



TAAT Technology: Mineral fertilizer micro-dose - Mechanization

Link: <https://africa-rising.net/mechanizing-fertilizer-microdosing-mali/>

Technology

- "Sénékéla" motorized planter for Mineral fertilizer microdose application
- The planter consists of three essential parts:
- The hopper containing the distributor disc
- The engine is equipped with four (04) wheels including two rear driving wheels and two front wheels driving the distributor disc
- The soil covering parts: sowing coulter, chute, skimmer and press wheel
- The plotter determines the spacing between two sowing lines
- The distributor disc applies the fertilizer in micro-doses and plants the seed at regular intervals between two pockets



Geographical Coverage

- Adapted to the sub-Saharan African regions agro-ecological conditions
- Used everywhere suitable for Fertilizer microdose application

Commodity

- Cereals, legumes and vegetables

Problems Solved and Benefits

- Soil fertility
- Low crop production
- Fertilizer affordability for farmers
- Fertilizer use efficiency
- The reduction of the arduousness of the work

Value Chain Position

- Production

Production cost

- The "Sénékéla" motorized planter is locally fabricated in Mali except the engines (four stroke-engine from motorbike), which is imported
- The costs range from \$915 to \$1,000 depending on the exchange rates

Potential profitability

- The machine comes with one-year guarantee and a lifespan of 10 years if well maintained.
- It is profitable with low operating cost (fuel, wages and maintenance)
- Compliance with the optimal sowing period and plant population
- Minimum fuel consumption (gasoline/petrol) per hectare (0.5 to 2.5 liters/ha)
- The reduction of production costs (quantity of fertilizers and seeds)

Licensing

- The design of the machine is the property of IER who is in charge of the production locally.
- Some blueprints and detailed building design for "Sénékéla" exist at IER

Associated Technologies

- Technology meant to reduce drudgery on farmers at planting while applying mineral fertilizer microdose
 - Row planning and standard planting population as Good Agronomic Practices