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Agricultural Technology Development And Use:

Phase I Survey Results & Database

November 1992

AGRICULTURAL MARKETING IMPROVEMENT STRATEGIES PROJECT

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AGRIBUSINESS & PUBLIC SECTOR COLLABORATION IN AGRICULTURAL TECHNOLOGY DEVELOPMENT & USE IN AFRICA:

PHASE I SURVEY RESULTS AND DATABASE

NOVEMBER 1992

Agricultural Marketing Improvement Strategies Project (AMIS)

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AGRICULTURAL TECHNOLOGY DEVELOPMENT AND USE: PHASE I RESULTS AND DATABASE

INTRODUCTION

PURPOSE OF THE STUDY

This document presents the results of the Phase I field work of a broad study on Agribusiness and Public Sector Collaboration in Agricultural Technology Development and Use in Africa. This study supports the Africa Bureau's efforts to encourage the increased contribution of local and U S agribusinesses to the goal of sustainable, broad-based, market-oriented growth of Sub-Sahara African (SSA) economies. The study is intended to·

(1) Identify and describe cases of private sector involvement in agricultural technology development in selected countries and commodity systems;

(2) Collect and analyze information to examine factors affecting/limiting private sector involvement and public-private sector collaboration;

(3) Identify policies and activities to increase the participation of the private commercial sector in agricultural technology development and stewardship of technology in SSA;

(4) Design and apply a framework for private sector agricultural research data base development.

The effort included activities in the US and field studies conducted in two phases to investigate the major technology groups used in key commodity groups. Five SSSA countries were selected for the field studies (see exhibit 1) The selection criteria of these five special studies, reflecting A.I.D.'s objectives, general mandate, and commitment about SSA, include technical, economic, and geopolitical considerations.

Exhibit 1

Selected Field Studies in SSA: Technology, Commodity and Country

TECHNOLOGY	COMMODITY GROUP	COUNTRY
Biological (Seed)	Cereals	Zimbabwe
Machinery	Cotton	Mali
Post-harvest	Fruits and vegetables	Ghana
Processing (feed)	Poultry	Kenya
Agrochemical	Maize, cereals, coffee, cocoa	Cameroon

FIRST PHASE FIELD WORK

The first phase, conducted by in-country consultants, provided sound background information on African technology markets. The second phase, conducted by international consultants and the in-country consultants, used the first phase information to carry out in-depth analysis, focusing on testing hypotheses about the collaboration between public and private sectors in agricultural technology development and use in Sub-Saharan Africa.

The purpose of the first phase field study was to.

- Develop a data bank of key actors involved in activities related to the technology and commodity of interest.
- Provide indications of the growth and potential market of the technology in the selected country.
- Collect available information related to the rules and regulations affecting the participation of private enterprises in technology development and use.
- Collect available statistics regarding the use of technology products in the commodity of interest.

Description of work

The in-country consultants conducted structured interviews of major actors in the public and private sectors, using two questionnaires: one for private enterprises, and the other for public institutions (see section E). The consultants provided names and addresses of key public and private actors involved in technology development and use in the country. They also secured statistics and key legal documents for the second phase studies.

Constraints and Caveats

The Phase I results and database presented here must be viewed in light of the following constraints and caveats The selection of in-country consultants was conducted from Washington, without the benefice of face-to-face interaction or tele-conferencing. Considerable time delays resulted from coordinating this effort. The field studies were conducted at different times, over the period from February 1992 to May 1992.

As a result of the selection process, the questionnaire was developed without pre-testing, although some feedback was provided by in-country consultants. A glossary of key terms was given to consultants to provide a common ground to the five case studies. Yet, because, a full-scale pretesting could not be done, different consultants interpreted differently some questions. Also, because of the different timing in conducting the field studies, a more streamlined coding of the open-ended questions could not be developed Cameroon's consultants, for example, reworked completely the questionnaire Mali's consultants used two versions of the same questionnaire, one more elaborated than the other

Phase I ran into Phase II field work in many cases, and it became difficult to conduct field checks because in-country consultants had exhausted their time and were engaged in other activities. The in-country consultants provided clarifications, but most could not go back to interviewees to check on the responses

Perhaps, the most severe constraint was in collecting sensitive information on revenue and expenditures in research and development in different technology groups. Several participants flatly declined to answer these questions. Still others provided inconsistent responses. The results present estimates of total expenditures, but do not attempt to show the share by technology groups.

Despite these constraints and caveats, these Phase I results and database provide insightful information. The database was developed following the ISNAR's format, and includes the sector (private/public), involvement in research, research expenditure, staffing (local and expatriates), research expenditure, and source of funding

The document includes the following parts: database organization, variable names and labels, characteristics of key participation, frequencies, and cross tabulations.

AGRICULTURAL TECHNOLOGY DEVELOPMENT AND USE: PHASE I RESULTS & DATABASE

A. DATABASE ORGANIZATION

1. For each of the five countries, there is one working SPSS/PC+ file, including all questions of Phase I (*work.sys) and one SPSS/PC+ data base file(*dbase.sys), containing results from the key questions, which are bolded and underlined in the questionnaire. This data base file is also available in lotus format (*dbase.wk1).

2. The first part of the printout is the variable names and labels, which go with the SPSS and Lotus files. (See the WordPerfect file VARNAMES.WP5). It should be noted that Cameroon's questionnaire was modified. Also in the Mali file, cases no. 37 and up are answers to an initial version of the questionnaire. Key variables, however, were retained.

3. The second part of the printout is made of tables summarizing the main characteristics of the organizations interviewed. These tables are in the Word Perfect TABLES.WP5.

4. The third and last part of the printout consists of a descriptive analysis: frequencies and crosstabs. More crosstabs can be performed, for example by discriminating between those who see a growth in the technology and those who don't. Care must exercised, however, for the cell count may become too small for meaningful interpretation. Note that the crosstabs, which are taken from spss printing, often have truncated codes. These codes, however, are fully listed in the frequencies.

B. VARIABLE NAMES & LABELS

CAMEROON

QUESTIONS	VARIABLE NAMES	VARIABLE LABEL	OBSERVATIONS
1	COUNTRY	COUNTRY	IN DATA BASE
2	COMODITY	COMMODITY	IN DATA BASE
3	TECHLOGY	TECHNOLOGY OF STUDY	IN DATA BASE
4	ACRONYM	ACRONYM OF ORGANIZATION	IN DATA BASE
5	FIRMNAME	NAME OF ORGANIZATION	IN DATA BASE
6	SECTOR	PRIVATE, PUBLIC OR MIX	IN DATA BASE
7	NATIONAL	NATIONAL, FOREIGN OR MIX	IN DATA BASE
8	STATUS	LEGAL STATUS	IN DATA BASE
9	TSIZE	TOTAL PERSONNEL SIZE	IN DATA BASE
10	TREVENUE	ENTERPRISE TOTAL REVENUE	IN DATA BASE
11	COMMSHAR	SHARE OF COMMODITY IN REVENUE	
12	HERBCIDE INSECTIC FUNGICID OTHERS	TECHNOLOGY PRODUCTS: HERBICIDES INSECTICIDES FUNGICIDES OTHER PRODUCTS	
13	NA	TYPES OF TECHNOLOGY	
14	NA	SHARE OF TECHNOLOGY IN COMMODITY REVENUE	
15	NA	RELATIVE SHARE OF EACH TECHNOLOGY:	

16	MAIS CEREALS COTTON COCOFFEE OTHERS ANIMALS	COMMODITY PRODUCTS USING THE TECHNOLOGY: MAIZE CEREALS COTTON COCOA AND COFFEE OTHER CROPS ANIMALS	
17	RESEARCH PRODUCT EXPIMP DISTRIBU EXTNSION SERVICE TECHUSE	RESEARCH ACTIVITY PRODUCTION OF TECHNOLOGY EXPORT/IMPORT DISTRIBUTION OF TECHNOLOGY EXTENSION SERVICING USING TECHNOLOGY	IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE
18	LOCAL EXPAT	LOCAL PERSONNEL IN RESEARCH EXPATRIATES IN RESEARCH	
19	RESEXPE	RESEARCH EXPENDITURES	IN DATA BASE
20	OWNFUND BORROW GRANTS	FINANCING RESEARCH:OWN BORROWING FINANCES GRANTS	
21	SEASON ACTIVWHY	SEASONS OF ACTIVITY REASONS OF ACTIVITY	
22	IDLETIME IDLEWHY	SEASONS OF NON-ACTIVITY REASONS OF NON-ACTIVITY	
23	LOCPROD	LOCAL TECHNOLOGY USED	
24	NA	NAMES OF SUPPLIERS	
25	LSUPLIER FSUPLIER	NUMBER OF SUPPLIERS: LOCAL SUPPLIERS FOREIGN SUPPLIERS	
26	NA	NAMES OF CLIENTS	

27	LCLIENT FCLIENT	NUMBER OF LOCAL CLIENTS NUMBER OF FOREIGN CLIENTS	
28	OTHERACT	OTHER ACTIVITIES	
29	YEARESTB	YEAR ENTERPRISE ESTABLISHED	IN DATA BASE
30	NA	YEAR START IN TECHNOLOGY:	
31	FIRMGROW	GROWTH OF ENTERPRISE	
32	WHYFGROW	REASONS FOR GROWTH	
33	TECHGROW	GROWTH OF TECHNOLOGY IN COUNTRY	
34	WHYTGROW	REASONS FOR GROWTH IN THE COUNTRY	
35	INTRTECH	INTRODUCTION TO TECHNOLOGY	
36	MOTIVES	MOTIVATING FACTORS	
37	MORETECH	NEEDED TO IMPROVE TECHNOLOGY	
38	MOREPRIV	NEEDED TO INCREASE PRIVATE SECTOR	
39	MOREFRGN	NEEDED TO ATTRACT FOREIGN COMPANIES	

GHANA

QUESTIONS	VARIABLE NAMES	VARIABLE LABEL	OBSERVATIONS
1	COUNTRY	COUNTRY	IN DATA BASE
2	COMODITY	COMMODITY	IN DATA BASE
3	TECHLOGY	TECHNOLOGY OF STUDY	IN DATA BASE
4	ACRONYM	ACRONYM OF ORGANIZATION	IN DATA BASE
5	FIRMNAME	NAME OF ORGANIZATION	IN DATA BASE
6	SECTOR	PRIVATE, PUBLIC OR MIX	IN DATA BASE
7	NATIONAL	NATIONAL, FOREIGN OR MIX	IN DATA BASE
8	STATUS	LEGAL STATUS	IN DATA BASE
9	TSIZE	TOTAL PERSONNEL SIZE	IN DATA BASE
10	TREVENUE	ENTERPRISE TOTAL REVENUE	IN DATA BASE
11	COMMSHAR	SHARE OF COMMODITY IN REVENUE	
12	PINEAPLE MANGO BANANA ORANGE CITRLIME	COMMODITY PROD: PINEAPPLE MANGO BANANA ORANGE CITRUS/LIME	
13	TYPTECH	TYPES OF TECHNOLOGY	
14	TECHSHAR	SHARE OF TECHNOLOGY IN COMMODITY REVENUE	

15	MECHSHAR BIOSHAR AGRISHAR POSTSHAR MGTSHAR	RELATIVE SHARE OF EACH TECHNOLOGY: MACHINERY SHARE FOR BIOLOGICAL SHARE FOR AGRICHEMICAL SHARE FOR POST-HARVEST SHARE FOR MANAGERIAL	
16	PINEPCT MANGOPCT BANAPCT ORANGPCT LIMEPCT	PERCENT SHARE OF PRODUCTS USING THE TECHNOLOGY: PINEAPPLE MANGO BANANA ORANGE CITRUS/LIME	
17	RESEARCH PRODUCT IMPORT EXPORT WHOLSALE RETAIL EXTNSION SERVICE TECHUSE	RESEARCH ACTIVITY PRODUCTION OF TECHNOLOGY IMPORT EXPORT WHOLESALING RETAILING EXTENSION SERVICING USING TECHNOLOGY	IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE
18	LOCAL EXPAT	LOCAL PERSONNEL IN RESEARCH EXPATRIATES IN RESEARCH	
19	RESEXPE	RESEARCH EXPENDITURES	IN DATA BASE
20	OWNFUND BORROW GRANTS	FINANCING RESEARCH:OWN BORROWING FINANCES GRANTS	
21	SEASON ACTIVWHY	SEASONS OF ACTIVITY REASONS OF ACTIVITY	
22	IDLETIME IDLEWHY	SEASONS OF NON-ACTIVITY REASONS OF NON-ACTIVITY	
23	LOCAL	PERCENT OF LOCAL TECHNOLOGY USED	

24	NA	NAMES OF SUPPLIERS	
25	LSUPLIER FSUPLIER	NUMBER OF SUPPLIERS: LOCAL SUPPLIERS FOREIGN SUPPLIERS	
26	NA	NAMES OF CLIENTS	
27	LCLIENT FCLIENT	NUMBER OF LOCAL CLIENTS NUMBER OF FOREIGN CLIENTS	
28	OTHERACT	OTHER ACTIVITIES	
29	YEARESTB	YEAR ENTERPRISE ESTABLISHED	IN DATA BASE
30	MECHTECH BIOTECH POSTTECH AGRITECH MGTTECH	YEAR START IN TECHNOLOGY: MECHANICAL TECHNOLOGY BIOLOGICAL TECHNOLOGY POST-HARVEST TECHNOLOGY AGRICHEMICAL TECHNOLOGY MANAGERIAL TECHNOLOGY	
31	FIRMGROW	GROWTH OF ENTERPRISE	
32	WHYFGROW	REASONS FOR GROWTH	
33	TECHGROW	GROWTH OF TECHNOLOGY IN COUNTRY	
34	WHYTGROW	REASONS FOR GROWTH IN THE COUNTRY	
35	INTRTECH	INTRODUCTION TO TECHNOLOGY	
36	MOTIVES	MOTIVATING FACTORS	
37	MORETECH	NEEDED TO IMPROVE TECHNOLOGY	
38	MOREPRIV	NEEDED TO INCREASE PRIVATE SECTOR	
39	MOREFRGN	NEEDED TO ATTRACT FOREIGN COMPANIES	

KENYA

QUESTIONS	VARIABLE NAMES	VARIABLE LABEL	OBSERVATIONS
1	COUNTRY	COUNTRY	IN DATA BASE
2	COMODITY	COMMODITY	IN DATA BASE
3	TECHLOGY	TECHNOLOGY OF STUDY	IN DATA BASE
4	ACRONYM	ACRONYM OF ORGANIZATION	IN DATA BASE
5	FIRMNAME	NAME OF ORGANIZATION	IN DATA BASE
6	SECTOR	PRIVATE, PUBLIC OR MIX	IN DATA BASE
7	NATIONAL	NATIONAL, FOREIGN OR MIX	IN DATA BASE
8	STATUS	LEGAL STATUS	IN DATA BASE
9	TSIZE	TOTAL PERSONNEL SIZE	IN DATA BASE
10	TREVENUE	ENTERPRISE TOTAL REVENUE	IN DATA BASE
11	COMMSHAR	SHARE OF COMMODITY IN REVENUE	
12	EGGS CHICKS LAYHENS LIVBROIL FRESHBRO FROZBRO	COMMODITY PRODUCT. EGGS DAYS OLD CHICKS LAYING HENS LIVE BROILERS FRESH BROILERS FROZEN/CHILLED BROILERS	
13	TYPTECH	TYPES OF TECHNOLOGY	
14	TECHSHAR	SHARE OF TECHNOLOGY IN COMMODITY REVENUE	

15	MECHSHAR BIOSHAR AGRISHAR MGTSHAR FEEDSHAR COLDSHAR PROCSHAR	RELATIVE SHARE OF EACH TECHNOLOGY: MACHINERY SHARE FOR BIOLOGICAL SHARE FOR AGRICHEMICAL SHARE FOR MANAGERIAL SHARE FOR FEEDS SHARE FOR COLD STORAGE SHARE FOR PROCESSING TECHNOLOGY	
16	FEEDCHIC FEEDHEN FEEDBROI	COMMODITY PRODUCTS USING FEEDS: CHICKS LAYING HENS BROILERS	
17	RESEARCH PRODUCT EXPIMP DISTRIBU EXTNSION SERVICE TECHUSE	RESEARCH ACTIVITY PRODUCTION OF TECHNOLOGY EXPORT/IMPORT DISTRIBUTION OF TECHNOLOGY EXTENSION SERVICING USING TECHNOLOGY	IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE
18	LOCAL EXPAT	LOCAL PERSONNEL IN RESEARCH EXPATRIATES IN RESEARCH	
19	RESEXPE	RESEARCH EXPENDITURES	IN DATA BASE
20	OWNFUND BORROW GRANTS	FINANCING RESEARCH:OWN BORROWING FINANCES GRANTS	
21	SEASON ACTIVWHY	SEASONS OF ACTIVITY REASONS OF ACTIVITY	
22	IDLETIME IDLEWHY	SEASONS OF NON-ACTIVITY REASONS OF NON-ACTIVITY	
23	LOCAFEED	LOCAL TECHNOLOGY USED : FEED	
24	NA	NAMES OF SUPPLIERS	

