INTERCROPPING
in semi-arid areas

Report of a symposium held at the
Faculty of Agriculture, Forestry
and Veterinary Science,
University of Dar es Salaam,
Morogoro, Tanzania,
10-12 May 1976

Editors:
J. H. Monyo, A. D. R. Ker,
and Marilyn Campbell

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Intercropping in Semi-Arid Areas

Report of a symposium held at the Faculty of Agriculture, Forestry and Veterinary Science, University of Dar es Salaam, Morogoro, Tanzania, 10–12 May 1976

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Farmer's field near Ibadan, Nigeria, showing intercrop of cowpea under maize
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These and other mixed cropping experiments have demonstrated that the subsistence farmer has developed a highly sophisticated system of cropping based upon good economic sense. We feel that the answer to the question is an unqualified "yes" and now intend moving to high input mixed cropping. Particularly we intend looking at the part played by nitrogen fixation by legumes within mixtures and the possibility of growing continuous legume crops within mixtures of various other crops. We also intend investigating rearrangements of the cereal component to give yet higher populations, possibly by closing up rows and sowing double rows to facilitate mechanization. We have already initiated lysimeter studies to investigate water use by high populations in mixtures.

Finally, preliminary studies have shown that trifluralin is selective in cotton, castor, okra, groundnuts, soybean, sunflower, and tomatoes; chlorbromuron is selective in soybean, maize, and sorghum; and linuron is selective in millet, maize, cowpea, cotton, soybean, and groundnuts. The last is being developed as a herbicide for use in millet/sorghum and cowpea mixtures.

Crop Production Practices in Intercropping Systems

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At the beginning of an intercrop research production program, it is important to identify quickly those factors that in combination increase agricultural production in terms of both quantity and quality.

It is suggested that an interlinked three-tier system be established involving: (1) studies on research fields; (2) experiments in village research-extension demonstrations; and (3) production data collection by sampling in actual farm conditions.

The purpose is to establish a testing and information network that will be self-checking. Priorities are established in meaningful terms within the real crop production sector. Data on the research innovations under development in the farmers' environment are continually being generated, analyzed, and corrected. These are all linked through field research studies, village research-extension experiments, and farmers' recommendations from within their own farming systems. The entire program is based on a recommendation-generating crop production system set within the framework in which the innovation is to function.

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