

NCAM INTERVENTIONS IN AGRICULTURAL MECHANIZATION IN NIGERIA

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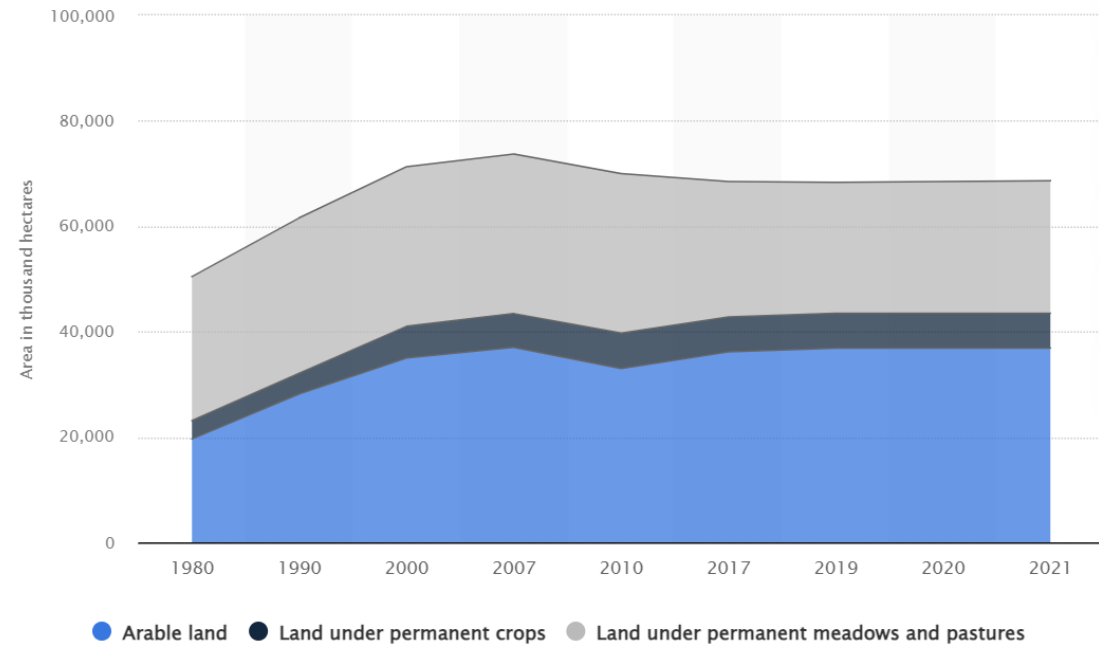
National Centre for Agricultural Mechanization (NCAM)



NIGERIAN AGRICULTURE

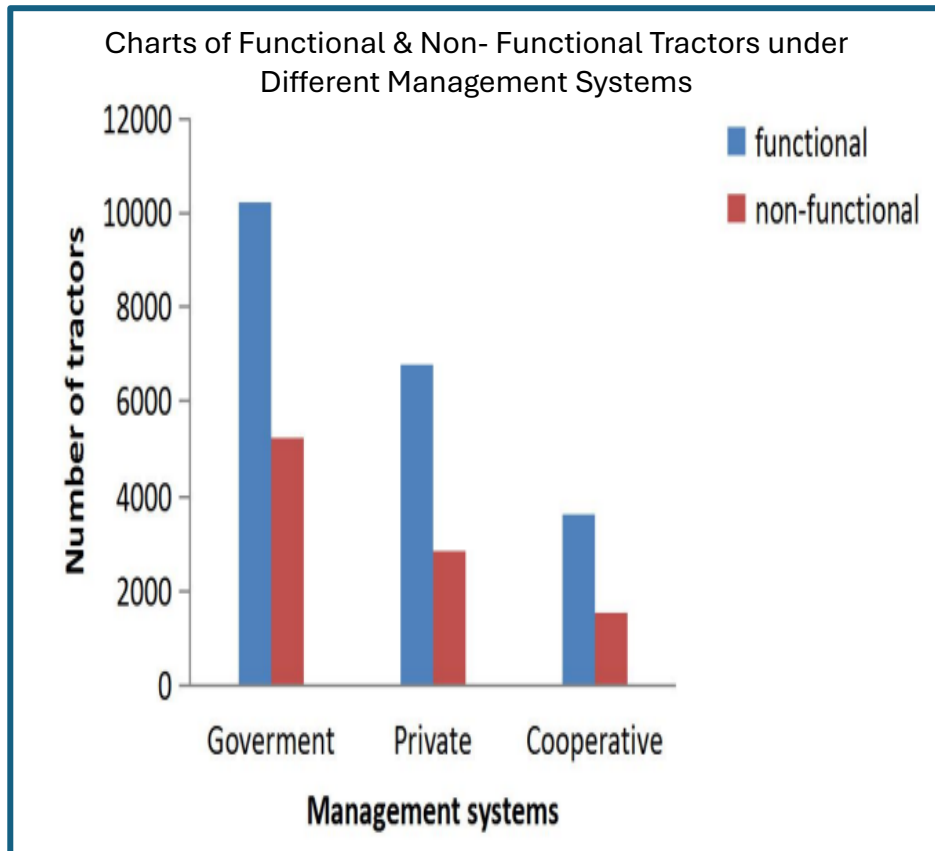
- Population of 229.15 million people (Macrotrends, 2024) with over 60% of its citizens below 55 years of age.
- Total agricultural area of **70.8** million hectares,
- **34** million hectares are arable land,
- **46** per cent of arable land is cultivated.
- **6.5** million hectares are used for permanent crops,
- **30.3** million hectares are meadows and pastures.
- Employs **37.99% of the population**
- Over **70%** of households involved in agricultural activities
- Sector driven by small-scale farmers.
- Average farm sizes are **0.5 ha and 4 ha** in the southern and northern parts of the country respectively, indicating the dominance of smallholders (NATIP, 2022).
- Contributes 21.07% of Nigeria's total GDP in 2024 (NBS, 2024).