25	LSUPLIER FSUPLIER	NUMBER OF SUPPLIERS: LOCAL SUPPLIERS FOREIGN SUPPLIERS	
26	NA	NAMES OF CLIENTS	
27	LCLIENT FCLIENT	NUMBER OF LOCAL CLIENTS NUMBER OF FOREIGN CLIENTS	
28	OTHERACT	OTHER ACTIVITIES	
29	YEARESTB	YEAR ENTERPRISE ESTABLISHED	IN DATA BASE
30	MECHTECH BIOTECH AGRITECH MGTTECH FEEDTECH COLDTECH PROCTECH	YEAR START IN TECHNOLOGY: MECHANICAL TECHNOLOGY BIOLOGICAL TECHNOLOGY AGRICHEMICAL TECHNOLOGY MANAGERIAL TECHNOLOGY FEED TECHNOLOGY COLD STORAGE TECHNOLOGY PROCESSING TECHNOLOGY	
31	FIRMGROW	GROWTH OF ENTERPRISE	
32	WHYFGROW	REASONS FOR GROWTH	
33	TECHGROW	GROWTH OF TECHNOLOGY IN COUNTRY	
34	WHYTGROW	REASONS FOR GROWTH IN THE COUNTRY	
35	INTRTECH	INTRODUCTION TO TECHNOLOGY	
36	MOTIVES	MOTIVATING FACTORS	
37	MORETECH	NEEDED TO IMPROVE TECHNOLOGY	
38	MOREPRIV	NEEDED TO INCREASE PRIVATE SECTOR	
39	MOREFRGN	NEEDED TO ATTRACT FOREIGN COMPANIES	

MALI

QUESTIONS	VARIABLE NAMES	VARIABLE LABEL	OBSERVATIONS
1	COUNTRY	COUNTRY	IN DATA BASE
2	COMODITY	COMMODITY	IN DATA BASE
3	TECHLOGY	TECHNOLOGY OF STUDY	IN DATA BASE
4	ACRONYM	ACRONYM OF ORGANIZATION	IN DATA BASE
5	FIRMNAME	NAME OF ORGANIZATION	IN DATA BASE
6	SECTOR	PRIVATE, PUBLIC OR MIX	IN DATA BASE
7	NATIONAL	NATIONAL, FOREIGN OR MIX	IN DATA BASE
8	STATUS	LEGAL STATUS	IN DATA BASE
9	TSIZE	TOTAL PERSONNEL SIZE	IN DATA BASE
10	TREVENUE	ENTERPRISE TOTAL REVENUE	IN DATA BASE
11	COMMSHAR	SHARE OF COMMODITY IN REVENUE	
12	COTSFED COTFIBER COTOIL COTMEAL	COMMODITY PROD· COTTON SEED COTTON FIBER COTTON OIL COTTON MEAL	
13	TYPTECH	TYPES OF TECHNOLOGY	
14	TECHSHAR	SHARE OF TECHNOLOGY IN COMMODITY REVENUE	
15	MECHSHAR BIOSHAR AGRISHAR POSTSHAR MGTSHAR	RELATIVE SHARE OF EACH TECHNOLOGY: MACHINERY SHARE FOR BIOLOGICAL SHARE FOR AGRICHEMICAL SHARE FOR POST-HARVEST SHARE FOR MANAGERIAL	

16	COTPROD GINNING OIL MEAL	COMMODITY PRODUCTS USING THE TECHNOLOGY: COTTON GINNING COTTON OIL COTTON MEAL	
17	RESEARCH PRODUCT EXPIMP DISTRIBU EXTNSION SERVICE TECHUSE	RESEARCH ACTIVITY PRODUCTION OF TECHNOLOGY EXPORT/IMPORT DISTRIBUTION OF TECHNOLOGY EXTENSION SERVICING USING TECHNOLOGY	IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE
18	LOCAL EXPAT	LOCAL PERSONNEL IN RESEARCH EXPATRIATES IN RESEARCH	
19	RESEXPE	RESEARCH EXPENDITURES	IN DATA BASE
20	OWNFUND BORROW GRANTS	FINANCING RESEARCH:OWN BORROWING FINANCES GRANTS	
21	SEASON ACTIVWHY	SEASONS OF ACTIVITY REASONS OF ACTIVITY	
22	IDLETIME IDLEWHY	SEASONS OF NON-ACTIVITY REASONS OF NON-ACTIVITY	
23	LOCMACH	LOCAL TECHNOLOGY USED:MACHINERY	
24	NA	NAMES OF SUPPLIERS	
25	LSUPLIER FSUPLIER	NUMBER OF SUPPLIERS: LOCAL SUPPLIERS FOREIGN SUPPLIERS	
26	NA	NAMES OF CLIENTS	

27	LCLIENT FCLIENT	NUMBER OF LOCAL CLIENTS NUMBER OF FOREIGN CLIENTS	
28	OTHERACT	OTHER ACTIVITIES	
29	YEARESTB	YEAR ENTERPRISE ESTABLISHED	IN DATA BASE
30	MECHTECH BIOTECH POSTTECH AGRITECH MGTTECH	YEAR START IN TECHNOLOGY: MECHANICAL TECHNOLOGY BIOLOGICAL TECHNOLOGY POST-HARVEST TECHNOLOGY AGRICHEMICAL TECHNOLOGY MANAGERIAL TECHNOLOGY	
31	FIRMGROW	GROWTH OF ENTERPRISE	
32	WHYFGROW	REASONS FOR GROWTH	
33	TECHGROW	GROWTH OF TECHNOLOGY IN COUNTRY	
34	WHYTGROW	REASONS FOR GROWTH IN THE COUNTRY	
35	INTRTECH	INTRODUCTION TO TECHNOLOGY	
36	MOTIVES	MOTIVATING FACTORS	
37	MORETECH	NEEDED TO IMPROVE TECHNOLOGY	
38	MOREPRIV	NEEDED TO INCREASE PRIVATE SECTOR	
39	MOREFRGN	NEEDED TO ATTRACT FOREIGN COMPANIES	

VARIABLE NAMES AND LABELS

ZIMBABWE

QUESTIONS	VARIABLE NAMES	VARIABLE LABEL	OBSERVATIONS
1	COUNTRY	COUNTRY	IN DATA BASE
2	COMODITY	COMMODITY	IN DATA BASE
3	TECHLOGY	TECHNOLOGY OF STUDY	IN DATA BASE
4	ACRONYM	ACRONYM OF ORGANIZATION	IN DATA BASE
5	FIRMNAME	NAME OF ORGANIZATION	IN DATA BASE
6	SECTOR	PRIVATE, PUBLIC OR MIX	IN DATA BASE
7	NATIONAL	NATIONAL, FOREIGN OR MIX	IN DATA BASE
8	STATUS	LEGAL STATUS	IN DATA BASE
9	TSIZE	TOTAL PERSONNEL SIZE	IN DATA BASE
10	TREVENUE	ENTERPRISE TOTAL REVENUE	IN DATA BASE
11	COMMSHAR	SHARE OF COMMODITY IN REVENUE	
12	COMAIZE COMMSORG COMMILLE COMMWHEA COMMBARL	COMMODITY PROD: MAIZE SORGHUM MILLET WHEAT BARLEY	
13	TYPTECH	TYPES OF TECHNOLOGY	
14	TECHSHAR	SHARE OF TECHNOLOGY IN COMMODITY REVENUE	

13

15	MECHSHAR BIOSHAR AGRISHAR POSTSHAR MGTSHAR	RELATIVE SHARE OF EACH TECHNOLOGY: MACHINERY SHARE FOR BIOLOGICAL SHARE FOR AGRICHEMICAL SHARE FOR POST-HARVEST SHARE FOR MANAGERIAL	
16	SEEDMAIZ SEEDSORG SEEDMILL SEEDWHEA SEEDBARL	COMMODITY PRODUCTS USING THE TECHNOLOGY:MAIZE SORGHUM MILLET WHEAT BARLEY	
17	RESEARCH PRODUCT EXPIMP DISTRIBU EXTNSION SERVICE TECHUSE	RESEARCH ACTIVITY PRODUCTION OF TECHNOLOGY EXPORT/IMPORT DISTRIBUTION OF TECHNOLOGY EXTENSION SERVICING USING TECHNOLOGY	IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE IN DATA BASE
18	LOCAL EXPAT	LOCAL PERSONNEL IN RESEARCH EXPATRIATES IN RESEARCH	
19	RESEXP	RESEARCH EXPENDITURES	IN DATA BASE
20	OWNFUND BORROW GRANTS	FINANCING RESEARCH:OWN BORROWING FINANCES GRANTS	
21	SEASON ACTIVWHY	SEASONS OF ACTIVITY REASONS OF ACTIVITY	
22	IDLETIME IDLEWHY	SEASONS OF NON-ACTIVITY REASONS OF NON-ACTIVITY	
23	LOCMAIZE LOCSORG LOCALMIL LOCWHEAT LOCBRLEY	LOCAL TECHNOLOGY USED:MAIZE SORGHUM MILLET WHEAT BARLEY	
24	NA	NAMES OF SUPPLIERS	

25	LSUPLIER FSUPLIER	NUMBER OF SUPPLIERS: LOCAL SUPPLIERS FOREIGN SUPPLIERS	
26	NA	NAMES OF CLIENTS	
27	LCLIENT FCLIENT	NUMBER OF LOCAL CLIENTS NUMBER OF FOREIGN CLIENTS	
28	OTHERACT	OTHER ACTIVITIES	
29	YEARESTB	YEAR ENTERPRISE ESTABLISHED	IN DATA BASE
30	MECHTECH BIOTECH POSTTECH AGRITECH MGTTECH	YEAR START IN TECHNOLOGY: MECHANICAL TECHNOLOGY BIOLOGICAL TECHNOLOGY POST-HARVEST TECHNOLOGY AGRICHEMICAL TECHNOLOGY MANAGERIAL TECHNOLOGY	
31	FIRMGROW	GROWTH OF ENTERPRISE	
32	WHYFGROW	REASONS FOR GROWTH	
33	TECHGROW	GROWTH OF TECHNOLOGY IN COUNTRY	
34	WHYTGROW	REASONS FOR GROWTH IN THE COUNTRY	
35	INTRTECH	INTRODUCTION TO TECHNOLOGY	
36	MOTIVES	MOTIVATING FACTORS	
37	MORETECH	NEEDED TO IMPROVE TECHNOLOGY	
38	MOREPRIV	NEEDED TO INCREASE PRIVATE SECTOR	
39	MOREFRGN	NEEDED TO ATTRACT FOREIGN COMPANIES	

C. CHARACTERISTICS OF KEY PARTICIPANTS

Table 1. Cameroon Phase I: Characteristics of Key Paticipants

ACRONYM	Sector	National	legal status	Size	Year Est.d	Revenue /Expend.	Research Expen.
SPNPSBM	Private	Mix	Corp.	> 200	1987	.	.
CAMSUCO	Mix	Mix	Found.	> 200	1977	.	.
HEVECAM	Public	Mix	Parastl	> 200	1976	$15,555,556	.
SAFACAM	Mix	Mix	Parastl	> 200	1897	$8,148,148	.
PLANMEDI	Private	Mix	Found.	100-200	1972	$7,407,407	.
ADER	Private	Mix	Corp	10-50	1980	$16,666,667	$148,148
NGAETS	Private	National	Corp	10-50	1955	$2,592,593	.
PMM	Private	National	Farm	10-50	1952	$1,851,852	.
TATADAN	Private	National	Farm	10-50	1950	$1,851,852	.
FME	Private	National	Corp.	10-50	1990	$2,222,222	.
FARCOOP	Private	National	Corp.	10-50	1980	$2,355,556	$5,556
NJIKAMJ	Private	National	Corp.	< 10	1960	.	.
ZACHARIE	Private	National	Corp.	< 10	1940	$5,000,000	.
UCLAF	Private	National	Corp.	< 10	1982	$421,852	.
RPOULENC	Private	Mix	Found.	< 10	1972	$7,407,407	.
SHELL	Private	Mix	Found.	< 10	1954	$2,222,222	$79,630
SDE	Private	National	Corp.	< 10	1962	.	.
CAMDC	Public	National	Corp.	NA	1947	.	.

Note: $1=CFAF270

Table 2. Cam Phase I: Activities in the Commodity Subsector

ACRONYM	Sector	Tech. Research	Tech. Producer	Tech. Distributor	extension	Tech. User
SPNPSBM	Private	No	No	No	No	Yes
CAMSUCO	Mix	Yes	No	No	No	Yes
HEVECAM	Public	Yes	Yes	No	No	No
SAFACAM	Mix	No	No	No	No	Yes
PLANMEDI	Private	No	No	No	No	Yes
ADER	Private	Yes	No	Yes	Yes	No
NGAETS	Private	No	No	No	No	Yes
PMM	Private	No	No	No	No	Yes
TATADAN	Private	No	No	No	No	Yes
FME	Private	No	Yes	No	No	No
FARCOOP	Private	Yes	No	No	No	No
NJIKAMJ	Private	No	No	No	No	Yes
ZACHARIE	Private	No	No	No	No	Yes
UCLAF	Private	Yes	No	No	No	No
RPOULENC	Private	No	No	Yes	No	No
SHELL	Private	Yes	Yes	Yes	No	Yes
SDE	Private	No	No	Yes	No	Yes
CAMDC	Public	No	No	No	No	Yes

Table 3. Cameroon Phase I: Research Staif and Funding

ACRONYM	Sector	Tech. Research	Research Expen.	Local Staff	Expat.	Own Fund	Credit	Grants
SPNPSBM	Private	No	.	NA	NA	NA	NA	NA
CAMSUCO	Mix	Yes	.	NA	NA	Yes	NA	NA
HEVECAM	Public	Yes	.	1	NA	Yes	NA	NA
SAFACAM	Mix	No	.	NA	NA	NA	NA	NA
PLANMEDI	Private	No	.	NA	NA	NA	NA	NA
ADER	Private	Yes	$148,148	1	NA	Yes	NA	NA
NGAETS	Private	No	.	NA	NA	NA	NA	NA
PMM	Private	No	.	NA	NA	NA	NA	NA
TATADAN	Private	No	.	NA	NA	NA	NA	NA
FME	Private	No		NA	NA	NA	NA	NA
FARCOOP	Private	Yes	$5,556	3	NA	Yes	NA	NA
NJIKAMJ	Private	No	.	NA	NA	NA	NA	NA
ZACHARIE	Private	No	.	NA	NA	NA	NA	NA
UCLAF	Private	Yes	.	NA	NA	NA	NA	NA
RPOULENC	Private	No	.	NA	NA	NA	NA	NA
SHELL	Private	Yes	$79,630	2	NA	Yes	NA	NA
SDE	Private	No	.	NA	NA	NA	NA	NA
CAMDC	Public	No	.	NA	NA	NA	NA	NA

Table 1. Ghana Phase I· Characteristics of Key Paticipants

ACRONYM	Sector	National	Legal status	Size	Year Est.d	Revenue /Expend.	Research Expen.
GCC	Public	National	Parastl	> 200	1960	$625,000	$3,750
GPC	Public	National	State	> 200	1963	3000000	$1,250
AKRAMAPG	Private	National	Self help	100-200	1981	$395,000	.
FARMEX	Private	National	Self help	100-200	1981	$650,000	.
FRI	Public	National	State	100-200	1968		$6,250
GCB	Private	Mix	Self help	50-100	1987	1750000	.
GREENTEX	Private	Mix	Self help	50-100	1980	$1,125	.
PCP	Private	Mix	Self help	50-100	1986	$900,000	.
DAL	Private	Mix	Self help	50-100	1991	.	.
DOSWAK	Private	National	Corp.	50-100	1984	$300,000	$12,500
KORANCO	Private	National	Self help	10-50	1985	$6,750	$1,375
MFO	Private	National	Self help	10-50	1988	$97,500	$1,500
RC	Private	National	Self help	10-50	1986		.
ADOCOPA	Private	National	Self help	10-50	1986	$250,000	.
LARROME	Private	National	Self help	10-50	1985	$5,000	.
CHEMICO	Private	National	Corp	10-50	1976	5000000	.
DONAKOT	Private	National	Self help	10-50	1982	$52,500	.
JLF	Private	National	Self help	10-50	1982	$280,000	.
KELS	Private	National	Self help	10-50	1985	$400,000	.
RAA	Private	National	Farm	10-50	1986	$75,000	.
PHDU	Public	National	State	10-50	1986	.	.
CWL	Private	Mix	Self help	< 10	1989	.	.
NI	Private	National	Self help	< 10	1959	$50,000	$375

Note: $1=c400

Table 2. Ghana Phase I: Activities in the Commodity Subsector

ACRONYM	Sector	Tech. Research	Tech. Producer	Tech. Distributor	Extension	Tech. User
GCC	Public	Yes	Yes	Yes	NA	Yes
GPC	Public	Yes	Yes	Yes	Yes	NA
AKRAMAPG	Private	No	No	Yes	NA	NA
FARMEX	Private	No	Yes	Yes	NA	Yes
FRI	Public	Yes	Yes	Yes	Yes	Yes
GCB	Private	No	Yes	Yes	NA	NA
GREENTEX	Private	No	Yes	Yes	NA	No
PCP	Private	No	Yes	Yes	NA	NA
DAL	Private	No	Yes	Yes	Yes	NA
DOSWAK	Private	Yes	Yes	Yes	NA	Yes
KORANCO	Private	Yes	Yes	Yes	NA	No
MFO	Private	Yes	No	Yes	NA	Yes
RC	Private	No	No	Yes	NA	NA
ADOCOPA	Private	No	Yes	Yes	NA	Yes
LARPOME	Private	No	No	Yes	NA	Yes
CHEMICO	Private	No	Yes	Yes	NA	NA
DONAKOT	Private	No	No	Yes	NA	Yes
JLF	Private	No	Yes	Yes	NA	Yes
KELS	Private	No	No	Yes	NA	Yes
RAA	Private	No	No	Yes	NA	Yes
PHDU	Public	No	No	Yes	Yes	Yes
CWL	Private	No	Yes	Yes	No	NA
NI	Private	Yes	Yes	Yes	NA	Yes

