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Kavango Farming Systems Research Team.
Community survey summary
of inland 'omuramba' and riverside communities
in the Kavango region. Unpublished.

METHODOLOGY AND AIMS:

FOLLOWING A DOCUMENTED PROCESS OF COMPILING DISTRICT PROFILES AND SITE SELECTION, TWO VILLAGE COMMUNITIES WERE CHOSEN FOR THE COMMUNITY SURVEYS. MASHARE (55KM EAST OF RUNDU) REPRESENTS THE RIVERSIDE COMMUNITIES, AND MBORA (40KM SOUTH-WEST OF RUNDU) REPRESENTS INLAND COMMUNITIES.

THE SURVEYS WERE PERFORMED IN JUNE AND JULY 1995 BY INTERDISCIPLINARY TEAMS OF RESEARCHERS, EXTENSIONISTS AND NGO FIELD WORKERS. INFORMAL AND PRA SURVEY METHODS WERE USED TO COLLECT QUALITATIVE AND DESCRIPTIVE INFORMATION. THE MAIN AIMS WERE:-

- TO DEEPEN OUR UNDERSTANDING OF THE SOCIOECONOMIC STRUCTURE AND AGRICULTURAL ACTIVITIES OF A RIVER AND AN INLAND COMMUNITY;
- TO COLLECT INFORMATION WHICH ALLOWS RESEARCH TOPICS TO BE PRIORITISED JOINTLY BY FARMERS, RESEARCHERS AND EXTENSIONISTS;
- TO IDENTIFY FARMERS TO PARTICIPATE IN A COLLABORATIVE RESEARCH PROCESS;
- TO DEVELOP POSITIVE WORKING RELATIONS WITH THE COMMUNITIES.

FULL COPIES OF THE SURVEY REPORTS FOR EACH COMMUNITY ARE AVAILABLE FROM THE PROJECT ON REQUEST.

SUMMARY OF FINDINGS:

AN IMPORTANT INDICATOR AND CRITERIA OF RELATIVE WEALTH IN BOTH COMMUNITIES WAS PLOUGH OWNERSHIP. PLOUGHS ARE NOT ONLY ASSOCIATED WITH LIVESTOCK RESOURCES AND CROPPING AREA, BUT ALSO CORRELATE WITH ACCESS TO FORMAL EMPLOYMENT. NON PLOUGH-OWNING HOUSEHOLDS INDICATED THAT LACK OF CAPITAL TO INVEST IN PLOUGHS WAS A MAJOR CONSTRAINT TO AGRICULTURAL PRODUCTION.

COMMON CHARACTERISTICS FOUND IN BOTH THE RIVERSIDE AND INLAND COMMUNITIES WERE:

- MIGRANT LABOUR;
- HIGHER LEVEL OF EDUCATION FOR YOUNGER GENERATIONS;
- SIGNIFICANT QUANTITIES OF UNDER-UTILISED MANURE;
- OPEN ACCESS TO COMMON PROPERTY RESOURCES.

COMMON PROBLEMS AND CONCERNS OF RIVERSIDE AND INLAND COMMUNITIES WERE:

- DECLINING SOIL FERTILITY;
- PROBLEM FOR NON-PLOUGH OWNING HOUSEHOLDS TO CLEAR NEW FIELDS INLAND;
- LOSS OF SEED VARIETIES;
- CROP PESTS IN FIELD AND IN STORAGE;
- INTEREST IN DROUGHT TOLERANT VARIETIES (OKASHANA MILLET & KUYUMA SORGHUM);
- LIVESTOCK AND POULTRY DISEASE;
- LARGESTOCK THEFT.

THE MOST IMPORTANT ENTERPRISES FOR IN BOTH AREAS WERE:

<u>NON PLOUGH-OWNERS:</u>	<u>FOR EITHER:</u>	<u>PLOUGH-OWNERS:</u>
COMMON RESOURCES (RIVER AND FOREST PRODUCTS)	MILLET	FORMAL EMPLOYMENT
CASUAL LABOUR	MAIZE	CATTLE
	SORGHUM	GOATS
	BAMBARA NUTS	CHICKEN
	GROUNDNUTS	
	COWPEAS/BEANS	
	CUCURBITS	
	WILD VEGETABLES	
	WOODWORKING	
	BLACKSMITHING	
	BASKET-MAKING	
	PENSIONS	