Agricultural areas in Nigeria in selected years between 1980 and 2021 (in 1,000 hectares)

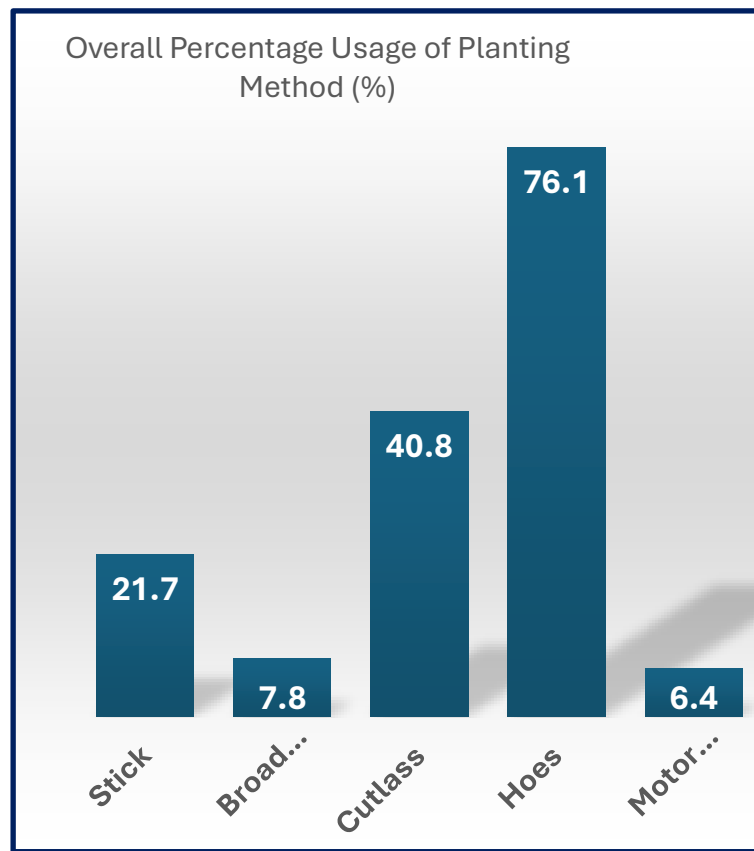


CURRENT STATUS OF AGRICULTURAL MECHANIZATION IN NIGERIA

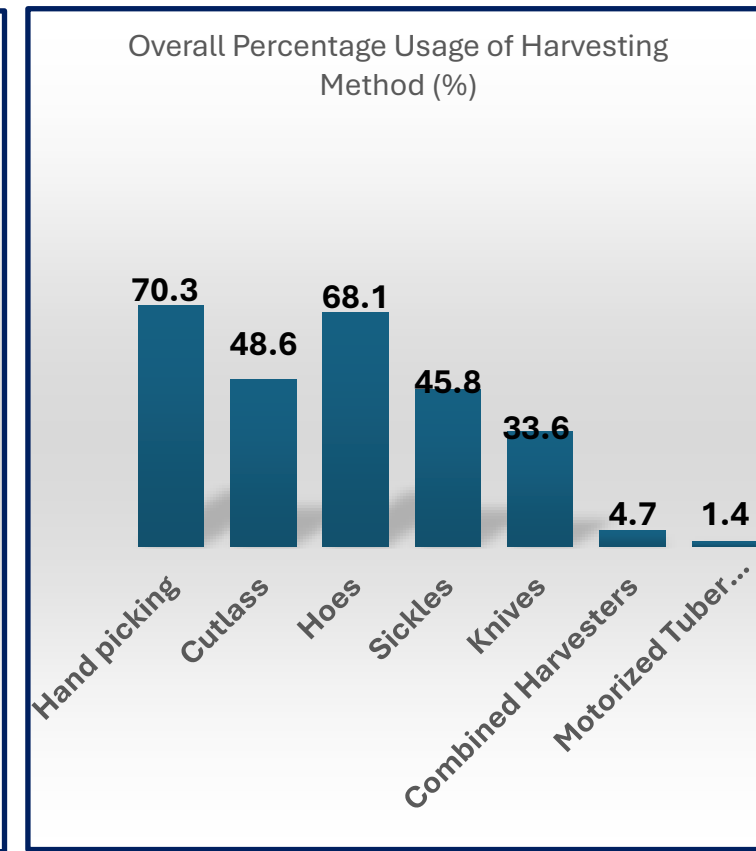
- Nigeria's level of mechanization is at 0.027 hp/hectare (\approx 6 tractors/10,000 hectares) which is far below the FAO's recommendation of 1.5 hp/hectare (NATIP, 2022).
- NCAM 2023 survey report reveals tractorization index of 0.019hp/ha (\approx 3 tractors/10,000 hectares) for Kwara state.