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Table 3. Ghana Phase I: Research Staff and Funding

ACRONYM	Sector	Tech. Research	Research Expen.	Local Staff	Expat.	Own Fund	Credit	Grants
GCC	Public	Yes	$3,750	2	NA	Yes	NA	NA
GPC	Public	Yes	$1,250	4	NA	Yes	NA	NA
AKRAMAPG	Private	No	.	NA	NA	NA	NA	NA
FARMEX	Private	No	.	NA	NA	NA	NA	NA
FRI	Public	Yes	$6,250	3	NA	NA	NA	Yes
GCB	Private	No	.	NA	NA	NA	NA	NA
GREENTEX	Private	No	.	NA	NA	NA	NA	NA
PCP	Private	No		NA	NA	NA	NA	NA
DAL	Private	No	.	NA	NA	NA	NA	NA
DOSWAK	Private	Yes	$12,500	2	NA	Yes	NA	NA
KORANCO	Private	Yes	$1,375	2	NA	Yes	NA	NA
MFO	Private	Yes	$1,500	3	NA	Yes	Yes	NA
[illegible]	Private	No	.	NA	NA	NA	NA	NA
ALOCOPA	Private	No	.	NA	NA	NA	NA	NA
LARROME	Private	No	.	NA	NA	NA	NA	NA
CHEMICO	Private	No	.	NA	NA	NA	NA	NA
DONAKOT	Private	No	.	NA	NA	NA	NA	NA
JLF	Private	No	.	NA	NA	NA	NA	NA
KELS	Private	No	.	NA	NA	NA	NA	NA
RAP	Private	No	.	NA	NA	NA	NA	NA
PHDU	Public	No	.	NA	NA	NA	NA	NA
CWL	Private	No	.	NA	NA	NA	NA	NA
NI	Private	Yes	$375	1	2	Yes	NA	NA

Table 1. Kenya Phase I: Characteristics of Key Paticipants

ACRONYM	Sector	National	Legal Status	Size	Year Est.d	Revenue /Expend.	Research Expen.
KENCHICH	Private	Mix	Corp.	> 200	1984	.	.
KARI	Public	National	State	> 200	1980	.	.
COOPER	Private	National	Corp	50-100	1990	$1,333,000	.
KGGCU	Private	National	Coop	50-100	1984	.	.
MICOPKE	Public	National	Parastl	50-100	1979	.	.
TAMFEEDS	Private	Mix	Corp.	50-100	1988	$800,000	$8,000
MUTTU	Private	National	Coop	50-100	1984	.	.
KOMOMUNY	Private	National	Self help	10-50	1978	.	.
GOLDFEED	Private	National	Corp.	10-50	1988	.	.
NGIGIDAV	Private	National	Farm	10-50	1975	.	.
MUUSKENY	Private	National	Corp.	10-50	1972	.	.
MUPOPRO	Private	National	Corp.	10-50	1990	.	.
UoNDAP	Public	National	State	10-50	1959	.	$5,000
KEVEVAPI	Public	National	Parastl	10-50	1990	.	.
BELMILL	Private	National	Corp	10-50	1984	.	.
SIGMAFEE	Private	National	Corp	10-50	1985	$80,000	.
HATOPAUL	Private	National	Farm	10-50	1965	.	.
ANIFEEDS	Private	National	Corp.	10-50	1990	$100,000	.
POULFARM	Private	National	Farm	10-50	1962	.	.
IDEAL	Private	National	Corp.	10-50	1979	.	.
ABCFOODS	Public	National	Corp.	10-50	1977	.	.
KAMITIFR	Private	National	Farm	< 10	1963	.	.
WANDOKIO	Private	National	Farm	< 10	1969	.	.
GACHIRIF	Private	National	Farm	< 10	1989	.	.
NJIRIRIM	Private	National	Farm	< 10	1987	.	.
NDUNGUST	Private	National	Farm	< 10	1982	.	.
HOFFLARO	Private	Mix	Corp.	< 10	1970	.	.
NJORGEST	Private	National	Farm	< 10	1975	$6,667	.
NUTRIVET	Private	National	Corp.	< 10	1983	.	.

Note: $1=KS30

Table 2. Kenya Phase I: Activities in the Commodity Subsector

ACRONYM	Sector	Tech. Research	Tech. Producer	Tech. Distributor	Extension	Tech. User
KENCHICH	Private	No	No	No	No	Yes
KARI	Public	Yes	No	No	Yes	Yes
COOPER	Private	No	No	No	No	No
KGGCU	Private	No	No	Yes	No	No
MICOPKE	Public	No	No	Yes	Yes	Yes
TAMFEEDS	Private	Yes	No	Yes	No	No
MUTTU	Private	No	Yes	Yes	Yes	No
KOMOMUNY	Private	No	No	No	No	Yes
GOLDFEED	Private	No	Yes	Yes	No	No
NGIGIDAV	Private	No	No	No	No	Yes
MUUSKENY	Private	No	Yes	Yes	Yes	No
MUPOPRO	Private	No	No	No	No	Yes
UoNDAP	Public	Yes	No	No	No	Yes
KEVEVAPI	Public	Yes	No	No	No	No
BELMILL	Private	No	Yes	Yes	No	No
SIGMAFEE	Private	Yes	Yes	Yes	No	Yes
HATOPAUL	Private	No	No	No	No	Yes
ANIFEEDS	Private	No	Yes	Yes	No	No
POULFARM	Private	No	No	No	No	Yes
IDEAL	Private	No	No	Yes	No	No
ABCFOODS	Public	No	No	Yes	No	Yes
KAMIFIFR	Private	No	No	No	No	Yes
WANDOKIO	Private	No	No	No	No	Yes
GACHIRIF	Private	No	No	No	No	Yes
NJIRIRIM	Private	No	No	No	No	Yes
NDUNGUST	Private	No	No	No	No	Yes
HOFFLARO	Private	Yes	No	No	Yes	No
NJORGEST	Private	No	No	No	No	No
NUTRIVET	Private	No	No	No	No	No

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Table 3. Kenya Phase I: Research Staff and Funding

ACRONYM	Sector	Tech. Research	Research expenditures	Local Staff	Expat.	Own Fund	Credit	Grants
KENCHICH	Private	No	Not applicable	NA	NA	NA	NA	NA
KARI	Public	Yes	.	4	1	NA	NA	Yes
COOPER	Private	No	Not applicable	NA	NA	NA	NA	NA
KGGCU	Private	No	Not applicable	NA	NA	NA	NA	NA
MICOPKE	Public	No	Not applicable	NA	NA	NA	NA	NA
TAMFEEDS	Private	Yes	$8,000	1	1	Yes	NA	NA
MUTTU	Private	No	Not applicable	NA	NA	NA	NA	NA
KOMOMUNY	Private	No	Not applicable	NA	NA	NA	NA	NA
GOLDFEED	Private	No	Not applicable	NA	NA	NA	NA	NA
NGIGIDAV	Private	No	Not applicable	NA	NA	NA	NA	NA
MUUSKENY	Private	No	Not applicable	NA	NA	NA	NA	NA
MUPOPRO	Private	No	Not applicable	NA	NA	NA	NA	NA
UoNDAP	Public	Yes	$5,000	4	NA	NA	Yes	Yes
KEVEVAPI	Public	Yes	.	10	NA	NA	NA	Yes
BELMILL	Private	No	Not applicable	NA	NA	NA	NA	NA
SIGMAFEE	Private	Yes	Not applicable	NA	NA	NA	NA	NA
HATOPAUL	Private	No	Not applicable	NA	NA	NA	NA	NA
ANIFEEDS	Private	No	Not applicable	NA	NA	NA	NA	NA
POULFARM	Private	No	Not applicable	NA	NA	NA	NA	NA
IDEAL	Private	No	Not applicable	NA	NA	NA	NA	NA
ABCFOODS	Public	No	Not applicable	NA	NA	NA	NA	NA
KAMITIFR	Private	No	Not applicable	NA	NA	NA	NA	NA
WANDOKIO	Private	No	Not applicable	NA	NA	NA	NA	NA
GACHIRIF	Private	No	Not applicable	NA	NA	NA	NA	NA
NJIRIRIM	Private	No	Not applicable	NA	NA	NA	NA	NA
NDUNGUST	Private	No	Not applicable	NA	NA	NA	NA	NA
HOFFLARO	Private	Yes	Not applicable	NA	NA	NA	NA	NA
NJORGEST	Private	No	Not applicable	NA	NA	NA	NA	NA
NUTRIVET	Private	No	Not applicable	NA	NA	NA	NA	NA

Table 1. Mali Phase I: Characteristics of Key Participants

ACRONYM	Sector	National	Legal status	Size	Year Est.d	Revenue /Expend.	Research Expen.
OHV	Public	National	State	> 200	1969	$8,081,481	.
COMATEX	Mix	National	Parastl	> 200	1968	$11,111,111	.
ITEMA	Mix	National	Corp.	> 200	1970	$6,296,296	.
SIDIBED	Public	National	Parastl	> 200	1960	$27,777,778	.
HUICOMA	Mix	National	Parastl	> 200	1979	$40,740,741	.
DIALLOMS	Private	National	Corp.	> 200	1970	$9,259,259	.
UMIMA	Private	National	Corp.	100-200	1960	$1,296,296	.
STNTAZLA	Public	National	State	50-100	1949	$740,741	$9,259
SODEMA	Private	National	Corp.	50-100	1981	.	.
SMECMA	Private	National	Corp.	50-100	1992	$1,851,852	$25,926
SMPC	Mix	National	Parastl	50-100	1988	$12,962,963	.
ESITEX	Public	Mix	Intl O.	10-50	1983	.	.
KELEMASE	Private	National	Self help	10-50	1976	$20,370	.
EMAMA	Mix	National	Parastl	10-50	1977	$1,851,852	.
SANOGOSA	Private	National	Blacksmith	10-50	1988	$100,000	.
COULIBAO	Private	National	Blacksmith	10-50	1987	$1,852	.
DEMBELEN	Private	National	Blacksmith	10-50	1987	$1,667	.
DEMBELES	Private	National	Blacksmith	10-50	1989	$1,111	.
SANOGODA	Private	National	Blacksmith	10-50	1986	$12,963	.
KONATEAB	Private	National	Self help	10-50	1985	$20,370	.
FANESAL	Private	National	Corp.	10-50	1972	$1,852	.
DEMBELEA	Private	National	Blacksmith	10-50	NA	$160,000	.
SEPT	Public	National	Parastl	10-50	1989	$3,518,519	.
UNINEGO	Private	National	Corp.	10-50	1986	$4,444,444	.
FONCOMA	Private	National	Coop	10-50	1963	.	.
KANTEMA	Private	National	Farm	10-50	1966	.	.
RECOMA	Private	National	Corp.	10-50	1983	$2,777,778	.
BERTHE	Private	National	Self help	< 10	1973	$7,865	.
BALLOB	Private	National	Self help	< 10	1972	$10,525	.
KELEMASI	Private	National	Farm	< 10	1987	$2,222	.
FANEDR	Private	National	Farm	< 10	1985	$3,704	.
TRAOREM	Private	National	Farm	< 10	1990	$7,407	.
KELEMADR	Private	National	Farm	< 10	1972	$3,111	.
DEMBELEB	Private	National	Farm	< 10	1991	.	.
BERTHEAR	Private	National	Farm	< 10	1989	$741	.
FANELA	Private	National	Farm	< 10	1988	$5,556	.
KANTEAM	Private	National	Farm	< 10	1975	$370	.
DIARRAMA	Private	National	Farm	< 10	1972	$370	.
KOUROUMO	Private	National	Farm	< 10	1986	$370	.
KANEBOU	Private	National	Farm	< 10	1972	$13,333	.
SINABAFA	Private	National	Farm	< 10	1977	$370	.
BAGAYOGK	Private	National	Farm	< 10	1972	$741	.
SINABABO	Private	National	Farm	< 10	1976	$926	.
TRAOREBO	Private	National	Self help	< 10	1984	$1,852	.
KANTESE	Private	National	Farm	< 10	1980	$741	.
KANTENOU	Private	National	Farm	< 10	1982	$1,481	.
OUATTARL	Private	National	Corp.	< 10	1986	$177,778	.
FANEB	Private	National	Blacksmith	< 10	1971	$1,441	.
TRAORET	Private	National	Corp.	< 10	1971	$9,259	.
KOUMAREK	Private	National	Blacksmith	< 10	1990	$3,015	.
FANEMON	Private	National	Blacksmith	< 10	1971	$2,112	.
DIALLOC	Private	National	11	< 10	1983	$129,630	.
GTI	Private	National	Blacksmith	< 10	1987	$370,370	$7,407

Table 1. Mali Phase I: Characteristics of Key Paticipants (Cont'd)

ACRONYM	Sector	National	Legal status	Size	Year Est.d	Revenue /Expend.	Research Expen.
DIABALES	Private	National	Blacksmith	< 10	1988	.	.
BALLOHAM	Private	National	Blacksmith	< 10	1972	$1,852	.

Note $1=CFAF270

Table '. Mali Phase I: Activities in the Commodity Subsector

ACRONYM	Sector	Tech. Research	Tech. Producer	Tech Distributor	Extension	Tech. User
OHV	Public	No	Yes	Yes	Yes	Yes
COMATEX	Mix	No	No	No	No	Yes
ITEMA	Mix	No	No	No	No	No
SIDIBED	Public	Yes	No	No	No	Yes
HUICOMA	Mix	No	No	No	No	Yes
DIALLOMS	Private	No	No	No	No	Yes
UMIMA	Private	No	Nc	No	No	Yes
STNTAZLA	Public	Yes	No	No	Yes	Yes
SODEMA	Private	No	No	No	No	Yes
SMECMA	Private	Yes	Yes	Yes	No	Yes
SMPC	Mix	No	No	Yes	Yes	Yes
ESITEX	Public	Yes	No	No	No	Yes
KELEMASE	Private	No	No	Yes	No	No
EMAMA	Mix	Yes	Yes	No	No	Yes
SANOGOSA	Private	No	No	No	No	Yes
COULIBAO	Private	No	No	No	No	Yes
DEMBELEN	Private	No	No	No	No	Yes
DEMBELES	Private	No	No	No	No	Yes
SANOGODA	Private	No	No	No	No	Yes
KONATEAB	Private	No	Yes	Yes	No	Yes
FANESAL	Private	No	Yes	Yes	No	Yes
DEMBELEA	Private	No	Yes	Yes	No	No
SEPT	Public	No	No	No	No	Yes
UNINEGO	Private	No	No	Yes	Yes	Yes
FONCOMA	Private	No	Yes	Yes	Yes	Yes
KANTEMA	Private	Yes	Yes	Yes	Yes	No
RECOMA	Private	Nc	No	Yes	No	No
BERTHE	Private	No	Yes	Yes	No	No
BALLOB	Private	No	Yes	Yes	No	No
KELEMASI	Private	No	Yes	Yes	No	No
FANEDR	Private	No	Yes	No	No	No
TRAOREM	Private	No	Yes	No	No	No
KELEMADR	Private	No	Yes	Yes	No	No
DEMBELEB	Private	No	Yes	Yes	No	No
BERTHEAR	Private	Yes	Yes	No	Yes	No
FANELA	Private	Yes	Yes	Yes	No	No
KANTEAM	Private	No	Yes	No	No	No
DIARRAMA	Private	No	Yes	No	No	No
KOUROUMO	Private	No	Yes	No	No	No
KANEBOU	Private	No	Yes	No	No	No
SINABAFA	Private	No	Yes	No	No	No
BAGAYOGK	Private	No	Yes	No	No	No
SINABABO	Private	No	Yes	No	No	No
TRAOREBO	Private	No	Yes	No	No	No
KANTESE	Private	No	Yes	No	No	No
KANTENOU	Private	No	Yes	No	No	No
OUATTARL	Private	No	No	No	No	No
FANEB	Private	No	Yes	Yes	No	No
TRAORET	Private	No	Yes	No	No	No
KOUMAREK	Private	No	Yes	Yes	No	No
FANEMON	Private	No	Yes	Yes	No	No
DIALLOC	Private	No	No	Yes	No	No
GTI	Private	Yes	Yes	Yes	Yes	Yes

Table 2. Mali Phase I: Activities in the Commodity Subsector (Cont'd)

ACRONYM	Sector	Tech. Research	Tech. Producer	Tech. Distributor	Extension	Tech. User
DIABALES	Private	No	Yes	Yes	No	No
BALLOHAM	Private	No	Yes	Yes	NA	No