OBSERVED DIFFERENCES BETWEEN RIVERSIDE AND INLAND COMMUNITIES WERE:

<u>INLAND:</u>	<u>RIVERSIDE:</u>
SMALL SIZE (30 HOUSEHOLDS).	LARGE SIZE (144 HOUSEHOLDS).
HOMOGENOUS POPULATION.	HETEROGENOUS POPULATION.
GOOD COOPERATION BETWEEN HOUSEHOLDS.	POOR COOPERATION BETWEEN HOUSEHOLDS.
GOOD ATTENDANCE AT COMMUNITY MEETINGS.	POOR ATTENDANCE AT COMMUNITY MEETINGS.
FEWER PROJECTS AND DEVELOPMENT.	MORE PROJECTS AND DEVELOPMENT.
FEW FARMERS GROUPS OR LINKAGES WITH FARMERS ASSOCIATIONS.	WOMENS' GROUPS, LINKAGES TO KFRU.
ACCESS TO NEW LAND.	SHORTAGE OF LAND.
PLENTIFUL WILD FRUIT.	WILD FRUIT BECOMING SCARCE.
MORE FOOD SECURITY (DUE TO WILD FRUIT AND VEGETABLE SUPPLIES).	LESS FOOD SECURITY (COMMON RESOURCES BECOMING SCARCE).
50% PLOUGH OWNERS.	20% PLOUGH OWNERS.
NO CUCA SHOPS OR STORES.	CUCA SHOPS AND STORE.
TRADITIONAL LABOUR EXCHANGE STILL OPERATES.	LABOUR EXCHANGE INTEGRATED INTO CASH ECONOMY.
NO ROOT CROPS.	SWEET POTATO (& LEAF CASSAVA).
MORE SEED VARIETIES, YET EXPRESSED CONCERN AT THE LOSS OF VARIETIES.	A NUMBER OF NEW ENTERPRISES: EXOTIC VEGETABLES, DUCKS, SUNFLOWER, TOBACCO, DOVES.
MORE FRUIT TREE VARIETIES.	LESS FRUIT TREE VARIETIES - BUT A NUMBER OF DIFFERENT SPECIES FROM THE INLAND COMMUNITY.
WILD FRUIT PRODUCTS VERY IMPORTANT.	REEDS USED FOR MAT-MAKING.

THE PARTICULAR CONCERNS OF RIVERSIDE AND INLAND COMMUNITIES WERE DIFFERENT, AND REFLECT THEIR RESPECTIVE NATURAL AND SOCIO-ECONOMIC ENVIRONMENTS:

INLAND:

NO RELIABLE SEED SUPPLY
 FOREST FIRE DESTROYING FRUIT TREES AND
 GRAZING
 LACK OF EXTENSION ADVICE
 HEALTH PROBLEMS - NEED CLINIC
 TRANSPORT PROBLEMS

RIVERSIDE:

LACK OF PLOUGHS AND OXEN
 WILD FRUIT BECOMING FURTHER AWAY
 FISH BECOMING SCARCE
 LACK OF CASH.

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ISSUES FOR RESEARCH, EXTENSION, TRAINING AND FARMER SUPPORT SERVICES:

THESE ISSUES EVOLVED FROM DISCUSSIONS BETWEEN FARMER GROUPS AND THE INTERDISCIPLINARY RESEARCH TEAMS.

APPLIED RESEARCH:

