

Pepper and vanilla as mixed/companion crop in cashew

Trailing crops such as pepper and vanilla can be grown as companion crop by trailing on the stem and branches of cashew trees of more than 6 years, grown under normal density planting system. With the onset of monsoon, pits of size 45 x 45 x 45 cm are to be opened 45 cm away from the base of the cashew tree. The pits are to be filled with topsoil, 200 g rock phosphate and 0.5 kg neem cake. Liming with 200 g agricultural lime is to be done if necessary based on the soil test report.

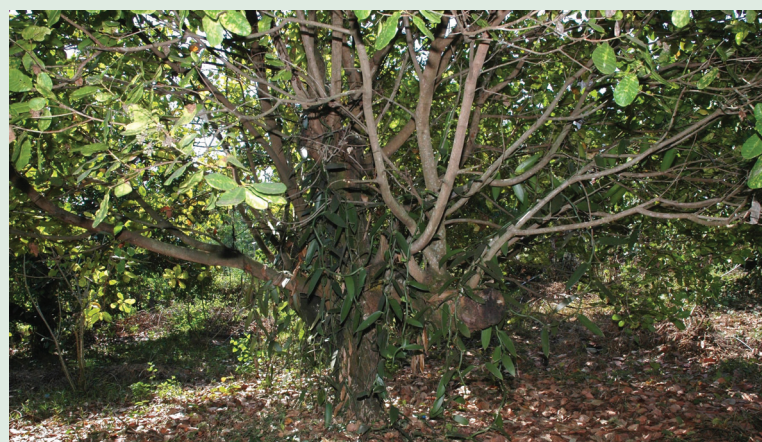
Black pepper

Shade tolerant varieties of pepper are to be selected for growing with cashew. With the onset of monsoon during June, the rooted pepper cuttings should be planted. The growing vines are to be tied on to the pepper trunk with jute thread. Tying of the vine to the cashew stem is to be continued till it reaches about 1.5 m height. Thereafter it spreads through trunk and branches. From the second year onwards regular application of recommended doses of fertilizers in split doses to pepper (100g N, 40g P₂O₅ and 140g K₂O g/tree/year) at 45 to 60 cm away from the base results in better growth and yield.



Vanilla

Vanilla requires shade and filtered sunlight for its growth and development. Cashew trees under normal density planting can act as live support for vanilla. With the onset of monsoon, plant



the cuttings/rooted cuttings or tissue culture vanilla plants in pits of 40 cm³ taken 45 cm away from the base of the cashew tree. Mulch the base after planting and repeat frequently as required. Root disturbances are to be avoided.

Vegetable and other crops with cashew

Other crops such as sweet potato and vegetables such as amaranthus, cluster bean, coleus, cucumber, bottle gourd, pumpkin and brinjal can be successfully intercropped with cashew during the initial periods of plantation establishment. Among pulses and oilseed crops, groundnut, green gram and black gram can be grown as intercrops during rabi season. Medicinal plants such as *Aloe vera* and *Ocimum* are also recommended as intercrop in cashew. Separate agrotechniques, manuring and fertilizer application is to be followed for the intercrops in all cases.



Mixed farming

The interspaces of cashew orchards can be used for raising fodder crops to meet the fodder requirement of livestock. The grasses like NB-21, guinea grass and para grass are reported to yield fairly well under cashew plantations during the initial periods of the establishment.

For more details contact:

Director

ICAR-Directorate of Cashew Research, Darbe (P.O.), Puttur
Karnataka – 574202

Tel: 08251-230902 Fax: 08251-234350

Email: director.dcr@icar.gov.in

Website: <https://cashew.icar.gov.in>

Published by: **Dr. M.G. Nayak, Director**

Compiled and edited by:

Dr. M.G. Nayak, Dr. Shamsudheen. M

Dr. Preethi. P., Mr. Muralidhara, B.M. and Dr. Babli Mog

Acknowledgements: This publication is funded by Rashtriya Krishi Vikas Yojana – Remunerative Approaches for Agriculture and Allied Sector Rejuvenation (RKVY-RAFTAAR), Government of Karnataka.