Table 3. Mali Phase I: Research Staff and Funding

ACRONYM	Sector	Tech. Research	Research Expen.	Local Staff	Expat.	Own Fund	Credit	Grants
OHV	Public	No	.	NA	NA	NA	NA	NA
COMATEX	Mix	No		NA	NA	NA	NA	NA
ITEMA	Mix	No	.	NA	NA	NA	NA	NA
SIDIBED	Public	Yes	.	3	NA	NA	NA	NA
HUICOMA	Mix	No		NA	NA	NA	NA	NA
DIALLOMS	Private	No	.	NA	NA	NA	NA	NA
UMIMA	Private	No	.	NA	NA	NA	NA	NA
STNTAZLA	Public	Yes	$9,259	2	2	NA	Yes	NA
SODEMA	Private	No	.	NA	NA	NA	NA	NA
SMECMA	Private	Yes	$25,926	4	NA	NA	NA	NA
SMPC	Mix	No	.	NA	NA	NA	NA	NA
ESITEX	Public	Yes	.	NA	NA	NA	NA	NA
KELEMASE	Private	No	.	NA	NA	NA	NA	NA
EMAMA	Mix	Yes	.	50	NA	NA	NA	NA
SANOGOSA	Private	No	.	NA	NA	NA	NA	NA
COULIBAO	Private	No	.	NA	NA	NA	NA	NA
DEMBELEN	Private	No	.	NA	NA	NA	NA	NA
DEMBELES	Private	No	.	NA	NA	NA	NA	NA
SANOGODA	Private	No	.	NA	NA	NA	NA	NA
KONATEAB	Private	No	.	NA	NA	NA	NA	NA
FANESAL	Private	No	.	NA	NA	NA	NA	NA
DEMBELEA	Private	No	.	NA	NA	NA	NA	NA
SEPT	Public	No	.	NA	NA	NA	NA	NA
UNINEGO	Private	No	.	NA	NA	NA	NA	NA
FONCOMA	Private	No	.	NA	NA	NA	NA	NA
KANTEMA	Private	Yes		NA	NA	NA	NA	NA
RECOMA	Private	No	.	NA	NA	NA	NA	NA
BERTHE	Private	No	.	NA	NA	NA	NA	NA
BALLOB	Private	No	.	NA	NA	NA	NA	NA
KELEMASI	Private	No	.	NA	NA	NA	NA	NA
FANEDR	Private	No	.	NA	NA	NA	NA	NA
TRAOREM	Private	No	.	NA	NA	NA	NA	NA
KELEMADR	Private	No	.	NA	NA	NA	NA	NA
DEMBELEB	Private	No	.	NA	NA	NA	NA	NA
BERTHEAR	Private	Yes	.	NA	NA	1	0	NA
FANELA	Private	Yes	.	NA	NA	Yes	NA	NA
KANTEAM	Private	No	.	NA	NA	NA	NA	NA
DIARRAMA	Private	No	.	NA	NA	NA	NA	NA
KOUROUMO	Private	No	.	NA	NA	NA	NA	NA
KANEBOU	Private	No	.	NA	NA	NA	NA	NA
SINABAFA	Private	No	.	NA	NA	NA	NA	NA
BAGAYOGK	Private	No	.	NA	NA	NA	NA	NA
SINABABO	Private	No	.	NA	NA	NA	NA	NA
TRAOREBO	Private	No	.	NA	NA	NA	NA	NA
KANTESE	Private	No	.	NA	NA	NA	NA	NA
KANTENOU	Private	No	.	NA	NA	NA	NA	NA
OUATTARL	Private	No	.	NA	NA	NA	NA	NA
FANEB	Private	No	.	NA	NA	NA	NA	NA
TRAORET	Private	No	.	NA	NA	NA	NA	NA
KOUMAREK	Private	No	.	NA	NA	NA	NA	NA
FANEMON	Private	No	.	NA	NA	NA	NA	NA
DIALLOC	Private	No	.	NA	NA	NA	NA	NA
GTI	Private	Yes	$7,407	4	NA	Yes	NA	NA

Table 3. Mali Phase I: Research Staff and Funding (Cont'd)

ACRONYM	Sector	Tech. Research	Research Expen.	Local Staff	Expat.	Own Fund	Credit	Grants
DIABALES	Private	No		NA	NA	NA	NA	NA
BALLOHAM	Private	No		1	NA	NA	NA	NA

Table 1. Zimbabwe Phase I: Characteristics of Key Participants

ACRONYM	Sector	National	Legal Status	Size	Year Est.d	Revenue /Expend	Research Expen.
ADA	Public	National	Parastl	> 200	1982	$2,689,200	.
SEEDCOOP	Private	National	Coop	> 200	1940	$10,400,000	$220,000
ICRISAT	Public	Mix	Intl O	100-200	1983		$250,000
ART	Private	National	S 'f help	50-100	1981	$300,000	$170,000
AGRITRAD	Private	National	Corp.	50-100	1983	.	.
JAGGERS	Private	National	Corp	50-100	1927	.	
CIMMYT	Public	Mix	Intl O	10-50	1985	.	$400,000
SEEDSERV	Public	National	State	10-50	1965	$10,800	$2,000
PANNAR	Private	Mix	Corp.	10-50	1985	$1,000,000	
ZFU	Private	National	Farm	10-50	1991	.	.
NATTSEED	Private	National	Corp.	10-50	1960	$5,000,000	$40,000
CBI	Public	National	State	10-50	1923		$100,000
CARGILL	Private	Mix	Corp.	10-50	1991	$1,000,000	$140,000
METROINT	Private	Mix	Corp.	10-50	1970	$30,000,000	
REDSTAR	Private	National	Corp	10-50	1979	.	
CERTSEED	Private	National	Corp.	< 10	1981	$8,000,000	.
PIONEER	Private	Mix	Corp.	< 10	1986	.	$260,000
UZ-AGR	Private	National	State	< 10	1955	.	$10,000
CACU	Private	National	Coop	< 10	1972	$200,000	.
FARMCOOP	Private	National	Coop	< 10	1981	$900,000	$100,000
ENDA	Public	National	NGO	< 10	1986	.	$4,000
TAMU	Private	National	Corp.	< 10	1984	$100,000	.
ORAP	Private	National	Corp.	< 10	1991	$67,200	.
FUSHAI	Private	National	Corp.	< 10	1984	.	.
CHIGUDU	Private	National	Corp.	< 10	1974	$60,000	.

Note: $1=Z$5

Table 2. ZImb Phase I: Activities in the Commodity Subsector

ACRONYM	Sector	Tech. Research	Tech. Producer	Tech. Distributor	Extension	Tech. User
ADA	Public	No	Yes	No	No	Yes
SEFDCOOP	Private	Yes	Yes	Yes	Yes	Yes
ICRISAT	Public	Yes	Yes	No	No	No
ART	Private	Yes	No	No	Yes	Yes
AGRITRAD	Private	No	No	Yes	No	No
JAGGERS	Private	No	No	Yes	No	No
CIMMYT	Public	Yes	No	No	No	No
SEEDSERV	Public	Yes	No	No	No	No
PANNAR	Private	Yes	No	Yes	Yes	No
ZFU	Private	No	No	No	Yes	Yes
NATTSEED	Private	Yes	No	Yes	No	No
CBI	Public	Yes	No	No	Yes	No
CARGILL	Private	Yes	No	Yes	No	No
METROINT	Private	No	No	Yes	No	No
REDSTAR	Private	No	No	Yes	No	No
CERTSEED	Private	No	No	No	No	No
PIONEER	Private	Yes	Yes	No	No	No
UZ-AGR	Private	Yes	No	No	Yes	No
CACU	Private	No	No	Yes	No	No
FARMCOOP	Private	Yes	No	Yes	Yes	Yes
ENDA	Public	Yes	Yes	No	Yes	No
TAMU	Private	No	No	Yes	No	No
ORAP	Private	No	No	Yes	No	No
FUSHAI	Private	No	No	Yes	No	No
CHIGUDU	Private	No	No	Yes	No	No

Table 3. Zimbabwe Phase I: Research Staff and Funding

ACRONYM	Sector	Tech Research	Research Expen	Local Staff	Expat.	Own Fund	Credit	Grants
ADA	Public	No		NA	NA	NA	NA	NA
SEEDCOOP	Private	Yes	$220,000	5	NA	Yes	NA	NA
ICRISAT	Public	Yes	$250,000	6	8	NA	NA	Yes
ART	Private	Yes	$170,000	2	NA	Yes	NA	Yes
AGRITRAD	Private	No	.	NA	NA	NA	NA	NA
JAGGERS	Private	No	.	NA	NA	NA	NA	NA
CIMMYT	Public	Yes	$400,000	1	5	NA	NA	Yes
SEEDSERV	Public	Yes	$2,000	2	NA	NA	0	Yes
PANNAR	Private	Yes	.	2	1	NA	NA	NA
ZFU	Private	No	.	NA	NA	NA	NA	NA
NATTSEED	Private	Yes	$40,000	2	NA	Yes	NA	NA
CBI	Public	Yes	$100,000	13	NA	NA	NA	Yes
CARGILL	Private	Yes	$140,000	NA	1	Yes	NA	NA
METROINT	Private	No	.	NA	NA	NA	NA	NA
REDSTAR	Private	No	.	NA	NA	NA	NA	NA
CERTSEED	Private	No	.	NA	NA	NA	NA	NA
PIONEER	Private	Yes	$260,000	3	1	NA	NA	Yes
UZ-AGR	Private	Yes	$10,000	3	NA	NA	NA	Yes
CACU	Private	No	.	NA	NA	NA	NA	NA
FARMCOOP	Private	Yes	$100,000	NA	NA	Yes	NA	NA
ENDA	Public	Yes	$4,000	2	NA	NA	NA	Yes
TAMU	Private	No	.	NA	NA	NA	NA	NA
ORAP	Private	No	.	NA	NA	NA	NA	NA
FUSHAI	Private	No	.	NA	NA	NA	NA	NA
CHIGUDU	Private	No	.	NA	NA	NA	NA	NA

D. FREQUENCIES & CROSS TABULATIONS:

OPEN-ENDED QUESTIONS

CAMEROON

FIRMGROW Growth of Firm

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	7	38.9	43.8	43.8
Same	2	1	5.6	6.3	50.0
Declining	3	8	44.4	50.0	100.0
	-5	2	11.1	Missing	
	Total	18	100.0	100.0	

Valid cases 16 Missing cases 2

WHYGROW1 Reason1 for growth

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Contact farmers	1.00	1	5.6	6.3	6.3
Limted budget	2.00	5	27.8	31.3	37.5
RPoulenc concessiona	3.00	1	5.6	6.3	43.8
No subsidies	4.00	2	11.1	12.5	56.3
Declining mkt	5.00	3	16.7	18.8	75.0
Increase prices	6.00	2	11.1	12.5	87.5
Creation of new spac	7.00	1	5.6	6.3	93.8
Good distrib. of pro	9.00	1	5.6	6.3	100.0
	.	2	11.1	Missing	
	Total	18	100.0	100.0	

HOWINTR1 How1 introduced to tech

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Past experience	1.00	4	22.2	25.0	25.0
Government program	2.00	7	38.9	43.8	68.8
Market demand	3.00	2	11.1	12.5	81.3
Matter of necessity	4.00	3	16.7	18.8	100.0
	.	2	11.1	Missing	
	Total	18	100.0	100.0	

Valid cases 16 Missing cases 2

MOTIVE1 Factor1 of attraction

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Chemicals were free	1.00	2	11.1	13.3	13.3
Food security	2.00	2	11.1	13.3	26.7
Matter of necessity	3.00	5	27.8	33.3	60.0
Market rehabilitatio	4.00	2	11.1	13.3	73.3
Government program	5.00	1	5.6	6.7	80.0
Cooperative program	6.00	2	11.1	13.3	93.3
Mkt est. by RPoulenc	7.00	1	5.6	6.7	100.0
	.	3	16.7	Missing	
	Total	18	100.0	100.0	

Valid cases 15 Missing cases 3

TECHGROW growth of technology in country

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	4	22.2	25 0	25.0
Staying about the sa	2	5	27.8	31 3	56.3
Losing ground	3	7	38.9	43.8	100.0
	-5	2	11.1	Missing	
	Total	18	100 0	100.0	

Valid cases 16 Missing cases 2

WHYTECH1 Reason1 for tech growth

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Absorption of stocks	1 00	1	5.6	6.3	6.3
Coffee/cacao liberal	2.00	3	16.7	18.8	25.0
Bad economy	3.00	4	22.2	25.0	50 0
Finan. support to fa	4.00	1	5.6	6.3	56.3
Market stability	5.00	4	22.2	25.0	81.3
Increased demand	6.00	2	11.1	12.5	93.8
Political instabilit	7.00	1	5.6	6.3	100.0
	.	2	11.1	Missing	
	Total	18	100.0	100.0	

Valid cases 16 Missing cases 2

NEEDTEC1 Need1 to devel. tech.

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Economic incentives	1.00	4	22.2	25.0	25.0
Better credit proced	2.00	6	33.3	37.5	62.5
Chemicals are toxic	3.00	1	5.6	6.3	68.8
Training and informa	4.00	1	5.6	6.3	75.0
Better coffee/cocao	6.00	1	5.6	6.3	81.3
Liberalized markets	7.00	2	11.1	12.5	93.8
Increase use of tech	9.00	1	5.6	6.3	100.0
	.	2	11.1	Missing	
	Total	18	100.0	100.0	

Valid cases 16 Missing cases 2

PRIVATE1 Need1 for private

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
More participation	1.00	2	11.1	16.7	16.7
More farmers purchas	2.00	1	5.6	8.3	25.0
Better procedures	3.00	2	11.1	16.7	41 7
Access to products	4.00	1	5.6	8.3	50.0
Training, MIS	5.00	2	11.1	16.7	66 7
Increase incomes	6.00	2	11.1	16.7	83.3
Better cashcrop pric	7.00	1	5.6	8.3	91.7
Est village woodlot	8.00	1	5.6	8.3	100 0
	.	6	33.3	Missing	
	Total	18	100.0	100 0	

Valid cases 12 Missing cases 6

FOREIGN1 Need1 for foreign

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Access to info	1.00	2	11.1	18.2	18.2
Don't need foreigner	2.00	1	5.6	9.1	27.3
Economic stability	4.00	1	5.6	9.1	36.4
More farmers purchas	6.00	1	5.6	9.1	45.5
Liberalized markets	7.00	2	11.1	18.2	63.6
Higher nat. incomes	8.00	2	11.1	18 2	81.8
Better research fund	9.00	2	11.1	18.2	100.0
	.	7	38.9	Missing	
	Total	18	100.0	100.0	

Valid cases 11 Missing cases 7

FIRMGROW Growth of Firm by SECTOR Sector

Page 1 of 1

FIRMGROW	Count	SECTOR Public 1.00	Private 2 00	Mix 3.00	Row Total
Growing	1	1	5	1	7 43.8
Same	2		1		1 6.3
Declining	3		8		8 50.0
	Column Total	1 6.3	14 87.5	1 6.3	16 100.0

Number of Missing Observations: 2

WHYGROW1 Reason1 for growth by SECTOR Sector

WHYGROW1 (Count)	SECTOR Public 1.00	Private 2 00	Mix 3.00	Row Total
1.00 Contact farmers		1		1 6.3
2 00 Limted budget		5		5 31.3
3.00 RPoulenc concess		1		1 6 3
4 00 No subsidies		2		2 12.5
5.00 Declining mkt		3		3 18.8
6 00 Increase prices		1	1	2 12.5
7.00 Creation of new		1		1 6.3
9.00 Good distrib of	1			1 6.3
Column Total	1 6.3	14 87.5	1 6.3	16 100.0

Number of Missing Observations· 2

TECHGROW growth of technology in country by SECTOR Sector

TECHGROW (Count)	SECTOR Public 1.00	Private 2.00	Mix 3.00	Row Total
1 Growing	1	2	1	4 25.0
2 Staying about th		5		5 31.3
3 Losing ground		7		7 43.8
Column Total	1 6.3	14 87.5	1 6.3	16 100.0

Number of Missing Observations: 2

51

WHYTECH1 Reason1 for tech growth by SECTOR Sector

Page 1 of 2

WHYTECH1 Count	SECTOR Public 1.00	Private 2.00	Mix 3.00	Row Total
1.00 Absorption of st		1		1 6.3
2.00 Coffee/cacao lib		3		3 18.8
3.00 Bad economy		4		4 25.0
4 00 Finan. support t		1		1 6.3
5.00 Market stability	1	3		4 25.0
6.00 Increased demand		1	1	2 12.5
7.00 Political instab		1		1 6.3
Column Total	1 6.3	14 87.5	1 6 3	16 100.0

Number of Missing Observations: 2

HOWINTR1 How1 introduced to tech by SECTOR Sector

Page 1 of 1

HOWINTR1 Count	SECTOR Public 1.00	Private 2.00	Mix 3.00	Row Total
1.00 Past experience		4		4 25.0
2.00 Government progr		7		7 43.8
3 00 Market demand		2		2 12.5
4.00 Matter of necess	1	1	1	3 18.8
Column Total	1 6.3	14 87.5	1 6.3	16 100.0

Number of Missing Observations: 2

40

MOTIVE1 Factor1 of attraction by SECTOR Sector

MOTIVE1 Count	SECTOR Public 1.00	Private 2 00	Mix 3.00	Row Total
1.00 Chemicals were f		2		2 13 3
2 00 Food security		2		2 13.3
3 00 Matter of necess	1	3	1	5 33.3
4 00 Market rehabilit		2		2 13.3
5 00 Government progr		1		1 6.7
6 00 Cooperative prog		2		2 13.3
7 00 Mkt est. by RPou		1		1 6.7
Column Total	1 6.7	13 86.7	1 6.7	15 100.0

Number of Missing Observations: 3

NEEDTEC1 Need1 to devel. tech. by SECTOR Sector

Count	SECTOR Public 1.00	Private 2.00	Mix 3.00	Row Total
NEEDTEC1				
1.00 Economic incenti		4		4 25.0
2.00 Better credit pr	1	5		6 37.5
3.00 Chemicals are to		1		1 6 3
4.00 Training and inf		1		1 6.3
6.00 Better coffee/co		1		1 6.3
7.00 Liberalized mark		2		2 12.5
9.00 Increase use of			1	1 6.3
Column Total	1 6.3	14 87.5	1 6.3	16 100.0

Number of Missing Observations: 2

PRIVATE1 Need1 for private by SECTOR Sector

Only private firms answered the question. See frequencies.