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| DECLINING SOIL FERTILITY | <ul style="list-style-type: none"> □ OPTIMUM FERTILISER USE FOR DRYLAND MILLET PRODUCTION ON SANDY SOILS; □ OPTIMUM USE OF MANURE AND APPLICATION CONSTRAINTS; □ ALTERNATIVE SOIL FERTILITY IMPROVEMENT MEASURES FOR LOW-INCOME FARMERS WITH NO LIVESTOCK (I.E. MULCHING, AGROFORESTRY); □ USE OF <i>ACACIA ALBIDA</i>; □ USE POLLARDING ON EXISTING TREE SPECIES TO MINIMISE COMPETITION AND BIRD PESTS DURING THE GROWING SEASON; □ IMPROVED FALLOW (USES OF <i>SESBANIA SESBAN</i>?); |
| LACK OF SEED (AND LOSS OF TRADITIONAL VARIETIES) | <ul style="list-style-type: none"> □ COLLECTION, STORAGE AND BULKING OF TRADITIONAL VARIETIES; □ COLLABORATE WITH LOCAL FARMERS IN SEED BULKING ACTIVITIES. |
| CROP PESTS & WEEDS | <ul style="list-style-type: none"> □ LOW EXTERNAL INPUT CONTROL OF FIELD AND STORAGE PESTS; □ TEST LOW-COST IMPROVED GRANARIES; □ IDENTIFICATION OF BAMBARA NUT PESTS & TEST MANAGEMENT STRATEGIES FOR PEST CONTROL; □ ON-FARM TRIALS (ACCEPTABILITY AND YIELD) OF BIRD-RESISTANT SORGHUM AND MILLET VARIETIES; □ EXPLORE ORGANIC IPM METHODS; □ COLLABORATIVE DESIGN WITH LOCAL BLACKSMITHS OF TOOLS FOR FASTER AND EASIER WEEDING. |
| LACK OF DRAUGHT ANIMAL POWER | <ul style="list-style-type: none"> □ LIGHTER IMPLEMENTS FOR DONKEY OR SINGLE OXEN ON SANDY SOILS; □ MINIMUM TILLAGE STRATEGIES. |

- LOW RAINFALL
- CONTINUE TESTING OF DROUGHT RESISTANT VARIETIES;
 - DEVELOP LIVESTOCK MANAGEMENT STRATEGIES FOR EARLY LAND PREPARATION / PLANTING;
 - ON-FARM MULCHING TRIALS.
- FRUIT TREES
- INVESTIGATE PROPAGATION OF INDIGENOUS FRUIT TREES.
- WEEDS
- WEED-CONTROL MANAGEMENT PRACTICES;
 - DRAUGHT ANIMAL TOOLS FOR WEED CONTROL (WITH ASSESSMENT OF REQUIRED CHANGES IN CROP MANAGEMENT AND MID-TERM EFFECTS).
- DECLINE IN FISH
- EXPLORE COMMUNITY MANAGEMENT STRATEGIES;
 - HERBIVOROUS FISH FRY PRODUCTION AND MARKETING.
- TRANSPORT
- COLLABORATIVE DESIGN WITH LOCAL ARTISANS;
 - HUMAN YOKE;
 - INCREASE USE OF DONKEYS, MULES AND HORSES.
- EXTENSION:
- SOIL FERTILITY
- FARMERS REQUIRE SPECIFIC INFORMATION ON TYPE OF FERTILISER MOST SUITABLE FOR MILLET PRODUCTION ON SANDY SOILS AND APPLICATION RATES.
- CROP PESTS
- PROVIDE FARMERS ON INFORMATION ON CONTROL OF APHIDS AND BAMBARA NUT PESTS;
 - INFORMATION ON CONTROL OF SMUT;
 - BIRD CONTROL.
- PROTECTION OF FRUIT TREES
- DEVELOP COMMUNITY STRATEGIES FOR CONTROL OF FOREST FIRES.
- CHICKEN DISEASES
- INFORM FARMERS OF MANAGEMENT STRATEGIES FOR THE RELEVANT PROBLEMS.
- WEEDS
- USE OF DRAUGHT ANIMAL POWER FOR WEED CONTROL.
- DECLINE IN FISH
- EXPLORE COMMUNITY MANAGEMENT STRATEGIES.
- SEED SUPPLY
- IMPROVE PUBLICITY OF SEED SALES.
- FOREST FIRES
- MORE EDUCATION IN SCHOOLS AND THROUGH NBC ABOUT THE VALUE OF FOREST RESOURCES AND FIRE HAZARDS.

TRAINING

ORGANISATIONAL CAPACITY □ TRAINING IN GROUP FORMATION AND MANAGEMENT.

INCOME GENERATION □ STARTING UP AN INCOME GENERATING PROJECT;
 □ BASIC ACCOUNT MANAGEMENT;
 □ LOAN MANAGEMENT.

SEED SUPPLY □ SEED MULTIPLICATION METHODS.

FRUIT TREES □ PROPAGATION AND CARE OF FRUIT TREES.

