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ACA World Cashew Festival & Expo 2016



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AGRONOMY PRACTICES TO INCREASE
CASHEW NUT YIELD AND QUALITY

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OVERVIEW ON TREE AID

- **Vision:** Thriving communities across the drylands of Africa where trees sustain livelihoods and enrich the environment.
- **Mission:** To enable people living in the drylands of Africa to unlock the potential of trees to reduce poverty and protect the environment.
- **Area of intervention:**
 1. Natural resources management and agroforestry
 2. Forest governance and access to land
 3. No wood forest products value chain and enterprise development and trade
 4. Food and nutrition security



• **Countries:** Burkina Faso, Ghana, Mali, Niger, Ethiopia



BACKGROUND

- Low yields of cashew: 150 kg to 350 kg per ha VS 1 000 to 1 500 kg
- 80% of orchards are olds with an average of 25 yrs and more
- Low quality of cashew nuts (KOR less than 46)
- Low knowledge and skills in cashew production techniques by farmers
- Lack of funds to invest in cashew production



RATIONALE

- Continuous increase on quality cashew nuts and kernel demand accross the world
- Improve quality means increase of cashew nut processing rate and profit for processor
- Cashew nuts and kernel prices depend on their quality
- Increase cashew farmer's income by increasing productivity and production
- Need for the diversification of source of employ, food and income for families



AGRONOMY TECHNIQUES

- Orchard weeding
- Pruning and uprooting to reduce cashew trees density (around 100 trees/ha) in orchard
- Plantation of seedlings (grafted or not)
- Firebreaks and back-burning against bush fire
- Pest and diseases control using mechanic method, organic pesticides or chemicals
- Organic manure production and use
- Harvest (collect and separation of nut from apple)
- Post harvest (drying, packaging, storage in ventilated warehouse to protect against fungus – aflatoxine)





INNOVATION IN CASHEW FARMING SYSTEMS

- Cashew farming becomes a family business which requiert some investment and diversification of sources of incomes
- The issues around cashew farming requiert some combinaison of pratices in the same farm to sustainable increase production
- Regarding the growth of the orchard creation in Africa, there is a need to combine cashew nut production and environment protection



INNOVATION 1: INTERCROPPING

- Intercropping of leguminous crops (soya, ground nuts, bambara beans) amongst cashew trees all times
- Increased of cashew yields due to increased soil fertility, permanent weeding and pruning and trees density reduction
- Increase the production of subsistence crops contributing to the food and nutrition security of households.
- Share costs for cashew and legumes maintenance (weeding, cleaning, ploughing, pruning, etc..)





INNOVATION 2: BEE KEEPING

- Bee-keeping is also being introduced in orchards alongside the cashew trees
- Bees facilitate the pollination and increase the cashew nut productivity while they use the pollen for honey production
- Increase of income to reinvest in orchard
- Production of honey for family needs, food and nutrition security for families
- Source of labour for youth and women



INNOVATION 3: IMPROVED MATERIALS

- The promotion of improved planting materials for new orchard creation, old orchard improvement, old and unproductive cashew trees
- Use of grafted seedlings for new orchard creation and old trees replacement
- Top working by grafting old trees directly in the farm after pruning and upproting
- Start production after one year of plantation
- Potential productivity of 1.2 tons/ha



Effects of the adoption of innovations in Benin 2014 and Burkina Faso 2015

PARAMETERS	Control	Effects on the adopters
QUALITY (KOR)	46	49 to 51
YIELDS (kg/ha)	329.85	549.95
INCREASE OF INCOME (XOF)	18835	75385
Soya production (kg/ha)	-	350 to 980
Honey production (kg/ha)	-	42 to 210 kg



WAY FORWARD

- Apply the three approaches in the same orchard is a guaranty for sustainable increase of production and quality and diversification of source of income and food for families
- Support the farmers especially women to secure their investment by arranging land tenure
- Access to investment fund by credit or subsidies
- Support farmers for cooperatives formation and organisation to face challenges
- Facilitate access to market information system and improved warehouse
- In collaboration with research, support to improve the success rate of grafting seedlings
- Establish local nursery as enterprise to facilitate access to grafted seedlings in villages at reasonable costs

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THANKS FOR YOUR ATTENTION