FOREIGN1 Need1 for foreign by SECTOR Sector

Count	SECTOR Public 1.00	SECTOR Private 2.00	Row Total
FOREIGN1			
1 00 Access to info		2	2 18.2
2 00 Don't need forei		1	1 9 1
4 00 Economic stabili		1	1 9.1
6.00 More farmers pur		1	1 9.1
7.00 Liberalized mark		2	2 18.2
8.00 Higher nat. inco		2	2 18 2
9 00 Better research	1	1	2 18.2
Column Total	1 9.1	10 90.9	11 100.0

Number of Missing Observations: 7

GHANA

FIRMGROW Growth of Firm

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	14	60.9	63.6	63.6
Same	2	6	26 1	27.3	90.9
Declining	3	2	8.7	9.1	100.0
	-5	1	4.3	Missing	
	Total	23	100.0	100.0	

Valid cases 22 Missing cases 1

Reason1 for growth

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
High export demand	1.00	3	13.0	13.6	13.6
Low demand	2.00	2	8.7	9.1	22.7
Local competition	3.00	1	4.3	4.5	27.3
Good capacity & serv	4.00	6	26.1	27.3	54.5
Available infr equi	5.00	1	4 3	4.5	59.1
Lack, costly infr.	6.00	3	13.0	13.6	72.7
Develop, use better	7.00	3	13.0	13 6	86.4
Financing assistance	8.00	1	4 3	4.5	90.9
Lack of finances	9.00	2	8.7	9.1	100.0
	.	1	4.3	Missing	
	Total	23	100.0	100.0	

Valid cases 22 Missing cases 1

How1 introduced to tech

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
High demand qlty fru	1.00	1	4.3	4.3	4.3
Overseas trips	2.00	2	8 7	8.7	13 0
Matter of necessity	3.00	12	52.2	52.2	65.2
Exposure to mkt info	4.00	6	26.1	26.1	91.3
Part national projec	6.00	2	8.7	8.7	100.0
	Total	23	100.0	100.0	

Valid cases 23 Missing cases 0

Factor1 of attraction

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Enabling environment	1.00	1	4.3	4.3	4.3
Increase prod. expor	3.00	6	26.1	26.1	30.4
Better storage qulty	4.00	6	26.1	26.1	56 5
Matter of necessity	5.00	7	30.4	30.4	87.0
Profits	6.00	3	13.0	13 0	100.0
	Total	23	100.0	100.0	

Valid cases 23 Missing cases 0

Growth of technology in country

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	21	91.3	95.5	95.5
Staying same	2	1	4.3	4 5	100.0
	-5	1	4.3	Missing	
	Total	23	100 0	100.0	

Valid cases 22 Missing cases 1

Reason1 for tech growth

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Incr'sed fuit demand	1.00	11	47.8	50.0	50.0
Need better handling	2.00	1	4 3	4.5	54.5
Better produce qulty	3.00	1	4.3	4 5	59.1
Lack research backin	4.00	1	4.3	4.5	63.6
High price from frei	6.00	2	8.7	9.1	72 7
Production expansion	7.00	4	17.4	18.2	90.9
Increased tech deman	8.00	1	4.3	4.5	95.5
Incr'sed res awarnes	9.00	1	4 3	4 5	100.0
	.	1	4.3	Missing	
	Total	23	100 0	100.0	

Valid cases 22 Missing cases 1

Need1 to devel. tech.

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Financial incentives	1.00	12	52.2	54.5	54.5
Strong research back	2.00	1	4 3	4.5	59.1
Increased exports	4.00	1	4.3	4.5	63.6
More supply packing	5.00	1	4.3	4.5	68.2
Better invest retur	7.00	1	4.3	4.5	72.7
Better link agr. ind	8.00	5	21.7	22.7	95.5
Infras & facilities	9.00	1	4.3	4.5	100.0
	.	1	4.3	Missing	
	Total	23	100.0	100.0	

Valid cases 22 Missing cases 1

Need1 for private

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Better infras. &faci	1.00	2	8.7	8.7	8.7
Finance &tech assist	2.00	6	26 1	26.1	34.8
Access to informatio	3.00	4	17.4	17.4	52.2
Invest incentives	4.00	5	21 7	21 7	73.9
Better invest. retur	5.00	3	13 0	13.0	87.0
Expansion of exports	6.00	2	8.7	8.7	95.7
Strengthen res. base	7.00	1	4.3	4.3	100.0
	Total	23	100.0	100 0	

Valid cases 23 Missing cases 0

Need1 for foreign

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Quotas to expatriate	1 00	1	4.3	4.5	4.5
Profit repatriation	2.00	10	43 5	45.5	50.0
Better local partner	4.00	1	4.3	4.5	54.5
Enabling environment	6.00	6	26.1	27.3	81 8
Better inves return	7.00	3	13 0	13 6	95.5
Patronize for cies	8.00	1	4.3	4.5	100.0
	.	1	4.3	Missing	
	Total	23	100.0	100.0	

Valid cases 22 Missing cases 1

Growth of Firm by SECTOR Sector

Page 1 of 1

FIRMGROW	Count	SECTOR Public 1.00	Private 2 00	Row Total
Growing	1	2	12	14 63.6
Same	2	2	4	6 27.3
Declining	3		2	2 9.1
	Column Total	4 18.2	18 81.8	22 100.0

Number of Missing Observations: 1

41

Reason1 for growth by SECTOR Sector

Page 1 of 3

WHYGROW1 / Count	SECTOR Public 1.00	SECTOR Private 2.00	Row Total
1.00 High export dema		3	3 13.6
2.00 Low demand		2	2 9.1
3 00 Local competitio		1	1 4.5
4.00 Good capacity &		6	6 27.3
5 00 Available infr		1	1 4.5
6.00 Lack, costly inf	1	2	3 13.6
7 00 Develop, use bet	2	1	3 13.6
8.00 Financing assist		1	1 4.5
9.00 Lack of finances	1	1	2 9 1
Column Total	4 18.2	18 81.8	22 100.0

Number of Missing Observations. 1

Growth of technology in country by SECTOR Sector

Page 1 of 1

TECHGROW / Count	SECTOR Public 1.00	SECTOR Private 2.00	Row Total
1 Growing	4	17	21 95 5
2 Staying same		1	1 4.5
Column Total	4 18.2	18 81 8	22 100.0

Number of Missing Observations: 1

Reason1 for tech growth by SECTOR Sector

WHYTECH1 / Count	SECTOR Public 1.00	SECTOR Private 2.00	Row Total
1.00 Incr'sed fuit de	2	9	11 50.0
2.00 Need better hand	1		1 4.5
3.00 Better produce q		1	1 4.5
4.00 Lack research ba		1	1 4.5
6 00 High price from		2	2 9.1
7.00 Production expan		4	4 18.2
8.00 Increased tech d		1	1 4.5
9 00 Incr'sed res awa	1		1 4.5
Column Total	4 18.2	18 81.8	22 100.0

Number of Missing Observations: 1

How1 introduced to tech by SECTOR Sector

HOWINTR1	SECTOR Public 1 00	SECTOR Private 2 00	Row Total
1.00 High demand qlty		1	1 4.3
2.00 Overseas trips		2	2 8.7
3.00 Matter of necess	1	11	12 52.2
4.00 Exposure to mkt	1	5	6 26.1
6.00 Part national pr	2		2 8.7
Column Total	4 17 4	19 82.6	23 100.0

Number of Missing Observations. 0

Factor1 of attraction by SECTOR Sector

MOTIVE1	SECTOR Public 1.00	SECTOR Private 2.00	Row Total
1.00 Enabling environ		1	1 4.3
3.00 Increase prod. e	2	4	6 26.1
4.00 Better storage q		6	6 26.1
5.00 Matter of necess	2	5	7 30.4
6.00 Profits		3	3 13.0
Column Total	4 17.4	19 82.6	23 100.0

Number of Missing Observations: 0

Need1 to devel. tech. by SECTOR Sector

NEEDTEC1	Public 1.00	Private 2.00	Row Total
1.00 Financial incent	2	10	12 54 5
2.00 Strong research		1	1 4.5
4.00 Increased export		1	1 4.5
5.00 More supply pack	1		1 4.5
7.00 Better invest. r		1	1 4.5
8.00 Better link agr.	1	4	5 22.7
9.00 Infras. & facili		1	1 4.5
Column Total	4 18.2	18 81.8	22 100.0

Number of Missing Observations: 1

Need1 for private by SECTOR Sector

PRIVATE1 — Count	SECTOR Public 1.00	SECTOR Private 2.00	Row Total
1.00 Better infras &		2	2 8.7
2.00 Finance &tech as	1	5	6 26.1
3.00 Access to inform	1	3	4 17.4
4.00 Invest incentiv	1	4	5 21.7
5 00 Better invest. r	1	2	3 13.0
6 00 Expansion of exp		2	2 8.7
7.00 Strengthen res.		1	1 4.3
Column Total	4 17.4	19 82.6	23 100.0

Number of Missing Observations: 0

Need1 for foreign by SECTOR Sector

FOREIGN1 — Count	SECTOR Public 1.00	SECTOR Private 2.00	Row Total
1 00 Quotas to expatr		1	1 4.5
2 00 Profit repatriat	2	8	10 45.5
4.00 Better local par		1	1 4.5
6.00 Enabling environ	1	5	6 27 3
7.00 Better inves ret	1	2	3 13.6
8.00 Patronize for. c		1	1 4.5
Column Total	4 18.2	18 81.8	22 100.0

Number of Missing Observations: 1

Frequencies and crosstabulations:
Open-ended questions

KENYA

FIRMGROW Growth of Firm

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	19	65 5	65.5	65.5
Same	2	6	20.7	20.7	86.2
Declining	3	4	13.8	13.8	100.0
	Total	29	100.0	100 0	

Valid cases 29 Missing cases 0

Reasons for growth

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Deseases	1.00	4	13.8	13.8	13.8
Financing research	3.00	2	6.9	6.9	20.7
Raw mat. drugs	5.00	3	10.3	10.3	31.0
Feed high demand	6.00	2	6.9	6.9	37.9
Poultry high demand	8.00	10	34.5	34.5	72.4
Poultry low demand	9.00	3	10 3	10.3	82.8
Competition	10.00	5	17.2	17.2	100.0
	Total	29	100 0	100.0	

Valid cases 29 Missing cases 0

How organizations were introduced to technology

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Profit motivation	1.00	2	6.9	15.4	15.4
Teach poul nutrit.	2.00	1	3.4	7.7	23.1
Service to farmers	3.00	1	3.4	7.7	30.8
Feed is major issue	4.00	1	3.4	7.7	38.5
Potential feed mkt	5.00	3	10.3	23.1	61.5
Experience in feed	6.00	2	6.9	15.4	76.9
Offshot of fish ind.	7.00	2	6.9	15.4	92.3
Part of res. program	8.00	1	3.4	7 7	100.0
	.	16	55.2	Missing	
	Total	29	100.0	100.0	

Valid cases 13 Missing cases 16

Motivation factors

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Feed major issue	1.00	5	17.2	38.5	38.5
Profit motivation	2.00	6	20.7	46.2	84.6
Coop investment	4.00	1	3.4	7.7	92.3
Serve farmers	5.00	1	3.4	7.7	100.0
	.	16	55.2	Missing	
	Total	29	100.0	100.0	

Valid cases 13 Missing cases 16

Growth of tehnology in country

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	21	72.4	72.4	72.4
Staying same	2	5	17.2	17.2	89.7
Declining	3	3	10.3	10.3	100.0
	Total	29	100.0	100.0	

Valid cases 29 Missing cases 0

Reasons for growth of technology in the country

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Unreliable supply ch	1.00	4	13.8	14.3	14.3
Feed low supply	3.00	1	3.4	3.6	17.9
Poultry high demand	4.00	15	51.7	53.6	71.4
Increasing beef pric	5.00	4	13.8	14.3	85.7
Educated farmers	7.00	1	3.4	3.6	89.3
Available raw materi	8.00	2	6.9	7.1	96.4
Competitive products	9.00	1	3.4	3.6	100.0
	.	1	3.4	Missing	
	Total	29	100.0	100.0	

What is needed to develop the technology in the country

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
More feed of quality	1.00	7	24.1	25.0	25.0
Better extension	2.00	1	3.4	3.6	28.6
Raw mater supply	4.00	1	3.4	3.6	32.1
Better management	5.00	1	3.4	3.6	35.7
Feed not for food	6.00	1	3.4	3.6	39.3
Dayold chick supply	7.00	16	55.2	57.1	96.4
Better product marke	8.00	1	3.4	3.6	100.0
	.	1	3.4	Missing	
	Total	29	100.0	100.0	

What is needed to increase private sector participation

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Credit facilty	1.00	20	69.0	80.0	80.0
Better licensing pro	5.00	2	6.9	8.0	88.0
Better entrepre'ship	6.00	2	6.9	8.0	96.0
Availablty raw mater	9.00	1	3.4	4 0	100.0
	.	4	13.8	Missing	
	Total	29	100.0	100 0	

What is needed to attract foreign partners

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Promote Kenya adv.	1.00	2	6 9	13 3	13.3
Better profit repa.	2.00	5	17.2	33.3	46.7
Better regulations	3.00	2	6.9	13.3	60.0
Identify foreign cie	4.00	1	3.4	6.7	66.7
Joint vent. awarenes	5.00	2	6.9	13.3	80.0
Better infra. commun	6.00	1	3.4	6.7	86 7
Reliable supply raw	8.00	1	3.4	6.7	93.3
Improve local expert	9.00	1	3.4	6.7	100.0
	.	14	48.3	Missing	
	Total	29	100.0	100.0	

Valid cases 15 Missing cases 14

Crosstabulation of Growth of Firm by SECTOR

FIRMGROW	Count	SECTOR Public 1.00	SECTOR Private 2.00	Row Total
Growing	1	4	15	19 65.5
Same	2	1	5	6 20.7
Declining	3		4	4 13.8
	Column Total	5 17.2	24 82.8	29 100.0

Number of Missing Observations: 0

Reason1 for growth by SECTOR Sector

SECTOR Page 1 of 2

WHYGROW1	Count	Public 1.00	Private 2 00	Row Total
Deseases	1.00		4	4 13.8
Financing resear	3 00	2		2 6.9
Raw mat. drugs	5.00	1	2	3 10.3
Feed high demand	6.00	1	1	2 6.9
Poultry high dem	8.00		10	10 34.5
Poultry low dema	9.00	1	2	3 10.3
Competition	10.00		5	5 17.2
	Column Total	5 17.2	24 82.8	29 100.0

Number of Missing Observations: 0

Growth of technology in country by SECTOR

SECTOR

TECHGROW	Count	Public 1.00	Private 2.00	Row Total
Growing	1	5	16	21 72.4
Staying same	2		5	5 17.2
Declining	3		3	3 10.3
	Column Total	5 17 2	24 82 8	29 100.0

Number of Missing Observations· 0

Reason for tech growth by SECTOR Sector

WHYTECH1 Count	SECTOR Public 1.00	Private 2.00	Row Total
1 00 Unreliable suppl		4	4 14 3
3.00 Feed low supply		1	1 3 6
4 00 Poultry high dem	3	12	15 53.6
5.00 Increasing beef	1	3	4 14.3
7.00 Educated farmers		1	1 3.6
8.00 Available raw ma		2	2 7 1
9.00 Competitive prod		1	1 3.6
Column Total	4 14.3	24 85.7	28 100.0

Number of Missing Observations: 1

Need to develoop technology by SECTOR Sector

NEEDTEC1 / Count	SECTOR Public 1 00	Private 2 00	Row Total
1 00 More feed of qua	1	6	7 25.0
2 00 Better extension		1	1 3.6
4 00 Raw mater suppl		1	1 3 6
5.00 Better managemen		1	1 3.6
6.00 Feed not for foo	1		1 3.6
7 00 Dayold chick sup	3	13	16 57.1
8.00 Better product m		1	1 3.6
Column Total	5 17 9	23 82.1	28 100.0

Number of Missing Observations: 1

Need1 for private by SECTOR Sector

Page 1 of 1

PRIVATE1 / Count	SECTOR Public 1.00	Private 2 00	Row Total
1 00 Credit facilty	3	17	20 80 0
5.00 Better licensing		2	2 8.0
6.00 Better entrepre'		2	2 8.0
9.00 Availablty raw m		1	1 4 0
Column Total	3 12.0	22 88.0	25 100.0

Number of Missing Observations: 4

91

Need for foreign by SECTOR Sector

Count	SECTOR Public 1.00	Private 2.00	Row Total
FOREIGN1			
1.00 Promote Kenya ad		2	2 13.3
2.00 Better profit re	1	4	5 33.3
3 00 Better regulatio		2	2 13.3
4 00 Identify foreign		1	1 6.7
5 00 Joint vent awar		2	2 13.3
6.00 Better infra co		1	1 6.7
8.00 Reliable supply		1	1 6.7
9 00 Improve local ex		1	1 6.7
Column Total	1 6.7	14 93 3	15 100.0

Number of Missing Observations: 14

MALI

Growth of Firm

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	36	65.5	70.6	70.6
Same	2	6	10 9	11.8	82.4
Declining	3	9	16.4	17.6	100.0
	-5	4	7.3	Missing	
	Total	55	100.0	100.0	

Valid cases 51 Missing cases 4

Reason1 for growth

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
CMDT good management	1.00	3	5.5	5.9	5.9
Inadeq mater &budge	2.00	12	21.8	23 5	29.4
Tech dev	3.00	15	27 3	29.4	58.8
Increased demand	4.00	7	12 7	13.7	72.5
Better management	5.00	8	14.5	15.7	88.2
Storage spare parts	6.00	3	5.5	5.9	94.1
Workshop destroyed	7.00	1	1.8	2.0	96.1
New workshop	8.00	2	3.6	3.9	100.0
	.	4	7 3	Missing	
	Total	55	100.0	100.0	

Valid cases 51 Missing cases 4

How1 introduced to tech

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
CMDT's agr. vocation	1.00	10	18.2	21.7	21.7
Quality res. work	2.00	2	3.6	4.3	26.1
Farm income	3.00	2	3.6	4.3	30.4
Heritage	4.00	15	27.3	32.6	63.0
Equip't is farm prob	5.00	5	9 1	10.9	73.9
Profit motivation	6.00	1	1.8	2.2	76.1
Past experience	7.00	8	14.5	17 4	93.5
Coop Mali-China	8.00	1	1.8	2.2	95.7
tariff cuts	9.00	1	1.8	2.2	97.8
Government requireme	10.00	1	1.8	2 2	100.0
	.	9	16.4	Missing	
	Total	55	100.0	100.0	

Valid cases 46 Missing cases 9

Factor1 of attraction

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Better cot mkt, soi	1.00	2	3.6	4.2	4.2
Experience with CMDT	2 00	3	5.5	6 3	10.4
Matter of necessity	3.00	6	10.9	12 5	22.9
High demand	4.00	11	20 0	22.9	45.8
Profit motivation	5.00	7	12.7	14 6	60 4
Increased farm needs	6.00	1	1 8	2.1	62.5
Economic interest	7.00	13	23.6	27.1	89.6
Training	8.00	5	9.1	10.4	100.0
	.	7	12.7	Missing	
	Total	55	100.0	100.0	

Valid cases 48 Missing cases 7

Growth of technology in country

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	41	74 5	89.1	89.1
Saying same	2	4	7.3	8.7	97.8
Declining	3	1	1.8	2.2	100.0
	-5	9	16.4	Missing	
	Total	55	100.0	100.0	

Valid cases 46 Missing cases 9

Reason1 for tech growth

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Improve textile indu	1.00	10	18.2	21.3	21.3
New privsect orientn	2.00	2	3.6	4.3	25.5
Increase of hectarag	3.00	3	5 5	6.4	31.9
Tech dev	5.00	12	21.8	25.5	57.4
High demand	6.00	13	23.6	27.7	85.1
Effective blacksmith	7.00	3	5.5	6.4	91.5
Self improvement	8.00	1	1.8	2.1	93.6
Technical assistance	9.00	1	1.8	2.1	95.7
Political stability	10.00	2	3.6	4.3	100.0
	.	8	14.5	Missing	
	Total	55	100 0	100.0	

Valid cases 47 Missing cases 8

Need1 to devel. tech.

