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Coconut Risk Management and Mitigation Manual for the Pacific Region



Compiled by R. Bourdeix, J. M. Sourisseau and J. Lin

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16. FARMING TECHNIQUES

By R. Bourdeix and V. Kumar

Description

In the Pacific region, most farmers are not achieving the full potential of their coconut plantation. Caricaturing slightly, here is the Western, pessimistic and stressed representation of a scenario:

Farmers will take low genetic value seednuts: those germinated naturally in the fields from forgotten small coconuts; or large seednuts coming from a heap and selected only based on large size. They will plant the seedlings without any fertilizer, be it organic or not. Many seedlings will be destroyed by wild animals, such as pigs and goats. So, farmers will plant again and again. Maybe they will finally succeed in achieving an appropriate density of palms; maybe they will plant too densely. In this last case, the palms will grow vertically very fast with a low production of fruits. Farmers who do not use any cover crops, will have to control fast growing useless weed species by more labour-intensive ways. When, after 6 to 8 years instead of 4, the young palms start to produce, the average fruit production will be no more than 50 fruits/palm/year. Farmers will leave the husk and leaves in big heap in the plantation, without distributing them and restoring them to the soil. Agricultural manpower is lacking, and the farmer will not regularly weed by themselves. So, the soil fertility will progressively decrease, or the land will return to bush.

Occurrence and severity

Unfortunately, whatever we do, this scenario will continue to occur, at least in some places, in the Pacific region. Lack of machinery may result in labour intensity, which restricts production, especially for the elderly, and women who are burdened with extensive caring obligations. In developing countries, where a relatively low level of technology is frequently adopted in farming, there is typically a high level of labour intensity.

Mitigation and adaptation

We presented a first vision as ‘Western, pessimistic and stressed’. Here is again almost the same scenario, but this time on another representation that we could call ‘Pacific, optimistic and relaxed’.

The soil, enriched with volcanic ash, is rich and fertile. The land is available in large quantities, because we are still quite few on the island. The climate is mild, watered and conducive. Just plant for it to grow. The plantation includes many cultivated species: coconut, banana, breadfruit, taro, sweet potato, medicinal plants. Maintenance is far from optimal, there are also wild species. The whole gives an impression of disorder close to nature. While the yield may be higher, it does not matter to us. For us, the important thing is to have enough income and food while working as little as possible. It is appropriate for us to make the most of each hour devoted to fieldwork.

When comparing these two representations, one could almost say there are two different worldviews that clash. Is there a true representation and a fake one? Probably no. There is a part of truth in each of these representations, which express different points of view.

In the introduction to this chapter, one of the definitions of 'agricultural ecological intensification' was 'producing more food from the same area of environmental impacts'. We could propose a new 'Pacific orientated' definition of such intensification, which also considers the labour aspect: 'producing more food from the same area of the environment, while improving the productivity of agricultural labour'.

There are already technical solutions that allow greater production while working less. We can cite the use of more productive varieties; taking special care of young coconut trees to produce well over the next fifty years, using cover crops that naturally enrich the soil and reduce weeding.

Actions to undertake

- Technical changes must be considered in terms of productivity of labour. It seems urgent to popularize, in full agreement with the farmers, technical changes that will preserve or even increase productivity of labour, and not only increase yields. This dynamic has already begun but needs to be reinforced and integrated into all communications with farmers: 'we (agricultural officers) do not want you (farmers) only to produce more; we want you to produce more while working less'.
- Carry out training for farmers and educate them in appropriate management techniques.
- Carry out demonstrations/research on various management practices such as cover crops, fertilizer application (organic/inorganic), breeding techniques, Integrated Pest Management, water conservation etc.
- Carry out soil and plant nutrient analysis to determine the nutrient status of coconut palms in the Pacific and formulate fertilizer recommendations (either organic or inorganic).
- Study the cost benefit of optional management practices.
- Explore other special management techniques available in other countries and the possibility of adopting them into the Pacific farmers conditions, if possible (for example: Thailand uses canals to support transportation and avoid drought).

References

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