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AFRICAN CASHEW ALLIANCE

10 years

A DECADE OF TRANSFORMATION

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AGRONOMIC PRACTICES FOR INCREASING CASHEW PRODUCTION : CASE STUDY FROM GHANA

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OUTLINE OF PRESENTATION

BACKGROUND

AGRONOMIC PRACTICES BEING USED TO INCREASED PRODUCTION

- USE OF IMPROVED PLANTING MATERIALS
- SELECTIVE THININING AND PRUNING
- WEEDS CONTROL
- CONTROL OF PESTS AND DISEASES
- TOP-WORKING

CONCLUDING REMARKS

BACKGROUND

- Small holder activity (0.8 – 2.5ha)
- Category of producers: small- scale – (≤5ha)
  medium-scale – (5-15ha)
  large-scale – (≥16ha)
- Estimated number of farmers: 80,000
- Estimated area under production : 89,000 ha
- Estimated Raw cashew production (2016) : 65,000 metric tons
- Standard practice: intercrop till canopy closes
- Major intercrops: maize, yam, sorghum, ground-nut, soybean, vegetables, cassava
- Harvesting season: February - May

- Despite the importance of cashew to the economies of most producing countries, yields from cashew farms are low ranging from 2 to 4 kg/tree /annum.

- Main factors contributing to low yields or production of cashew trees include :

A) Use of seedlings or seeds of poor genetic make up for planting :

a) Seeds

b) Seedlings

- **B) High cashew crop population density (overcrowding)**

- **C) Poor pruning practices**

D) Poor weeds control

E) Poor pests/diseases control

Helopeltis spp.