Source: Status Of Agricultural Tractor Ownership And Management In Nigeria by Onyeagba et.al (2013)

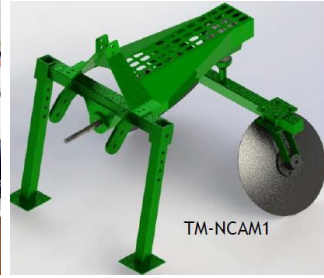


Source: NCAM, 2019



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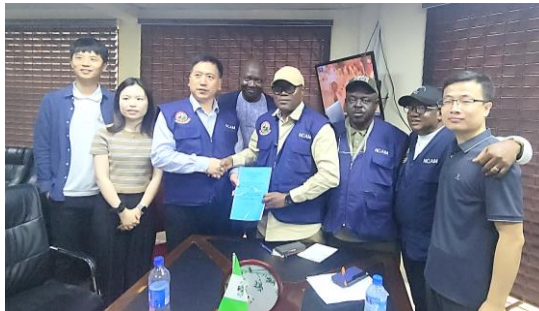
TANTA Motors



LOVOL Tractors



Belarus Tractors



GOVERNMENT INTERVENTION ON MECHANIZATION

- Establishment of Agricultural Equipment Hiring Enterprises (AEHE)
- Partnership with Private Sectors and International Organizations (AFICAT, TANTA, LOVOL)
- Importation of Agricultural Equipment
 - 2000 tractors under the Green Imperative Project (GIP)
 - 2000 tractors from John Deer in the next 5years
 - 2000 tractors from Belarus in the next 5years
- Subsidies and Grants for Equipment Acquisition
- **Promotion of local manufacturing of agricultural equipment (Establishment of NCAM)**

THE NATIONAL CENTRE FOR AGRICULTURAL MECHANIZATION (NCAM)

- Established in 1990 by Decree 35, now an Act of the Parliament
- Stands as the only Agricultural Mechanization Centre in Nigeria.
- The overall objective is to accelerate the pace of mechanization in the agricultural sector of the Nigerian economy to increase the quantity and quality of agricultural products.
- Specifically, set up to develop and promote agricultural mechanization technologies for the transformation of Nigeria's agriculture to attain self-sufficiency in food production through the development of need-based and home-grown agricultural mechanization technologies, aimed at reducing drudgery, improving productivity, and quality of agricultural produce.
- Mandated to regulate, test and certify all imported agricultural machines and equipment to ascertain their suitability in Nigeria taking into cognizance, Nigeria's climatic and soil conditions.
- A total of 249 Staff cutting across various fields of Agricultural & Biosystem Engineering, Agricultural Sciences, Mechanical Engineering, Mechatronics and Instrumentation Engineering, Human Resources, Finance and Account, etc.).



Some Recent Equipment Developed

NCAM Mini Tractors

- 30hp – 50hp engine capacity
- Field capacity: 0.15 to 0.25 ha/hr
- Fuel consumption : 0.8 to 7 l/ha



30 hp Mini Tractor (Tryctor)



50 hp NCAM-LOVOL Tractor



40 hp Mini Tractor



Yam Mound making Implement

- Tractor mounted
- PTO powered
- Capacity of making 2,650 heaps/day



Winnower



Multi-Purpose Thresher



Combine Rice Harvester



15-Row Rice Seeder



Tractor Drawn Multi-Seed Planters

Three (3) rows with fertilizer applicator



Four (4) rows with fertilizer applicator



Manually Operated Single Row Seed Planter

- **Effective field capacity; 0.091 ha/h (10.9 h/ha)**
- **Capable of planting maize, cowpea, melon etc.**



Row Weeder

- **Hand guided, motorized**
- **Width of weeding blade; 35 cm**
- **Work rate: 16hr/ha (0.063ha/hr)**
- **3.5 hp gasoline engine**



TRAINING FACILITIES

The Centre has facilities to train more than 200 participants simultaneously



Ultra-Modern Conference and Training Centre with 500 sitting capacity hall and several syndicate/training rooms



Training Hostel



Training Hostel



Workshop for field equipment



Workshop for processing equipment



Training Hostel

COLLABORATION AND POSSIBLE INVESTMENT OPPORTUNITIES

- The need for more extensive Private sector involvement in the area of Agricultural Mechanization Technologies;
- Provision of sustainable mechanization in Nigeria through domestication of Agricultural Mechanization Technologies;
- Capacity building in area of Agricultural Machinery Development and Maintenance; and
- Establishment of Agricultural machinery plant for tractor and other agricultural equipment.



**THANK
YOU**