FARMER SUPPORT SERVICES:

LACK OF DRAUGHT ANIMAL POWER OR PLOUGHING SERVICES. □ MAKE PLOUGHING SERVICES MORE ACCESSIBLE TO POORER HOUSEHOLDS;
 □ EXPLORE MEANS OF IMPROVING FARMERS ACCESS TO DRAUGHT ANIMAL POWER;
 □ MAKE INDIGENOUS AND EXOTIC FRUIT TREE SEEDLINGS AVAILABLE TO FARMERS.

NO RELIABLE SEED SUPPLY □ SUPPORT FORMATION OF SEED SUPPLY OUTLETS.

POULTRY DISEASES □ VETERINARY ASSISTANTS COULD CARRY DRUGS TO TREAT POULTRY DISEASES;
 □ VILLAGE LEVEL 'PARAVETS' COULD BE TRAINED TO DIAGNOSE AND TREAT SIMPLE LIVESTOCK DISEASES.

FUTURE WORK:

FOLLOWING THESE PRELIMINARY COMMUNITY SURVEYS, THE PROJECT PLANS TO INITIATE COLLABORATIVE RESEARCH ACTIVITIES WITH REPRESENTATIVE INDIVIDUALS FROM GROUPS OF FARMERS IN MASHARE AND MBORA COMMUNITIES. WORKING TOGETHER WITH MAWRD RESEARCHERS AND EXTENSION OFFICERS, THE PROJECT PLANS TO RESEARCH AND DEMONSTRATE IN A PRACTICAL MANNER A RANGE OF TECHNOLOGIES OR MANAGEMENT STRATEGIES WHICH COULD HELP FARMERS OVERCOME SPECIFIC CONSTRAINTS WHICH THEY HAVE IDENTIFIED. THIS 'CAFETERIA OF OPTIONS' WILL HOPEFULLY BE GENERATED FROM ADAPTIVE OR APPLIED RESEARCH IN NAMIBIA OR THE REGION, AND FROM INNOVATIVE FARMER PRACTICES OBSERVED IN KAVANGO. THE TECHNOLOGIES WILL BE SCREENED BY REPRESENTATIVE CLIENT GROUPS OF FARMERS, THESE GROUPS MAY THEN SELECT WHICH IDEAS MIGHT BE APPROPRIATE FOR THEIR OWN FARMING SYSTEMS. IF POSSIBLE, THESE TECHNOLOGIES SHOULD THEN BE TESTED BY FARMERS, UNDER THEIR OWN FARMING CONDITIONS (WITH PARALLEL TRIALS ON STATION) OVER THE NEXT YEAR.

FURTHER INFORMATION NEEDS:

TO INCREASE THE EFFECTIVENESS OF THE PROJECT AND TO ENHANCE THE APPLICATION OF THE FSR PERSPECTIVES, MORE BASIC INFORMATION IS NEEDED ON A RANGE OF SPECIFIC TOPICS:

- THE SOCIO-ECONOMIC INTERACTIONS BETWEEN RIVERSIDE AND INLAND COMMUNITIES;
- THE INDIGENOUS AGRICULTURAL KNOWLEDGE INFORMATION STRUCTURE (WHO KNOWS WHAT, WHY, AND WHO HAS/IMPARTS SPECIALISED KNOWLEDGE);
- THE HOUSEHOLD CYCLE (FORMATION OF NEW HOUSEHOLDS, AND INHERITANCE ETC);
- RESOURCE OWNERSHIP AND MANAGEMENT;
- ENTERPRISE ANALYSIS (IN COLLABORATION WITH MAWRD RESEARCHERS);
- LIVESTOCK AND RANGE MANAGEMENT;
- PLANTING METHODS - FREQUENCY OF DRY PLANTING, ROW PLANTING ETC;
- COMPARISON OF DRY PLANTING/LATE PLANTING ON CROP SECURITY AND YIELD;
- INVENTORY OF ECONOMIC FOREST SPECIES TO IMPROVE UNDERSTANDING OF DISTRIBUTION AND TRENDS;
- FORESTRY MANAGEMENT OVER A BROADER RANGE OF USES/ISSUES;
- TRADITIONAL METHODS OF AQUATIC RESOURCE CONTROL AND RIPARIAN RIGHTS;
- IDENTIFY PROBLEM WEEDS AND EXAMINE ORGANIC CONTROL METHODS;
- PESTS AND DISEASES - MONITOR IMPACT ON CROP PRODUCTION.