



INTERCROPPING IN CASHEW ORCHARD IN KENYA







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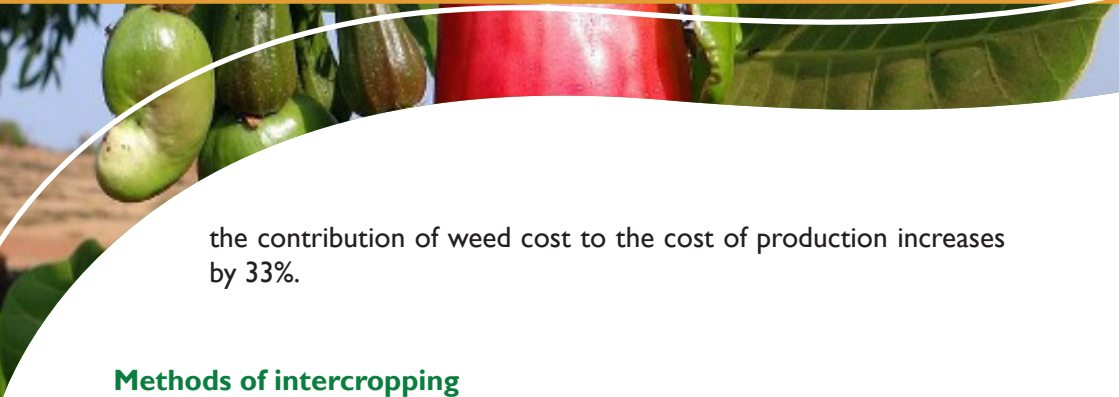
Introduction

Intercropping is a multiple cropping practice involving growing two or more crops together. The most common goal of intercropping is to produce a greater yield on a given piece of land by making use of resources or ecological processes that would otherwise not be utilized by a single crop. The practice benefits include; the potential to yields increase, enhanced soil fertility, conserved soil moisture, better control of weeds and pests and increased land productivity and income.

Why Intercrop Cashew?

Intercropping cashew offers numerous advantages for farmers in Kenya

- **Diversification of income:** By growing multiple crops together, farmers can diversify their income and reduce the risk associated with relying on a single crop.
- **Optimized land use:** Intercropping allows farmers to make the most of their land by utilizing available space efficiently. This maximizes productivity and increases overall yield per unit area.
- **Soil health:** Intercropping helps improve soil fertility and minimize the loss of soil moisture, which leads to healthier cashew trees and better long term productivity.
- **Pests and diseases management:** Crop mixtures frequently have lower pest densities, especially of insect pests due to the many alternate hosts for the insect pests. The intercrop crops can also repel pests and diseases, reducing the need for chemical pesticides and promoting natural pest control.
- **Weed Control:** Intercropping reduces weed occurrence and biomass. This is particularly beneficial to the cashew crop during the early stages of cashew field establishment. In sole cashew plantations,



the contribution of weed cost to the cost of production increases by 33%.

Methods of intercropping

Single row intercropping: Involves the planting of an intercrop such as legumes (e.g. *Mucuna pruriens*, *Dolichos Lab lab*, Cowpeas, *Clitoria ternatea*) arranged in alternate single rows in between the cashew tree rows.

Strip intercropping: This is the cultivation of multiple rows of the intercrop in between one or alternate rows of cashew.

Intercrop Spacing: The inter row spacing of the legume crop is 50-60 cm while the minimum legume to cashew spacing is 60 cm. The spacing for cashew is 12m x 12m.

Therefore, growing legumes between two rows of cashew increases the yield of cashew (main crop) by 1.5 times compared to cashew alone. Other suitable intercrops are sweet potatoes and water melons. Besides the annual crops, the arid zone fruit crops smaller canopy than cashew such as pawpaw can be used.

The best time to intercrop

In cashew intercropping is best done during the early establishment stages (the first 3-5 years). Different intercrops can be adopted between two rows of cashew plants to get more returns as well as utilize the solar energy and soil resources efficiently. Watermelons can be grown as an intercrop between two rows of cashew for the first years.



Fig. 1 Multiple spacing of cowpea legume



Fig. Well-spaced intercrop



Fig 3. Mucuna intercrop



Fig 4. Canopy of a grown cashew



Fig. 5 No intercrop



Fig 6. Pure stand of cashew



What to avoid

- Farmers should avoid tall growing inter-crops such as sorghum and millet, between young cashews, as they provide too much shade.
- Avoid plants that may host pests and diseases of cashew.



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