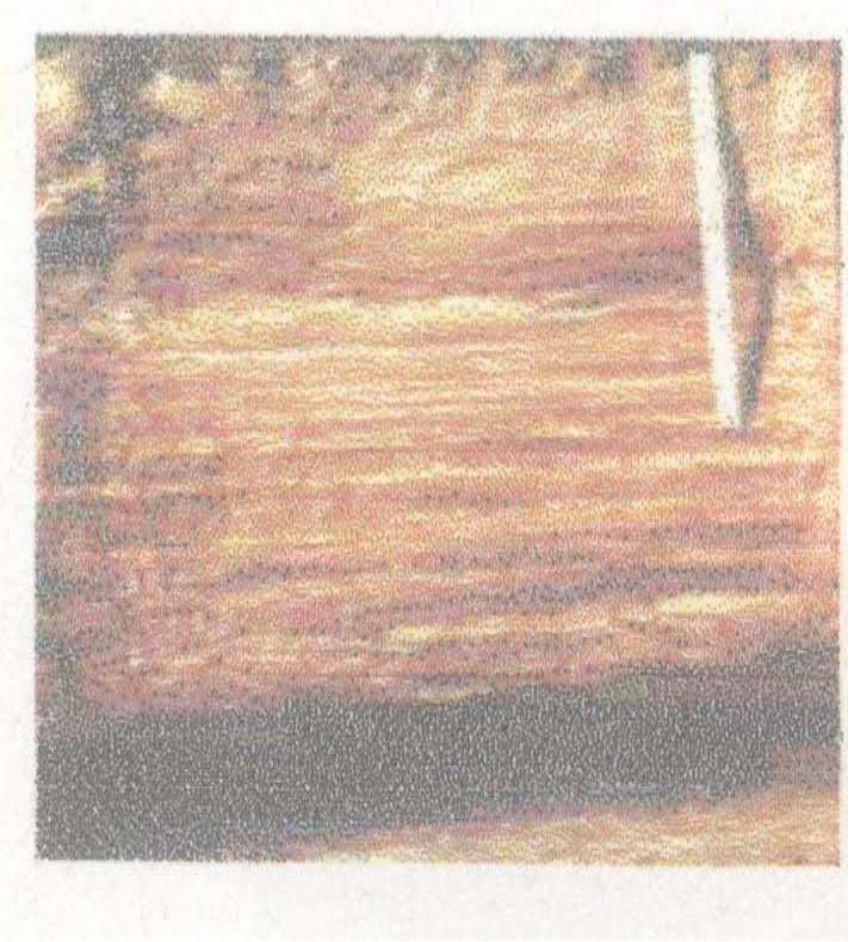
Anoplocnemis curvipe

Analeptes trifasciata

Anthracnose on nuts

Anthracnose disease on apple

F)Less attention to soil degradation issues



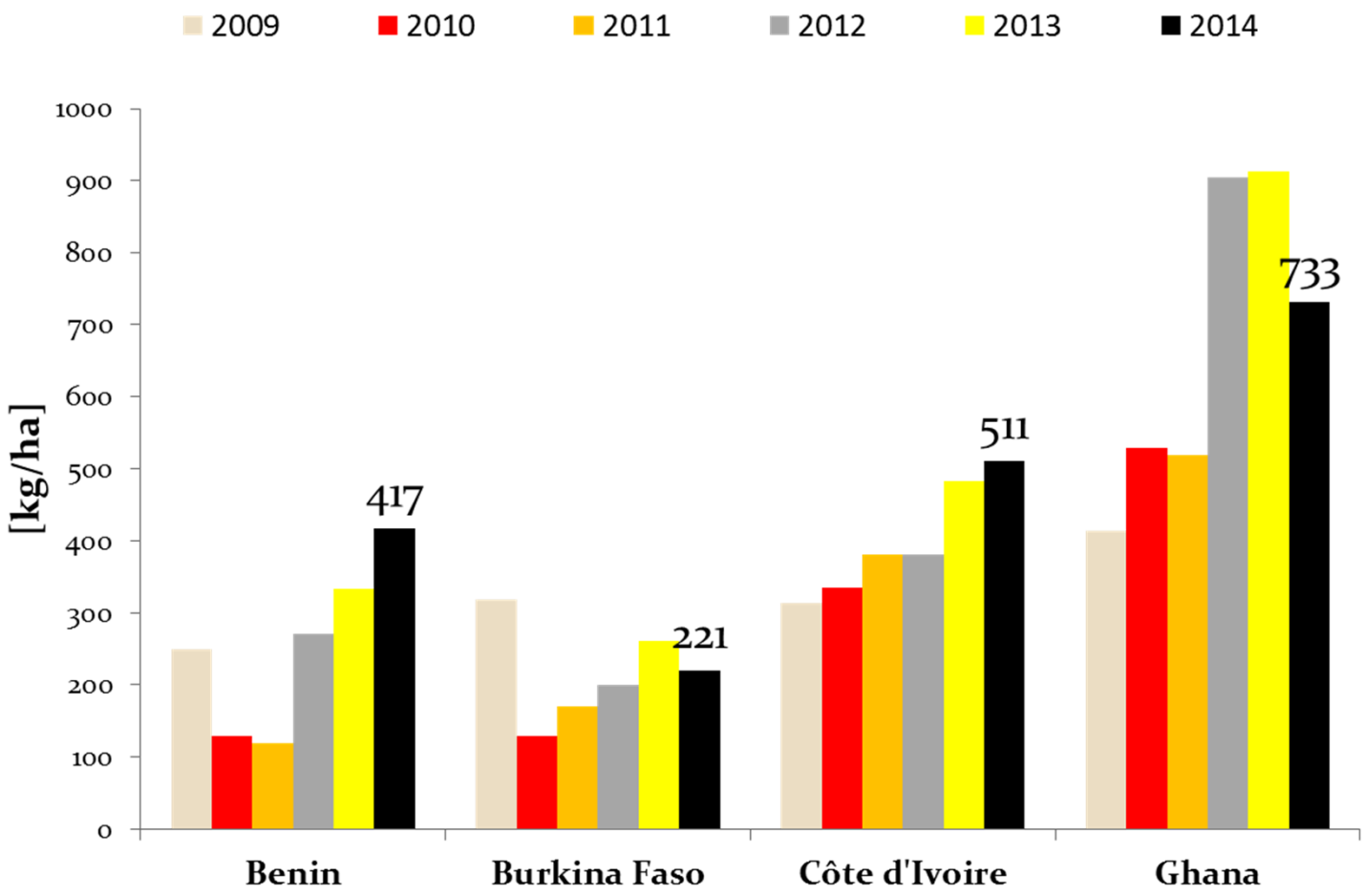
G) Non-bearing trees

AGRONOMIC PRACTICES BEING USED TO INCREASE CASHEW PRODUCTION

- A) Use of improved cashew planting materials


Voltic

Average Yield kg/ha



- **B) Selective Thinning and Planting with appropriate spacing**

  -Optimal tree density for cashew production varied from 70 trees/ha to 100trees/ha

- **Pruning practices**

Maintain or reduce cashew size- Pruning can prevent a cashew tree from overgrowing its space and eliminates the need for drastic cutting of crowded, overgrown trees.

a) Excessive branches are removed for good canopy formation and improve light penetration. This is what we term Maintenance Pruning

b) Remove dead, diseased, or broken branches, suckers/water shoots- to ensure improved farm sanitation. This is Sanitation pruning

c) Remove undesirable growth- It is essential in young trees. Pruning starts one year after planting. Prune until all lateral branches have been removed up to a height of 1m.- Formation pruning.

Formation pruning of 1 year old tree


Unpruned cashew tree


Pruned mature trees

- **Weeds Control**

-Control weeds manually, mechanically or chemically at least 3 times in a year.

- Apply herbicides such as Glyphosate at the rate of 1.5L-2.0L/ha in 100L of water which is equivalent to 225-300ml in 15L of water.

- **Pests Control**

Research on chemical control of sucking pests (*Helopeltis* spp. and *Anocplenemis curvipes)* has shown that three sprays at monthly intervals during initiation of flowering, peak flowering and fruit formation with cyperdim can significantly control these pests and can increase the number of nuts per panicle

- **Control of sucking pests can be achieved by encouraging the colonization of trees by the predatory weaver ants , *Oecophylla longinoda.***

Oecophylla and Scale Insects

- **Control of diseases**

Anthracnose can be effectively controlled by removing and burning of infected dead plant parts such as water suckers and by spraying copper based fungicides (100g/15 litres of water)

TOP-WORKING TECHNIQUE FOR IMPROVING CASHEW YIELDS

Stumping for Top-working

Grafting Shoots

Top worked tree

Concluding Remarks

- Ideally, all these agronomic practices when adopted by farmers would have helped as improve cashew production.
- However, it is also known that some of these practices being tried are more appropriate than others for a wide range of farmers, for example **the use of improved cashew planting materials**.
- **Top working** is a particularly appropriate skill to be transferred to farmers.
- When **selective thinning** is combined with **top working**, it allows farmers to convert some non-bearing trees into productive ones quite rapidly.