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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The views expressed in this publication are those of the individual author(s) and do not necessarily represent the views of IDRC.
Farmer's field near Ibadan, Nigeria, showing intercrop of cowpea under maize
Contents

Foreword  A. D. R. Ker ......................................................... 5

Addresses to the Participants

Welcoming address  A. M. Hokororo ....................................... 8
Opening address  Hon Mr J. S. Malecela ................................ 9

Summaries of Papers Presented

An appraisal of some intercropping methods in terms of grain yield, response to applied phosphorus, and monetary return from maize and cowpeas  Y. A. Sudi, H. O. Mongi, A. P. Uriyo, and B. R. Singh .................................................. 12
Rhizosphere populations in intercropped maize and soybean  T. H. M. Kibani, C. L. Keswani, and M. S. Chowdhury ..................... 13
Intercropping for increased and more stable agricultural production in the semi-arid tropics  B. A. Krantz, S. M. Virmani, Sardar Singh, and M. R. Rao ......................... 15
Cropping systems research: the scope and strategy for research in crop combinations based on experience of previous and current studies  B. N. Okigbo .................................................. 16
Mixed cropping research at the Institute for Agricultural Research, Samaru, Nigeria  E. F. I. Baker and Y. Yusuf ......................... 17
Crop production practices in intercropping systems  R. C. Finlay ................................................................. 18
Effects of crop combinations and planting configurations on the growth and yield of soybeans, millet, and sorghum in intercropping  R. K. Jana and V. M. Sekao ......................... 19
Intercropping with sorghum at Alemaya, Ethiopia  Brhane Gebrekidan .......................................................... 21
Studies on mixtures of maize and beans with particular emphasis on the time of planting beans  D. S. O. Osiru and R. W. Willey .......................................................... 23
Intercropping of cassava with vegetables  G. F. Wilson and M. O. Adeniran .................................................. 24
Some aspects of the productivity and resource use of mixtures of sunflower and fodder radish  R. W. Willey and D. A. Lakhani .................................................. 25
Preliminary results of intercropping trials in Zaire with maize and certain legumes  Thomas G. Hart and Mangha Kewe ............. 27

(con't.)
Contents (concluded)

Effects of maize height difference on the growth and yield of intercropped soybeans  D. R. Thompson, J. H. Monyo, and R. C. Finlay .................................................. 29

Intercropping as a means of producing off-season tomatoes during the hot summer months in the Sudan  A. T. Abdel Hafeez ........................................... 30

Development of cowpea ideotypes for farming systems in Western Nigeria  Olatunde A. Ojomo .................................................. 30

Cereal–legume breeding for intercropping  R. C. Finlay ........................................... 31

Cowpea as an intercrop under cereals  H. C. Wien and D. Nangju ........................................... 32

Selection criteria in intercrop breeding  R. C. Finlay ........................................... 33

Experiments with maize–bean and maize–potato mixed crops in an area with two short rainy seasons in the highlands of Kenya  N. M. Fisher ........................................... 37

Pest control in mixed cropping systems  H. Y. Kayumbo ........................................... 39

Measuring plant density effects on insect pests in intercropped maize–cowpeas  B. M. Gerard ........................................... 41

Effects of spraying on yield of cowpeas grown in monoculture and under maize, sorghum, or millet  H. Y. Kayumbo, R. C. Finlay, and S. A. Doto ........................................... 44

Possible relationship between intercropping and plant disease problems in Uganda  J. Mukiibi ........................................... 45

Attempted control of virus incidence in cowpeas by the use of barrier crops  S. A. Shoyinka ........................................... 46

Induced resistance to bean rust and its possible epidemiological significance in mixed cropping  D. J. Allen ........................................... 46

A limited objective approach to the design of agronomic experiments with mixed crops  N. M. Fisher ........................................... 47

Systematic spacing designs as an aid to the study of intercropping  P. A. Huxley and Z. Maingu ........................................... 50

Future directions of intercropping and farming systems research in Africa  A. D. R. Ker ........................................... 51

Developing mixed cropping systems relevant to the farmers’ environment  D. W. Norman ........................................... 52

Assessment of innovations in intercropping systems  C. D. S. Bartlett, E. A. Manday, and G. I. Mlay ........................................... 58

Summary and Conclusions  
D. W. Norman ........................................... 59
H. Doggett ........................................... 62

References ........................................... 63

List of Participants ........................................... 67
(e) the level and dependability of the yields of the different crop constituents as a result of following the suggestions;

(f) assessment of the improved crop mixture in terms of:

(i) deviations from the suggestions given in (a) above and an analysis of the reasons; these could well be linked with (b), (c), and/or (d) above;

(ii) level and dependability of the profit, and return to the more limiting factor (e.g., land or labour particularly during the labour bottleneck period)\(^{15}\);

\(^{15}\)Labour, when viewed on a seasonal basis, is in fact more often a more limiting factor than land in many semi-arid areas and yet analysis is seldom couched in terms of the former factor.

(iii) its compatibility with the overall farming system adopted by farmers.\(^{16}\)

Such information hopefully would provide guidelines as to whether further changes in the proposed improved crop mixture should be considered and whether a reappraisal of the infrastructural support system required is necessary. As far as possible, work at the experimental level should be undertaken concurrently with the adaptive research at the farmer's level to provide a feedback of information that can be incorporated in research work at the former level.

\(^{16}\)A useful starting point is to consider any differences the improved crop mixtures exhibit compared with the indigenous crop mixture and an assessment of the importance of them considering both the benefits and problems.

Assessment of Innovations in Intercropping Systems

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There is a widespread complaint that small farmers in tropical Africa fail to adopt innovations produced by research. A farmer normally adopts innovations because they provide benefits to him that exceed their costs, but these net benefits to the farmer are seldom assessed. There is a need to project the costs and benefits within the farming system of an innovation before it is developed and to assess costs and benefits of recommended innovations. Many research-produced innovations require fundamental changes in the farming system. These changes can be assessed by farm planning methods that indicate the impact of innovations on the whole farm plan and on overall farm profits. The Morogoro Intercropping Project is largely concerned with relatively small changes in farm operations designed to fit in easily with the existing system. The net benefit of these changes can best be assessed by methods akin to partial budgeting that focus on comparing changes in benefits and changes in costs. Close cooperation with scientists is required in choosing relevant areas to examine for innovations, and intimate knowledge of the farming system is required if all costs and benefits are to be identified.