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Support loc indus.	1.00	11	20.0	23.4	23.4
Lack of material	2.00	1	1.8	2.1	25.5
Good price competiti	3.00	1	1.8	2.1	27.7
Finan support to pro	4.00	2	3.6	4.3	31.9
Gov & CMDT assistanc	5.00	2	3.6	4.3	36.2
Technical assistance	6.00	15	27.3	31.9	68.1
Credits facilities	7.00	5	9.1	10.6	78.7
Improved farm income	8.00	5	9.1	10.6	89.4
Transf'med trad agr	9.00	5	9.1	10.6	100.0
	.	8	14.5	Missing	
	Total	55	100.0	100.0	

Valid cases 47 Missing cases 8

Need1 for private

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Liberal prod. sector	1.00	9	16.4	20.5	20.5
Better compet. quali	2.00	1	1.8	2.3	22.7
Technical assistance	3.00	6	10.9	13.6	36.4
Speculation supprese	4.00	8	14.5	18.2	54.5
No machinery experie	5.00	1	1.8	2.3	56.8
Formation	6.00	5	9.1	11.4	68.2
Better blacksmiths	7.00	3	5.5	6.8	75.0
Support of CMDT/Gov	8.00	7	12.7	15.9	90.9
Credit facilities	9.00	2	3.6	4.5	95.5
Political stability	10.00	2	3.6	4.5	100.0
	.	11	20.0	Missing	
	Total	55	100.0	100.0	

Valid cases 44 Missing cases 11

Need1 for foreign

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Use adapted mat.	1.00	3	5.5	7.0	7.0
Tech exchanges	2.00	3	5.5	7.0	14 0
Price policy incent.	4.00	14	25.5	32.6	46.5
Financial assistance	5.00	5	9.1	11.6	58.1
Improve education	6.00	6	10.9	14.0	72.1
Better mngemt &hones	7.00	8	14.5	18.6	90.7
Diversify activities	9.00	4	7.3	9.3	100.0
	.	12	21.8	Missing	
	Total	55	100 0	100.0	

Valid cases 43 Missing cases 12

Growth of Firm by SECTOR Sector

FIRMGROW	Count	SECTOR Public 1.00	Private 2.00	Mix 3 00	Row Total
Growing	1	3	31	2	36 70.6
Same	2		5	1	6 11.8
Declining	3		8	1	9 17.6
	Column Total	3 5.9	44 86.3	4 7 8	51 100.0

Number of Missing Observations: 4

Reason1 for growth by SECTOR Sector

WHYGROW1	Count	SECTOR Public 1.00	Private 2.00	Mix 3.00	Row Total
CMDT good manage	1.00		2	1	3 5.9
Inadeq mater. &b	2 00		11	1	12 23.5
Tech dev	3.00	1	14		15 29.4
Increased demand	4.00		6	1	7 13.7
Better managemen	5.00	2	6		8 15.7
Storage spare pa	6.00		3		3 5.9
Workshop destroy	7.00		1		1 2.0
New workshop	8.00		1	1	2 3.9
	Column Total	3 5.9	44 86.3	4 7.8	51 100.0

Number of Missing Observations: 4

Growth of technology in country by SECTOR Sector

SECTOR Page 1 of 1

TECHGROW	Count	Public 1.00	Private 2.00	Mix 3.00	Row Total
Growing	1	2	36	3	41 89.1
Saying same	2	1	2	1	4 8.7
Declining	3		1		1 2.2
	Column Total	3 6.5	39 84.8	4 8.7	46 100.0

Number of Missing Observations 9

Reason1 for tech growth by SECTOR Sector

SECTOR Page 1 of 3

WHYTECH1	Count	Public 1.00	Private 2 00	Mix 3.00	Row Total
Improve textile	1.00	2	4	4	10 21.3
New privsect ori	2.00		1	1	2 4.3
Increase of hect	3.00	1	2		3 6.4
Tech dev	5.00		12		12 25.5
High demand	6.00	1	12		13 27.7
Effective blacks	7.00		3		3 6.4
Self improvement	8.00		1		1 2.1
Technical assist	9.00		1		1 2 1
Political stabil	10.00		2		2 4.3
	Column Total	4 8 5	38 80.9	5 10.6	47 100.0

Number of Missing Observations: 8

How1 introduced to tech by SECTOR Sector

HOWINTR1 / Count	SECTOR Public 1.00	Private 2.00	Mix 3.00	Row Total
1.00 CMDT's agr. voca		9	1	10 21.7
2.00 Quality res. wor	1	1		2 4.3
3.00 Farm income	1		1	2 4.3
4.00 Heritage		15		15 32.6
5.00 Equip't is farm	1	3	1	5 10.9
6.00 Profit motivatio		1		1 2.2
7.00 Past experience		8		8 17.4
8.00 Coop Mali-China			1	1 2.2
9.00 tariff cuts	1			1 2.2
10.00 Government requi			1	1 2.2
Column Total	4 8.7	37 80.4	5 10.9	46 100.0

Number of Missing Observations: 9

Factor1 of attraction by SECTOR Sector

MOTIVE1	Count	SECTOR Public 1.00	Private 2.00	Mix 3.00	Row Total
Better cot. mkt,	1.00	1		1	2 4
Experience with	2.00	2	1		3 6.3
Matter of necess	3.00		6		6 12 5
High demand	4.00		11		11 22.9
Profit motivatio	5.00		7		7 14.6
Increased farm n	6 00		1		1 2.1
Economic interes	7.00	2	7	4	13 27.1
Training	8.00		5		5 10.4
	Column Total	5 10.4	38 79.2	5 10.4	48 100.0

Number of Missing Observations: 7

Need1 to devel. tech. by SECTOR Sector

NEEDTEC1 Count	SECTOR Public 1.00	Private 2.00	Mix 3 00	Row Total
1.00 Support loc. ind	1	8	2	11 23.4
2.00 Lack of material			1	1 2.1
3.00 Good price compe	1			1 2.1
4.00 Finan support to		2		2 4.3
5.00 Gov & CMDT assis		2		2 4.3
6.00 Technical assist	2	13		15 31.9
7 00 Credits faciliti		4	1	5 10.6
8.00 Improved farm in		5		5 10.6
9 00 Transf'med trad.		4	1	5 10.6
Column Total	4 8.5	38 80.9	5 10.6	47 100.0

Number of Missing Observations: 8

Need1 for private by SECTOR Sector

Count	SECTOR Public 1 00	Private 2 00	Mix 3 00	Row Total
PRIVATE1				
1 00 Liberal prod se	1	6	2	9 20.5
2.00 Better compet. q		1		1 2 3
3 00 Technical assist		6		6 13 6
4 00 Speculation supp		7	1	8 18.2
5.00 No machinery exp		1		1 2.3
6 00 Formation		5		5 11.4
7 00 Better blacksmit		3		3 6.8
8.00 Support of CMDT/	1	6		7 15.9
9 00 Credit facilitie		2		2 4.5
10.00 Political stabil	1		1	2 4.5
Column Total	3 6.8	37 84 1	4 9 1	44 100.0

Number of Missing Observations: 11

Need1 for foreign by SECTOR Sector

Count	SECTOR Public 1 00	Private 2.00	Mix 3.00	Row Total
FOREIGN1				
1 00 Use adapted mat	1	2		3 7.0
2 00 Tech exchanges	1	1	1	3 7.0
4.00 Price policy inc	2	9	3	14 32.6
5.00 Financial assist		5		5 11.6
6 00 Improve educatio		6		6 14.0
7.00 Better mngemt &h		7	1	8 18.6
9 00 Diversify activi		4		4 9.3
Column Total	4 9.3	34 79 1	5 11.6	43 100.0

Number of Missing Observations: 12

ZIMBABWE

FIRMGROW Growth of Firm

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	20	80.0	83.3	83.3
Same	2	3	12.0	12.5	95.8
Declining	3	1	4 0	4.2	100.0
	-5	1	4 0	Missing	
		---	---	---	
	Total	25	100 0	100.0	

Valid cases 24 Missing cases 1

WHYGROW1 Reason1 for growth

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
High tech demand	1 00	14	56.0	58.3	58.3
Supply approp. varie	3.00	3	12.0	12 5	70.8
Efficient marketing	4.00	3	12.0	12.5	83 3
Loss of market	5 00	1	4.0	4.2	87.5
Incr'sed tech invest	6.00	1	4.0	4.2	91 7
Limited budget	8.00	1	4.0	4.2	95 8
Increased awareness	9.00	1	4.0	4.2	100.0
		1	4 0	Missing	
		---	---	---	
	Total	25	100.0	100 0	

Valid cases 24 Missing cases 1

HOWINTR1 How1 introduced to tech

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Demand for service	1.00	15	60.0	60 0	60.0
Experience in seed	2 00	1	4.0	4.0	64 0
Our mandate	3.00	4	16.0	16 0	80.0
Seedhouse extension	4.00	3	12.0	12.0	92.0
Profit motivation	5.00	2	8.0	8 0	100.0
		---	---	---	
	Total	25	100.0	100.0	

Valid cases 25 Missing cases 0

MOTIVE1 Factor1 of attraction

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Mkt for seed	1.00	10	40.0	40.0	40.0
Profit motivation	2.00	6	24.0	24 0	64.0
Experience in seeds	3.00	2	8.0	8 0	72 0
Our mandate	4.00	3	12 0	12.0	84.0
Techn'gical benefit	5.00	2	8.0	8.0	92.0
Food security	7.00	2	8 0	8 0	100.0
	Total	25	100.0	100.0	

Valid cases 25 Missing cases 0

TECHGROW Growth o Technology Market

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Growing	1	23	92.0	92.0	92 0
Staying same	2	1	4.0	4.0	96 0
Declining	3	1	4 0	4.0	100.0
	Total	25	100.0	100 0	

Valid cases 25 Missing cases 0

WHYTECH1 Reason1 for tech growth

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Better extension	1.00	7	28 0	28.0	28 0
Better mkt services	2.00	1	4.0	4.0	32.0
High seed demand	3 00	9	36.0	36.0	68 0
Saturated market	4.00	2	8 0	8.0	76 0
Better price policy	5 00	1	4 0	4 0	80.0
Viability of indus.	6.00	1	4 0	4.0	84.0
	8.00	2	8 0	8.0	92 0
	9.00	1	4.0	4.0	96.0
	10.00	1	4 0	4.0	100.0
	Total	25	100.0	100.0	

Valid cases 25 Missing cases 0

NEEDTEC1 Need1 to devel tech.

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Incentive pricing	1.00	11	44.0	44.0	44.0
Stable land tenure	2.00	1	4 0	4 0	48.0
Increase extension	4.00	6	24.0	24 0	72.0
Liberalized mkts	5.00	2	8.0	8.0	80.0
Better mkt infrast.	6.00	3	12.0	12.0	92.0
Support seedgrowers	7.00	1	4.0	4 0	96 0
Invest more in resea	9.00	1	4 0	4 0	100.0
	Total	25	100 0	100.0	

Valid cases 25 Missing cases 0

PRIVATE1 Need1 for private

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Nomore agre/mt RSS/S	1 00	4	16 0	17.4	17.4
Financial assitance	2.00	8	32 0	34 8	52 2
Better res. fund fa	4.00	2	8.0	8.7	60.9
Liberal grain seed m	5 00	2	8 0	8 7	69.6
Technical assistance	6 00	1	4 0	4.3	73 9
Better seed mktg inf	7.00	4	16.0	17 4	91.3
Viability seed indus	9.00	2	8.0	8.7	100.0
	.	2	8.0	Missing	
	Total	25	100 0	100 0	

Valid cases 23 Missing cases 2

FOREIGN1 Need1 for foreign

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Profit repatriation	1 00	8	32.0	33.3	33.3
Econ, poli stabili	2 00	1	4.0	4 2	37.5
Simpler expimp proc	3.00	3	12.0	12 5	50.0
Legal protectn incen	4.00	2	8.0	8 3	58.3
Not desirable	5 00	3	12 0	12 5	70.8
Better infras, comm	6 00	1	4.0	4 2	75.0
Better proce, &info	7 00	2	8.0	8 3	83.3
Expanded markets	8 00	2	8.0	8 3	91 7
Enabling environment	9.00	2	8.0	8 3	100 0
		1	4.0	Missing	
	Total	25	100 0	100 0	

Valid cases 24 Missing cases 1

FIRMGROW Growth of Firm by SECTOR Sector

FIRMGROW	Count	SECTOR Public 1.00	Private 2.00	Row Total
Growing	1	4	16	20 83.3
Same	2	2	1	3 12.5
Declining	3		1	1 4.2
	Column Total	6 25 0	18 75.0	24 100.0

Number of Missing Observations 1

WHYGROW1 Reason1 for growth by SECTOR Sector

WHYGROW1	Count	SECTOR Public 1 00	Private 2.00	Row Total
High tech demand	1.00	3	11	14 58 3
Supply approp v	3 00	1	2	3 12 5
Efficient market	4 00		3	3 12 5
Loss of market	5.00		1	1 4.2
Incr'sed tech in	6 00	1		1 4 2
Limited budget	8.00	1		1 4 2
Increased awaren	9 00		1	1 4 2
	Column Total	6 25 0	18 75 0	24 100.0

Number of Missing Observations: 1

TECHGROW Growth of Technology Market by SECTOR Sector

SECTOR Page 1 of 1

TECHGROW	Count	Public 1.00	Private 2.00	Row Total
Growing	1	5	18	23 92.0
Staying same	2	1		1 4.0
Declining	3		1	1 4 0
	Column Total	6 24.0	19 76.0	25 100 0

Number of Missing Observations: 0

WHYTECH1 Reason1 for tech growth by SECTOR Sector

SECTOR Page 1 of 3

WHYTECH1	Count	Public 1.00	Private 2 00	Row Total
Better extension	1 00		7	7 28.0
Better mkt servi	2 00	1		1 4.0
High seed demand	3.00	2	7	9 36 0
Saturated market	4.00	1	1	2 8.0
Better price pol	5.00		1	1 4.0
Viability of ind	6.00		1	1 4.0
	8.00	1	1	2 8.0
	9.00	1		1 4.0
	10.00		1	1 4.0
	Column Total	6 24 0	19 76 0	25 100.0

Number of Missing Observations· 0

HOWINTR1 How1 introduced to tech by SECTOR Sector

Count	SECTOR Public 1.00	Private 2 00	Row Total
HOWINTR1			
1 00 Demand for servi	3	12	15 60.0
2.00 Experience in se		1	1 4.0
3 00 Our mandate	2	2	4 16.0
4.00 Seedhouse extens		3	3 12.0
5 00 Profit motivatio	1	1	2 8.0
Column Total	6 24 0	13 76.0	25 100.0

Page 1 of 2

Number of Missing Observations. 0

MOTIVE1 Factor1 of attraction by SECTOR Sector

Count	SECTOR Public 1.00	Private 2.00	Row Total
MOTIVE1			
1 00 Mkt for seed	1	9	10 40.0
2.00 Profit motivatio	1	5	6 24.0
3.00 Experience in se		2	2 8.0
4.00 Our mandate	2	1	3 12.0
5.00 Techn'gical bene		2	2 8.0
7.00 Food security	2		2 8.0
Column Total	6 24.0	19 76.0	25 100.0

