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FARMING SYSTEMS RESEARCH AT THE NATIONAL ROOT CROPS RESEARCH INSTITUTE, UMUDIKE AND ITS IMPACT ON THE RURAL COMMUNITY

(Systèmes d'exploitation dans l'Agriculture nigériane à base de tubercules)

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SUMMARY

In Nigeria, small-scale farmers account for 70 per cent of domestic food supply. From a farming systems benchmark survey in 1982, major constraints to food production included lack of capital (92 per cent), unavailability of fertilizers and pesticides (42 per cent), weed infestation (38 per cent), poor transportation (36 per cent), diseases/pests (25 per cent), ineffective extension services (9 per cent). 88 per cent of the respondents practised mixed cropping (yam/maize/cassava/vegetables/egusi). Trials confirmed that the following per cent more land became available to the farmer from intercropping cassava/maize (40 per cent), cassava/maize/groundnuts (71 per cent), yam/maize (59 per cent), yam/egusi (63 per cent), cocoyam/egusi (59 per cent), cocoyam/sweet potato/maize (58 per cent). Weed control was most efficient when herbicide use was integrated with intercropping (egusi) and local manual hoeing practice. All the farmers in the sample frame accepted this technology.

RESUME

Au Nigéria, les petits exploitants assurent 70 pour cent de l'approvisionnement alimentaire. Une enquête de repérage des systèmes d'exploitation effectuée en 1982 a établi que les contraintes majeures dans la production alimentaire comportaient l'absence de capitaux (92 pour cent), l'indisponibilité de fertilisants et de pesticides (42 pour cent), les mauvaises herbes (38 pour cent), l'insuffisance des transports (36 pour cent), les attaques parasitaires (25 pour cent), l'inefficacité des services de vulgarisation (9 pour cent). Les réponses montrent que 88 pour cent des exploitants pratiquent les cultures associées (igname/maïs/manioc/plantes maraîchères/egusi). Les essais confirment que les associations suivantes manioc/igname (40 pour cent),

manioc/maïs/arachide (71 pour cent), igname/maïs (59 pour cent), igname/egusi (63 pour cent), taro/egusi (59 pour cent), taro/patate/maïs (58 pour cent) permettent un gain de surface aux exploitants. La lutte contre les mauvaises herbes étaient la plus efficace lorsque l'emploi de l'herbicide était intégré à la culture intercalaire (egusi) et aux pratiques locales de désherbage à la houe. Tous les exploitants de l'échantillon acceptaient cette technologie.

INTRODUCTION

The fourth National Development Plan in Nigeria expected the bulk of a projected 4 per cent agricultural incremental rate to come from small holder farmers who currently account for over 80 per cent of the domestic food supply (FMNAR, JPC 1974).

This projection is far from being realised due to, among other factors, limited adoption by small farmers, of a backlog of agricultural technologies developed in Nigeria (EZE, 1981). Therefore, agricultural productivity have remained low. The technologies were not adopted, principally because they were not tailored to the needs, capabilities and situations of the farmers. Instead, agricultural research in Nigeria has been organized along discipline and commodity lines ; an arrangement which has been criticised as presenting formidable management problems in evolving relevant and coherent research programmes without adequate reference to the farmers problems (OKIGBO, 1978 and 1982 ; ARIBISALA, 1982).

In order to increase the agricultural productivity of the apparently neglected majority of small farmers, the Federal Government of Nigeria set up a committee that reviewed agricultural research activities in Nigeria and advised on the re-orientation of research activities towards developing technologies that are within the farmers means to own, use, hire and repair and which are relevant to their needs and situations (OKIGBO, 1982). This required a reversal of an age long "Top to down" approach to agricultural research. Some of the National Research Institutes including NRCRI, have already started implementing the recommendations of the Committee. At the NRCRI, farming systems research efforts are geared towards :

(i) Identifying the major agricultural production constraints of rural root crops-based farmers.

(ii) Addressing the "small" farmers' problems by working with them under their conditions.