Crop rotation

Crop rotation is the practice of growing different crops in succession on the same land. The practice is used to replenish the soil’s nutrients and to reduce the build-up of pests and pathogens.

A crop rotation plan can also include leaving the land fallow for a period of time. Among the crops that have been used in crop rotations with bananas are sugarcane, pineapples, brassica and legumes such as velvet beans and sunhemp.

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Pest control function

Before rotating bananas with another crop to reduce the population levels of banana pests and parasites, certain aspects should be considered:

- The host status of the crop;
- The possibility of introducing new parasites that will attack bananas;
- The duration of the rotation.

Crop rotation experiments in Cameroon showed that maize and groundnut rotations did not reduce levels of *Radopholus similis*, whereas cassava and sweet potato rotations did[1]. However, sweet potato is a host to other nematodes[2]. In South Africa, a long-term rotation with sugarcane has been shown to be efficient in suppressing burrowing nematodes[3]. In India, rotating bananas with rice is used to control nematode numbers[4].

In China, the discovery of the inhibitory effect of Chinese leek (*Allium tuberosum*) on the tropical race 4 strain of *Fusarium oxysporum f. sp. cubense* has led to the development of the practice of cultivating Chinese leeks for three years and then switch to banana for three years[5].

References

4. Managing nematode infestation in banana, in the 4 September 2013 issue of The Hindu

Further reading
Crop rotation in intensive banana cultivation by E. Ternisien and J. Ganry in a Fruits 1990 special edition on bananas.

Also on this website
Pesticide-reducing practices:
- Bagging
- Biological forecasting system for black leaf streak
- Biological forecasting system for Sigatoka leaf spot
- Cover crop
- Crop rotation
- Deleafing
- Fallow
- Fungicide-reducing application technologies
- Integrated nematode management system
- Pheromone trapping
- Weed management

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