Page 1 of 2

Number of Missing Observations: 0

16

NEEDTEC1 Need1 to devel. tech. by SECTOR Sector

Count	SECTOR Public 1.00	Private 2.00	Row Total
NEEDTEC1			
1 00 Incentive pricin	1	10	11 44.0
2.00 Stable land tenu	1		1 4.0
4 00 Increase extensi	1	5	6 24.0
5 00 Liberalized mkts	1	1	2 8.0
6.00 Better mkt infra		3	3 12 0
7.00 Support seedgrow	1		1 4.0
9.00 Invest more in r	1		1 4.0
Column Total	6 24.0	19 76.0	25 100.0

Number of Missing Ob ervations· 0

PRIVATE1 Need1 for private by SECTOR Sector

Count	SECTOR Public 1.00	Private 2.00	Row Total
PRIVATE1			
1.00 Nomore agre/mt R	2	2	4 17.4
2.00 Financial assita	1	7	8 34.8
4.00 Better res. fund		2	2 8.7
5.00 Liberal grain se		2	2 8.7

PRIVATE1 Need1 for private by SECTOR Sector

SECTOR Page 2 of 2

PRIVATE1 Count	Public 1.00	Private 2.00	Row Total
6.00 Technical assist		1	1 4.3
7.00 Better seed mktg	1	3	4 17.4
9 00 Viability seed i	1	1	2 8.7
Column Total	5 21.7	18 78.3	23 100.0

Number of Missing Observations: 2

FOREIGN1 Need1 for foreign by SECTOR Sector

SECTOR Page 1 of 3

FOREIGN1 Count	Public 1.00	Private 2.00	Row Total
1 00 Profit repatriat	2	6	8 33 3
2.00 Econ, poli sta		1	1 4.2
3.00 Simpler expimp p	1	2	3 12.5
4.00 Legal protectn i	2		2 8.3
5.00 Not desirable		3	3 12.5
6.00 Better infra c		1	1 4.2
7 00 Better proce, &i		2	2 8.3
8.00 Expanded markets	1	1	2 8.3
9.00 Enabling environ		2	2 8.3
Column Total	6 25.0	18 75.0	24 100 0

Number of Missing Observations: 1

E. QUESTIONAIRES

INTERVIEW OF THE MAJOR PRIVATE ENTERPRISES ENGAGED IN ACTIVITIES RELATED TO THE SEED TECHNOLOGY IN CEREALS

The following questionnaire is addressed to private and parastatal companies, i.e. commercial (for profit) enterprises, engaged in activities related to cereals seeds:

1. Country is: **Zimbabwe** 2. Commodity is: **Cereals** 3. Technology Product is: **Seeds**

BASELINE DATA OF KEY ACTORS IN THE TECHNOLOGY

4 Name, address, and telephone of the enterprise being interviewed.

_____

5. Name of manager of the enterprise_____

6. Are you a mix public/private enterprise?___ Mix - public?___%, private?___%

7. Is your enterprise National?___ Foreign?___ or Mix: - national?___ % foreign?___%

8. What is your enterprise's legal status: Commercial parastatal?___ Private corporation?___ Cooperative?___, Other?_____

9. Size in Personnel: ≤10__; >10 - ≤50__; >50 - ≤100__, >100 - ≤200__; ≥200___

10. What is your enterprise's total annual gross sales revenue?_____

11. What percentage of this **total gross revenue** comes from your cereal-related activities?____

12. Which of the following cereals are your activities related to?
Maize?_____, Sorghum?_____, Millet?_____, Wheat?_____, Barley?_____

13. Which of the following cereal technology products are your activities related to?
Machinery?___, Biological (seed)?___, Post-harvest/processing?___, Agrichemical?___, Managerial (e.g. agronomic practices)?___

14. What shares of your **revenue from cereal activities** come from:
Cereal products themselves (maize, sorghum, millet, wheat, barley)?_____%
Cereal technology products (machinery, seeds, agrichemicals, processing equipment)?____%

15. What shares of your **revenue generated by technology products** come from each of them:
Farm Machinery?___%, Biological?___%, Agrochemical?___%, Post-harvest/processing?___%, Managerial (e.g. agronomic practices)?___%

16. What percentages of your seeds go to the following cereals:
Maize?____%, Sorghum?____%, Millet?____%, Wheat?___%, Barley?___%

17 In which of the following cereal seed activities is your enterprise engaged?
- Research (refer to glossary of key terms) in
  Technology development?___ Product (variety) development?___ Seed testing?___
- Production (multiplication) of cereals seeds?____
- Import of cereals seeds?____ export of cereals seeds?____ or both?____
- Wholesaling cereals seeds?___ retailing cereals seeds?___ or both?____
- Extension of cereals seeds?____
- Seed certification?_____
- Using cereals seeds?_____

18. How much personnel do you employ in research activities (i.e.. technology development, product (variety) development, and seed testing) related to seed technology:
Nationals with degree equivalent to BSc. or above____ , Number of expatriates?_____

19. What is your annual expenditure in these research activities (i e , technology development, product (variety) development, and seed testing) related to seed technology:?_____

20. In these activities related to technology development, product (variety) development and seed testing, what percentages of your total annual expenditure come from?
Reinvesting your profit?___%; borrowing?____%, public funds or other grants?_____%

21. In which periods of the year are you generally the most active?_____
Why (give at most three main reasons) _____

22. In which periods of the year are you generally the less active?_____
Why (give at most three main reasons) _____

23. What proportions of your seeds (volume) are:
Local seeds?____% (Maize___%, Sorghum___%, Millet___%, Wheat___%, Barley___%)
Imported seeds?___% (Maize___%, Sorghum___%, Millet___%, Wheat___%, Barley___%)

24. Who are your main suppliers of this seed technology (from whom you buy or receive products and services: e.g., genetic material, seeds)?
_____

25. Local suppliers being?_____ foreign suppliers?_____

26. Who are your main clients for this cereals seeds technology (to whom do you sell)?
_____

27. Local clients being?_____ foreign clients?_____

28. In which other activities (outside cereals seeds) is your enterprise engaged?
_____

29. When was your enterprise established?_____

30. When did your enterprise start activities in the following technologies related to cereals:
Farm Machinery?___, Biological (seed)?___, Post-harvest/processing?___, Agrichemical?___, Managerial (agronomic practices)?___

MARKET FOR THE TECHNOLOGY, GROWTH AND POTENTIAL

31. Compared to the average revenue (or volume of activity) in the previous five years, would you say today that your enterprise has been:
growing?___, staying about the same?___, or losing ground?____

32. What are the main (at most three) reasons for your growth performance?

_____

_____

33. In the near future, for Zimbabwe as a whole, do you expect the market for improved cereals seeds to grow?____, stay about the same?____ shrink?____

34. What are the main (at most three) factors that determine this potential?

_____

_____

MOTIVATIONS FOR ENGAGING IN TECHNOLOGY RELATED ACTIVITIES

35. How did your enterprise get introduced to these cereals seeds?

_____

_____

36. What were the motivating factors that got you interested in cereals seeds?

_____

_____

PROSPECTS FOR INCREASING PRIVATE SECTOR PARTICIPATION

37. In your opinion, what would be needed to increase the production and utilization of improved cereals seeds in this country?

_____

_____

38. In your opinion, what would be needed to increase local private sector participation in activities related to this improved cereals seeds?

_____

_____

39. In your opinion, what would be needed to increase foreign (including U.S., European, Japanese) private sector participation in activities related to cereals seeds?

_____

_____

40 **IMPORTANT:** The consultant must provide a comprehensive list of names and addresses of key ministries; public research organizations, development, and extension agencies, and all private enterprises engaged in activities related to the technology.

41. **IMPORTANT:** The local consultant will collect all available legal documentation (of the rules and procedures) related to technology, e g technology licensing procedures, patent law, intellectual property law, investment code, etc.

42. **IMPORTANT:** The local consultant will also update (last 5 - 10 years) statistics on the use/production of cereal seeds in Zimbabwe in general, and by each enterprise interviewed.

INTERVIEW OF THE MAJOR PUBLIC INSTITUTIONS ENGAGED IN ACTIVITIES RELATED TO THE SEED TECHNOLOGY IN CEREALS

The following questionnaire is addressed to public and private non-commercial (government, NGO, and PVO) institutions, engaged in activities related to the technology, for·

1 Country is: **Zimbabwe** 2. Commodity is. **Cereals** 3 Technology Product is. **Seeds**

BASELINE DATA OF KEY ACTORS IN THE TECHNOLOGY

4 Name, address, and telephone of the institution being interviewed.

_____

5 Name of manager of the institution_____ _____

6. Are you a mix public/private institution?___ Mix - public?___%, private?___%

7 Is your institution National?___ Foreign?___ or Mix. - national?___ % foreign?___%

8 What is your institution's legal status. Government?___, Cooperative?___, NGO?___, PVO?___, Foundation?___ International organization?___, Regional??_____

9 Size in Personnel: ≤10__, >10 - ≤50__, >50 - ≤100__, >100 - ≤200__; ≥200___

10. What is your institution's total annual gross sales revenue?_____

11. What percentage of this **total annual expenditure** go to your cereal-related activities?____

12. Which of the following cereals are your activities related to?
Maize?_____, Sorghum?_____, Millet?_____, Wheat?_____, Barley?_____

13 Which of the following cereal technology products are your activities related to?
Machinery?___, Biological (seed)?___, Post-harvest/processing?___, Agrichemical?___, Managerial (e g. agronomic practices)?___

14. What shares of your **expenditure in cereal activities** go to:
Cereal products themselves (maize, sorghum, millet, wheat, barley)?_____%
Cereal technology products (machinery, seeds, agrichemicals, processing equipment)?____%

15. What shares of your **expenditure for technology products** go to each of them:
Farm Machinery?___%, Biological?___%, Agrochemical?___%, Post-harvest/processing?___%, Managerial (e g agronomic practices)?___%

16. What percentages of your seeds go to the following cereals:
Maize?____%, Sorghum?____%, Millet?____%, Wheat?___%, Barley?___%

17. In which of the following cereal seed activities is your institution engaged?
- Research (refer to glossary of key terms) in
  Technology development?___ Product (variety) development?___ Seed testing?___
- Production (multiplication) of cereals seeds?___
- Import of cereals seeds?____ export of cereals seeds?____ or both?____
- Wholesaling cereals seeds?___ retailing cereals seeds?___ or both?____
- Extension of cereals seeds?____
- Seed certification?_____
- Using cereals seeds?_____

18. How much personnel do you employ in research activities (i e , technology development, product (variety) development, and seed testing) related to seed technology
Nationals with degree equivalent to BSc or above_____, Number of expatriates?_____

19. What is your annual expenditure in these research activities (i e , technology development, product (variety) development, and seed testing) related to seed technology ?_____

20. In these activities related to technology development, product (variety) development and seed testing, what percentages of your total annual expenditure come from?
Reinvesting your proceeds?___%, borrowing?____%, public funds or other grants?_____%

21 In which periods of the year are you generally the most active?_____
Why (give at most three main reasons) _____

22 In which periods of the year are you generally the less active?_____
Why (give at most three main reasons) _____

23 What proportions of your seeds (volume) are
Local seeds?____% (Maize___%, Sorghum___%, Millet___%, Wheat___%, Barley___%)
Imported seeds?___% (Maize___%, Sorghum___%, Millet___%, Wheat___%, Barley___%)

24 Who are your main suppliers of this seed technology (from whom you buy or receive products and services· e g., genetic material, seeds)?

_____

25. Local suppliers being?_____ foreign suppliers?_____

26 Who are your main clients for this cereals seeds technology (to whom do you sell)?

_____

27. Local clients being?_____ foreign clients?_____

28. In which other activities (outside cereals seeds) is your institution engaged?

_____

29 When was your institution established?_____

30. When did your institution start activities in the following technologies related to cereals: Farm Machinery?___, Biological (seed)?___, Post-harvest/processing?___, Agrichemical?___, Managerial (agronomic practices)?___

MARKET FOR THE TECHNOLOGY: GROWTH AND POTENTIAL

31 Compared to the average volume of activity in the previous five years, would you say today that your institution has been:
growing?___, staying about the same?___, or losing ground?____

32 What are the main (at most three) reasons for your growth performance?

_____

_____

33. In the near future, for Zimbabwe as a whole, do you expect the market for improved cereals seeds to grow?____, stay about the same?____ shrink?____

34 What are the main (at most three) factors that determine this potential?

_____

_____

MOTIVATIONS FOR ENGAGING IN TECHNOLOGY RELATED ACTIVITIES

35 How did your institution get introduced to these cereals seeds?

_____

_____

36 What were the motivating factors that got you interested in cereals seeds?

_____

_____

PROSPECTS FOR INCREASING PRIVATE SECTOR PARTICIPATION

37 In your opinion, what would be needed to increase the production and utilization of improved cereals seeds in this country?

_____

_____

38. In your opinion, what would be needed to increase local private sector participation in activities related to this improved cereals seeds?

_____

_____

39. In your opinion, what would be needed to increase foreign (including U.S., European, Japanese) private sector participation in activities related to cereals seeds?

_____

_____

40 **IMPORTANT:** The consultant must provide a comprehensive list of names and addresses of key ministries, public research organizations, development, and extension agencies, and all private enterprises engaged in activities related to the technology.

41. **IMPORTANT:** The local consultant will collect all available legal documentation (of the rules and procedures) related to technology, e g. technology licensing procedures, patent law, intellectual property law, investment code, etc.

42 **IMPORTANT:** The local consultant will also update (last 5 - 10 years) statistics on the use/production of cereal seeds in Zimbabwe in general, and by each institution interviewed.

INTERVIEW DES PRINCIPALES ENTERPRISES PRIVÉES CONCERNÉES PAR LA TECHNOLOGIE MÉCANIQUE DANS LA FILIÈRE COTON AU MALI

Ce questionnaire s'adresse aux entreprises privées et parapubliques commerciales concernées par l'équipement agricole et les machines utilisés dans le secteur coton au Mali.

1 Pays: **Mali** 2. Filière. **Coton** 3 Produit Technologique **Machines, équipement**

BANQUE DE DONNEES DES PRINCIPAUX INTERVENANTS

4 Nom, addresse, et télephone de l'enterprise interviewée

_____

5 Nom du directeur ou gérant de l'entreprise _____

6. L'entreprise est-elle mixte?___ Si oui, part publique?___%, privée?___%

7. Est-elle Malienne?___, Etrangère?___, ou partie Malienne?___ %, étrangère?___%

8 Quel est son statut légal Parapublique commerciale?___ Société privée SARL?___ Coopérative?___ Autre (à préciser)?_____

9 Total personnel ≤10__, >10 - ≤50__, >50 - ≤100__, >100 - ≤200__, ≥200___

10 Quel est le **chiffre d'affaire annuel** de votre entreprise?_____

11 Quelle part de ce **chiffre d'affaire total** provient de vos activités liées au coton?____%

12 Vos activités concernent-elles les produits cotonniers suivants:
Cotton graine?____, Fibre de coton?___, Huile de coton?____, Tourteau de coton?_____

13 Vos activites concernent-elles des produits relatifs aux technologies suivantes
Equipement/mecanisation agricole?___, Biologique (semences)?___, Post-récolte/transformation?___, Agrochimique (engrais, protection des cultures)?___, Gestion (pratiques culturales)?___

14. Quelle part du chiffre d'affaires provient des produits
Cotonniers (graine, fibre, huile, tourteau)?_____%
De technologie (mécanique, biologique, agrochimique, agronomique)?____%

15 Quelle part du revenu **des produits technologiques** provient de ces technologies:
Mécanique?___%, Biologique?___%, Post-récolte/transformation?___%, Agrochimique?___%, Gestion (pratiques agronomiques)?___%

16. Quelle part de vos produits d'équipement et machines concerne les domaines suivants:
Production de coton?___% Égrenage?___%, Huilerie?___%, Tourteau?____%

17 Dans quels domaines d'activité de la technologie mécanique appliquée au coton est engagée l'entreprise.

- Recherche (distinguez selon le glossaire) pour
  Générer la technologie?___ Développer le produit?___ Tester le produit?___
- Production ou assemblage d'équipement ou machine?____
- Importation d'équipement ou machine?____ exportation ?____ ou les deux?____
- Vulgarisation d'équipement ou de machine?____
- Distributeur grossiste d'équipement/machines?___ détaillant?___ ou les deux?____
- Service après-vente, réparation d'équipement/machine?_____
- Utilisateur d'equipement ou machine?_____

18. Combien de personnes emploie l'entreprise dans les activités de recherche sur la technologie mécanique (génération de technologie, développement et test de produits)? Indiquez Nationaux avec diplôme équal ou supérieur à ingénieur, licence, ou équivalent ____, et Expatries ____

19 Combien dépensez-vous au total par an dans la recherche sur la technologie mécanique (génération de technologie, développement et test d'équipement/machines) dans le secteur coton)?_____

20 Dans ces activités de recherche sur la technologie mécanique (génération de technologie, développement et test d'équipement et machines), quel pourcentage de ces dépenses totales provient de
Profit réinvesti?___%, crédit?____%, fonds publics or autres dons?_____%

21. A quelles periodes de l'annéee, l'entreprise a-t-elle le plus d'activite?_____
Pourquoi (on ne notera au plus que les trois raisons principales)
_____

22 A quelles périodes de l'année, est-elle généralement la moins active?_____
Pourquoi (on ne notera au plus que les trois raisons principales)
_____

23. Quelles proportions de vos équipement/machines sont d'origine
Locale?____%, importée?____%

24 Quels sont vos principaux fournisseurs d'equipement/machines services, ou pièces détachées dans la filière coton?
_____

25 Lesquels fournisseurs sont locaux?_____ étrangers?_____

26 Quels sont vos principaux clients d'équipement/machines utilisés dans le secteur coton?
_____

27 Lesquels clients sont locaux?_____ étrangers?_____

28. Dans quelles autres activités en dehors de la filière coton l'entreprise est-elle engagée?
_____

29 En quelle année l'entreprise a-t-elle été créée?_____

30. En quelle année l'entreprise a-t-elle commencé, dans le secteur coton, des activités de recherche ou autres concernant les technologies suivantes: Equipement/mécanisation agricole?____, Biologique (semences)?____, Post-récolte/transforamtion?____, Agrochimiques?____, Gestion (pratiques agronomiques)?____

MARCHÉ DE LA TECHNOLOGIE MÉCANIQUE: CROISSANCE ET POTENTIEL

31. Quand vous comparez vos résulats actuels au chiffre d'affaire moyen des cinq années précédentes, concernant l'équipement et machines dans la filière coton, trouvez-vous que votre entreprise : a progresé?___ est au même niveau?___, a décliné?____

32. Quelles en sont les principales raisons (on ne retiendra au plus que les trois principales)?

_____

_____

33. Dans le futur immédiat, pour tout le Mali en général, pensez-vous que le marché pour l'équipement et machines utilisés dans le secteur du coton va-t-il: croître?____, rester à peu près le même?____ ou décliner?____

34. Quelles sont les principales raisons de votre pronostique (on ne retiendra au plus que les trois raisons prinipales)?

