sale of napier fodder as pellets and silage bags (all year round)
Potential Customers	Pastoralists, dairy co-operatives, large dairy farms, other livestock owners (including sheep and goats)
Potential Revenue/Annum	<p>Sale of napier seedlings:</p> <ul style="list-style-type: none"> – Approximately 5,000 napier seedlings are needed to plant 0.5 Ha of land; each seedling produces an average of 15 stems. 5,000 seedlings will therefore yield 75,000 stems. – Each stem can be cut 3 times, thus leading to 225,000 stems



	<ul style="list-style-type: none"> – Each cutting can be sold for ₦15, thus producing ₦3,375,000 of revenue per year <p>Sale of pellets and silage:</p> <ul style="list-style-type: none"> – 1 Ha of napier can yield 150 tons of fodder per year. For pelletization 50 % dry matter is required; therefore after pelletization you end up with 75 tons of pellets – Each ton of pellets can be sold for ₦30,000.00 – This produces ₦2,250,000 of revenue per year
Potential Profit	<p>Year 1:</p> <ul style="list-style-type: none"> – Costs: ₦6,100,000 (setup) + ₦2,318,000 (operations) = ₦8,418,000 – Revenue = ₦3,375,000 (seedlings) + ₦2,250,000 (pellets) = ₦5,625,000 – Profit: ₦5,625,000 - ₦8,418,000 = -₦2,793,000 <p>Year 2:</p> <ul style="list-style-type: none"> – Costs: ₦2,318,000 (operations) = ₦2,318,000 – Revenue = ₦3,375,000 (seedlings) + ₦2,250,000 (pellets) = ₦5,625,000 – Profit: ₦5,625,000 - ₦2,318,000 = ₦3,307,000 <p>Year 3:</p> <ul style="list-style-type: none"> – Costs: ₦2,318,000 (operations) = ₦2,318,000 – Revenue = ₦3,375,000 (seedlings) + ₦2,250,000 (pellets) = ₦5,625,000 – Profit: ₦5,625,000 - ₦2,318,000 = ₦3,307,000 <p>Cumulative Profit: -₦2,793,000 + ₦3,307,000 + ₦3,307,000 = ₦3,821,000</p>

Key Risks

Risk Description	Mitigation methods
Crop yield is drastically reduced by natural disasters, especially drought	Install backup irrigation systems where possible and purchase insurance cover (both require additional investment)
Farmers do not use best practice and farming techniques when growing napier	Ensure farmers are properly trained on growing napier grass, especially spraying the grass with pesticides to defend against termite infestation four weeks after planting

Key Contacts

- Dr Celestine Ayok
- Nasrun Nigeria Limited
- Ladugga grazing reserve
- Kaduna State government

All numbers presented are estimates only. All investments are speculative and involve the risk of loss