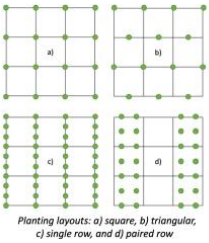
Spacing and Stand Management in Banana and Plantain

Optimized Spacing, Maximum Yield

This technology optimizes banana and plantain plant spacing to boost yield, considering factors like plant variety, climate, and soil fertility. It uses various planting systems and may require herbicide use and stem base "earthing-up" in windy areas.



Planting layouts: a) square, b) triangular, c) single row, and d) paired row

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This technology is TAAT1 validated.

8·9 Scaling readiness: idea maturity 8/9; level of use9/9

Inclusion assessment 3

Climate impact 7

Problem

- High plant densities cause uneven growth, delayed maturity, and increased labor.
- Low densities lead to weed competition and yield variability.
- Unmanaged stands accumulate pests and diseases.
- Insufficient wind protection damages plants.

Solution

- Proper spacing promotes uniform growth, reduces labor, and optimizes yield.
- Adequate spacing minimizes resource competition and maximizes sunlight exposure.
- Square block planting provides wind protection.
- Spacing aids in weed management and pest/disease control.

Key points to design your program

Banana and Plantain Spacing and Stand Management can be integrated into food security, climate resilience, sustainable land management, and banana and plantain development programs to improve productivity, crop health, and plantation performance. Its adoption contributes to SDGs 1, 2, 13, and 15.

To integrate this technology into your project, plan and budget for the following activities and prerequisites:

- Facilitate access to quality planting materials and spacing guidelines.
- Build partnerships with IITA, research institutes, extension services, cooperatives, and private sector actors.
- Train farmers on spacing systems, stand management, and crop health practices.
- Promote women's and youth participation and support demonstration activities.
- Monitor productivity, crop health, bunch quality, and adoption rates.

100 t/ha/year

Dwarf Cavendish planted at 2500 to 4400 plants per ha

IP

Open source / open access

Technology from

ProPAS

Commodities

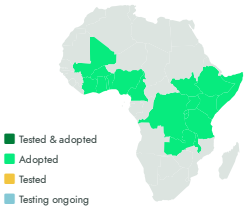
Bananas & plantains

Sustainable Development Goals

Categories

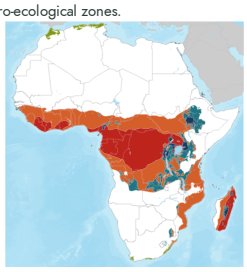
Production, Practices, Yield improvement

Tested/adopted in



Where it can be used

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



Target groups

Farmers