01 February, 2020

Intercropping and Cashew Based Cropping/Farming Systems



Dr. M.G. Nayak

Dr. Shamsudheen. M

Dr. Preethi. P

Mr. Muralidhara, B.M

Dr. Babli Mog



भा.कृ.अनु.प. – काजू अनुसंधान निदेशालय
ICAR-Directorate of Cashew Research
Darbe (P.O.), Puttur - 574 202, Dakshina Kannada, Karnataka



काअनि
DCR

INTERCROPPING AND CASHEW BASED CROPPING/FARMING SYSTEMS

Introduction

Cashew is grown along the west coast and east coast of India. Cashew has been traditionally grown at a spacing of 7.5 m x 7.5 m or higher in India. The canopy expansion rate of cashew is slow during the initial years of plantation. So planting at wider spacing leads to wastage of horizontal and vertical space, nutrients, moisture (below ground resource) and solar radiation (above ground resource). Moreover, the unused interspace will lead to severe weed infestation. It requires 8 to 10 years for the complete coverage of cashew canopy under normal density planting. During the initial years of cashew plantation under normal density planting, the interspaces can be utilised for intercropping with suitable crops. Such integration of different crops can be useful to increase the income for the growers, minimise soil erosion and runoff by acting as a cover to protect the soil in otherwise exposed areas in the early periods of a plantation, conservation of soil moisture and prevention of weed growth. This publication intends to aid the growers on different options available for intercropping in cashew.

Pineapple as an intercrop in cashew

Pineapple is suggested as intercrop in cashew planted under normal density for the initial 7 years. Pineapple is to be planted with the onset of pre-monsoon showers in three trenches taken 90 cm apart, opened across the slope. Each trench should be of 1 m width, 0.5 m depth and convenient length. The pineapple suckers can be planted at a spacing of 60 cm between rows and 40 cm between two suckers in the row. Before planting the

suckers, the trench should be half-filled with a mixture of topsoil, farmyard manure and rock phosphate and thoroughly mixed. The recommended rate is about 2.5 kg farmyard manure and 160 g rock phosphate per metre length of the trench. The fertilisers are to be applied in two split doses during May-June and September-October at the rate of 25g N, 7g P₂O₅ and 25g K₂O per sucker per year. Earthing up after fertiliser application during September-October ensures adequate anchorage of the pineapple plant. The pineapple does not tolerate waterlogging. Therefore sufficient provision for drainage should be provided and should not be planted in areas prone to waterlogging/salinity.

Ginger and turmeric as an intercrop in cashew

Ginger and turmeric are shade tolerant crop which makes them ideal intercrop in cashew plantations. Raised beds of 1.5 m width, 0.25 m height and convenient length are to be prepared across the slope between two rows of cashew with the onset of pre-monsoon showers. Leave spacing of 40 cm between beds.



Ginger

Disease-free ginger rhizomes (about 15 g weight) should be planted on raised beds at a spacing of 20 cm x 20 cm at 4-5 cm depth with the active bud facing upwards. The seed rate required is about 1 tonne per ha. Farmyard manure or compost at the rate of 15 t/ha has to be applied to the bed after planting the rhizomes. Soon after planting, the mulching is to be done with green leaves at the rate of 10 t/ha. Additional mulching with green leaves is to be undertaken 60 and 90 days after planting.

Turmeric

Turmeric is also a shade-tolerant crop. With the onset of pre-monsoon showers, prepare raised beds. Plant healthy and disease-free mother rhizomes that are treated with copper oxychloride fungicides. With the



receipt of pre-monsoon showers, plant the rhizomes in small pits on beds at a spacing of 25 cm x 25 cm, with the buds facing upside and cover with soil. Farmyard manure or compost at the rate of 15 t/ha has to be applied to the bed after planting the rhizomes. Soon after planting, the mulching is to be done with green leaves at the rate of 10 t/ha. Additional mulching is to be done 50 days after planting.

Yams

Yams such as elephant foot yam and colocasia can be intercropped with cashew. Yams require well-drained soil. For elephant foot yam, dig pits of size 60 cm x 60 cm x 45 cm, at one metre spacing between pits. Refill 2/3rd of the pits with topsoil and FYM or compost @ 2kg/pit. Corm pieces (treated with cow dung slurry and dried) are planted in the pits and cover with dried leaves or mulch materials. For colocasia, planting is recommended on ridges taken 60 cm apart and plant the tubers at a spacing of 45 cm.