_____

_____

MOTIVATIONS POUR LES ACTIVITÉS LIÉES AUX ÉQUIPEMENTS ET MACHINES

35. Comment l'entreprise a-t-elle été introduite aux activités liées à l'équipement ou aux machines utilisés dans le secteur coton?

_____

_____

36. Quels sont les facteurs qui ont suscité l'intérêt de l'entreprise dans ces activités?

_____

_____

PERSPECTIVES POUR ACCROÎTRE LA PARTICIPATION DU SECTEUR PRIVÉ

37. Selon vous, que faudrait-il pour acroître la production et l'utilisation d'équipement ou machines dans le secteur coton au Mali?

_____

_____

38. Que faudrait-il selon vous pour accroître la participation du secteur privé dans les activités liees à cette technologie mécanique (équipement, machines)?

_____

_____

39 Que faudrait-il selon vous pour accroître la participation des privés étrangers (américains, européens, japonais, etc.) dans les produits de cette technologie mécanique?

_____

_____

40. **IMPORTANT:** Le consultant malien fournira la liste exhaustive (noms et adresses) des ministères, organismes publics de recherche, développement, et vulgarisation; entreprises privées avec activités liées à la technologie mécanique dans la filière coton.

41. **IMPORTANT:** Le consultant malien collectera tous documents de réglementation relatifs à la technologie mécanique: par example, textes des procédures de license, propriéte intellectuelle (brevets), code d'investissement, etc..

42. **IMPORTANT:** Il assemblera aussi la liste de l'équipement et des machines utilisés actuellement au Mali dans la filière coton: fourniture d'intrants, production agricole, activités de post-récolte, égrénage, et huilerie. Il fournira les statistiques (des 5-10 dernières années) au Mali et par les entreprises interviewées, et une brève discription des caractéristiques de l'équipement et machines indiqués.

INTERVIEW DES PRINCIPALES INSTITUTIONS PUBLIQUES CONCERNÉES PAR LA TECHNOLOGIE MÉCANIQUE DANS LA FILIÈRE COTON AU MALI

Ce questionnaire s'adresse aux institutions publiques, non commerciales, concernées par l'équipement agricole et les machines utilisés dans le secteur coton au Mali.

1. Pays: **Mali** 2. Filière: **Coton** 3. Produit Technologique: **Machines, équipement**

BANQUE DE DONNÉES DES PRINCIPAUX INTERVENANTS

4 Nom, addresse, et téléphone de l'institution interviewée.

_____

5. Nom du directeur ou gérant de l'insitution ____ _____

6. L'insitution est-elle mixte?___ Si oui, part publique?___%, privée?___%

7. Est-elle Malienne?___, Etrangère?___; ou partie Malienne?___ %, étrangère?___%

8. Quel est son statut légal: Institut gouvernemental?___ ONG?___ Organisation Bénévole Privée (OBP)?___, Coopérative?___ Autre (à préciser)?_____

9. Total personnel: ≤10__; >10 - ≤50__; >50 - ≤100__; >100 - ≤200__; ≥200___

10. Quel est le budget annuel de dépenses de l'insitution?_____

11. Quelle part de ce **budget de dépenses** va à vos activités liées au coton?____ %

12. Vos activités concernent-elles les produits cotonniers suivants:
Cotton graine?____, Fibre de coton?___, Huile de coton?____, Tourteau de coton?_____

13. Vos activités concernent-elles des produits relatifs aux technologies suivantes:
Equipement/mécanisation agricole?___, Biologique (semences)?___, Post-récolte/transformation?___, Agrochimique (engrais, protection des cultures)?___, Gestion (pratiques culturales)?___

14. Quelle part **de ce budget de dépenses** est consacrée aux produits:
Cotonniers (graine, fibre, huile, tourteau)?_____%
De technologie (mécanique, biologique, agrochimique, agronomique)?____%

15. Quelle part des dépenses relatives **aux produits technologiques** va à chacune des technologies. Mécanique?___%, Biologique?___%, Post-récolte/transformation?___%, Agrochimique?___%, Gestion (pratiques agronomiques)?___%

16. Quelle part de vos produits d'équipement et machines concerne les domaines suivants:
Production de coton?___% Égrenage?___%, Huilerie?___%, Tourteau?____%

17. Dans quels domaines d'activité de la technologie mécanique appliquée au coton est engagée l'entreprise:
   - Recherche (distinguez selon le glossaire) pour
     Générer la technologie?___ Développer le produit?___ Tester le produit?___
   - Production ou assemblage d'équipement ou machine?____
   - Importation d'équipement ou machine?____ exportation ?____ ou les deux?____
   - Vulgarisation d'équipement ou de machine?____
   - Distributeur grossiste d'équipement/machines?___ détaillant?___ ou les deux?____
   - Service après-vente, réparation d'équipement/machine?_____
   - Utilisateur d'équipement ou machine?_____

18. Combien de personnes emploie l'insitution dans les activités de recherche sur la technologie mécanique (génération de technologie, développement et test de produits)? Indiquez: Nationaux avec diplôme équal ou supérieur à: ingénieur, licence, ou équivalent.____, et Expatriés:_____

19. Combien dépensez-vous au total par an dans la recherche sur la technologie mécanique (génération de technologie, développement et test d'équipement/machine) dans le secteur coton)?_____

20. Dans ces activités de recherche sur la technologie mécanique (génération de technologie, développement et test d'équipement et machines), quel pourcentage de ces dépenses totales provient de:
    Profit réinvesti?___%; crédit?____%, fonds publics or autres dons?_____%

21. A quelles périodes de l'annéee, l'insitution a-t-elle le plus d'activité?_____
    Pourquoi (on ne notera au plus que les trois raisons principales.)
    _____

22. A quelles périodes de l'année, est-elle générallement la moins active?_____
    Pourquoi (on ne notera au plus que les trois raisons principales.)
    _____

23. Quelles proportions de vos équipement/machines sont d'origine:
    Locale?____%, importée?____%

24. Quels sont vos principaux fournisseurs d'équipement/machines services, ou pièces détachées dans la filière coton?
    _____

25. Lesquels fournisseurs sont locaux?_____ étrangers?_____

26. Quels sont vos principaux clients d'équipement/machines utilisés dans le secteur coton?
    _____

27. Lesquels clients sont locaux?_____ étrangers?_____

28. Dans quelles autres activités en dehors de la filière coton l'insitution est-elle engagée?
    _____

29. En quelle année l'insitution a-t-elle été créée?_____

30. En quelle année l'insitution a-t-elle commencé, dans le secteur coton, des activités de recherche ou autres concernant les technologies suivantes: Equipement/mécanisation agricole?____, Biologique (semences)?____, Post-récolte/transforamtion?____, Agrochimiques?____, Gestion (pratiques agronomiques)?____

MARCHÉ DE LA TECHNOLOGIE MÉCANIQUE: CROISSANCE ET POTENTIEL

31. Quand vous comparez le volume des activités actuelles à la moyenne des cinq années précédentes, concernant l'équipement et machines dans la filière coton, trouvez-vous que votre insitution : a progresé?___, est au même niveau?___, a décliné?____

32. Quelles en sont les principales raisons (on ne retiendra au plus que les trois principales)?

_____

_____

33. Dans le futur immédiat, pour tout le Mali en général, pensez-vous que l'utilisation de l'équipement et machines dans le secteur du coton va-t-elle:
croître?____, rester à peu près le même?____ ou décliner?____

34. Quelles sont les principales raisons de votre pronostique (on ne retiendra au plus que les trois raisons prinipales)?

_____

_____

MOTIVATIONS POUR LES ACTIVITÉS LIÉES AUX ÉQUIPEMENTS ET MACHINES

35. Comment l'insitution a-t-elle été introduite aux activités liées à l'équipement ou aux machines utilisés dans le secteur coton?

_____

_____

36. Quels sont les facteurs qui ont suscié l'intérêt de l'insitution dans ces activités?

_____

_____

PERSPECTIVES POUR ACCROÎTRE LA PARTICIPATION DU SECTEUR PRIVÉ

37. Selon vous, que faudrait-il pour acroître la production et l'utilisation d'équipement ou machines dans le secteur coton au Mali?

_____

_____

38. Que faudrait-il selon vous pour accroître la participation du secteur privé dans les activités liées à cette technologie mécanique (équipement, machines)?

_____

_____

39. Que faudrait-il selon vous pour accroître la participation des privés étrangers (américains, européens, japonais, etc.) dans les produits de cette technologie mécanique?

_____

_____

40. **IMPORTANT:** Le consultant malien fournira la liste exhaustive (noms et adresses) des ministères, organismes publics de recherche, développement, et vulgarisation; insitutions privées avec activités liées à la technologie mécanique dans la filière coton

41 **IMPORTANT:** Le consultant malien collectera tous documents de réglementation relatifs à la technologie mécanique: par example, textes des procédures de license, propriété intellectuelle (brevets), code d'investissement, etc

42 **IMPORTANT:** Il assemblera aussi la liste de l'équipement et des machines utilisés actuellement au Mali dans la filière coton. fourniture d'intrants, production agricole, activités de post-récolte, égrénage, et huilerie. Il fournira les statistiques (des 5-10 dernières années) au Mali et par les entreprises interviewées, et une brève discription des caractéristiques de l'équipement et machines indiqués.

INTERVIEW OF THE MAJOR PRIVATE ENTERPRISES ENGAGED IN ACTIVITIES RELATED TO THE POST-HARVEST TECHNOLOGY IN PINEAPPLES

The following questionnaire is addressed to private and parastatal companies, i.e., commercial (for profit) enterprises, engaged in activities related to fruit post-technology.

1 Country is. **Ghana** 2. Commodity is: **Fruits (Pineapples)** 3. Technology is **Post-Harvest**

BASELINE DATA OF KEY ACTORS IN THE TECHNOLOGY

4. Name, address, and telephone of the enterprise being interviewed.

_____

5 Name of manager of the enterprise_____

6 Are you a mix public/private enterprise?___ Mix - public?___%, private?___%

7 Is your enterprise National?___ Foreign?___ or Mix· - national?___ % foreign?___%

8. What is your enterprise's legal status· Commercial parastatal?___ Private corporation?___ Cooperative?___, Other?____

9. Size in Personnel· ≤10_; >10 - ≤50_; >50 - ≤100_; >100 - ≤200_, ≥200___

10. What is your enterprise's total annual gross sales revenue?_____

11. What percentage of this **total gross revenue** comes from your fruit-related activities?____

12. Which of the following fruits are your activities related to?
Pineapple?_____, Mango?____, Banana?____, Orange?_____, Citrus/lime?_____

13 Which of the following fruit technology products do you have activities related to?: Farm Machinery?___, Biological (seed)?___, Agrichemical?___, Managerial (e.g. agronomic practices)?___ Post-harvest: Handling?___, Cold storage?___, Processing?____,

14. What shares of your **revenue from fruit activities** come from.
Fruits products themselves (pineapple, mango, banana, orange, citrus/lime)? ___%
Fruit technology products (Machinery, biological, agrichemical, post-harvest)?____%

15. What shares of your **revenue generated by technology products** come from each of them: Farm Machinery?___%, Biological?___%, Agrochemical?___%, Post-harvest/processing?___%, Managerial (e g. agronomic practices)?___%

16. In which proportions are your activities in fruit post-harvest technology relate to·
Pineapple?____%, Mango?___%, Banana?___%, Orange?____%, Citrus/lime?_____%

17. In which of the following fruit post-harvest technology activities is your enterprise engaged?
- Research (refer to glossary of key terms) in
  Technology development?___ Product development?___ Product testing?___
- Production of handling products?___ cold storage?____, Processing equipment?____
- Importing post-harvest handling products?_____ Cold Storage?____ Processing?____
- Exporting post-harvest handling products?_____ Cold Storage?____ Processing?____
- Wholesaling post-harvest handling products?____ Cold Storage?____ Processing?____
- Retailing post-harvest handling products?_____ Cold Storage?____ Processing?____
- Extension of post-harvest handling products?___ Cold Storage?____ Processing?____
- Using handling products?_____, cold storage?_____, Processing equipment?____

18 How much personnel do you employ in research activities (i e., technology development, product development, and product testing) related to fruit post-harvest technology:
Nationals with degree equivalent to BSc. or above_____, Number of expatriates?_____

19 What is your annual expenditure in these research activities (i.e., technology development, product development, and product testing) related to post-harvest technology?_____

20 In these activities related to technology development, product development and testing, what percentage of your total annual expenditure comes from?
Reinvesting your profit?___%; borrowing?____%, public funds or other grants?_____%

21 In which periods of the year are you generally the most active?_____
Why (give at most three main reasons) _____

22. In which periods of the year are you generally the less active?_____
Why (give at most three main reasons) _____

23 What proportions of your fruit post-harvest technology used or produced
Local handling products?_____, cold storage?_____, Processing equipment?____
Imported handling products?_____, cold storage?_____, Processing equipment?____

24. Who are your main suppliers of fruit post-harvest technology products (from whom you buy or receive products and services: e.g., cartons, containers, cold storage equipment, etc.)?
_____

25 Local suppliers being?_____ foreign suppliers?_____

26. Who are your main clients of post-harvest technology products (to whom do you sell)?
_____

27 Local clients being?_____ foreign clients?_____

28 In which other activities (outside fruit post-harvest technology) is your enterprise engaged?
_____

29 When was your enterprise established?_____

30 When did your enterprise start activities in the following technologies related to fruits: Farm Machinery? ___, Biological (seed)?___, Agrichemical?___, Managerial (agronomic practices)?___ Post-harvest Handling?____, cold storage?____, processing?____

MARKET FOR THE TECHNOLOGY: GROWTH AND POTENTIAL

31. Compared to the average revenue in the previous five years, would you say today that your enterprise has been: growing?___, staying about the same?___, or losing ground?____

32. What are the main (at most three) reasons for your growth performance?

_____

_____

33 In the near future, for Ghana as a whole, do you expect the market for fruit post-harvest technology to grow?____, stay about the same?____ shrink?____

34. What are the main (at most three) factors that determine this potential?

_____

_____

MOTIVATIONS FOR ENGAGING IN TECHNOLOGY RELATED ACTIVITIES

35. How did your enterprise get introduced to these fruit post-harvest technology?

_____

_____

36. What were the motivating factors that got you interested in fruit post-harvest technology.

_____

_____

PROSPECTS FOR INCREASING PRIVATE SECTOR PARTICIPATION

37. In your opinion, what would be needed to increase the production and utilization of improved fruit post-harvest technology in this country?

_____

_____

38. In your opinion, what would be needed to increase local private sector participation in activities related to this improved fruit post-harvest technology?

_____

_____

39. In your opinion, what would be needed to increase foreign (including U.S., European, Japanese) private sector participation in activities related to fruit post-harvest technology?

_____

_____

40. **IMPORTANT:** The consultant must provide a comprehensive list of names and addresses of key ministries; public research organizations, development, and extension agencies; and all private enterprises engaged in activities related to the technology

41 **IMPORTANT:** The local consultant will collect all available legal documentation (of the rules and procedures) related to technology, e.g. technology licensing procedures, patent law, intellectual property law, investment code, etc.

42. **IMPORTANT:** The local consultant will also update (last 5 - 10 years) statistics on the use/production of fruit post-harvest technology products (cartons, containers, cold storage, processing) in Ghana in general, and by the enterprises interviewed.

INTERVIEW OF THE MAJOR PUBLIC INSTITUTIONS ENGAGED IN ACTIVITIES RELATED TO THE POST-HARVEST TECHNOLOGY IN PINEAPPLES

The following questionnaire is addressed to public and private non-commercial (government, NGO, and PVO) institutions, engaged in activities related to the technology, for:

1. Country is: **Ghana** 2. Commodity is. **Fruits (Pineapples)** 3. Technology is: **Post-Harvest**

BASELINE DATA OF KEY ACTORS IN THE TECHNOLOGY

4 Name, address, and telephone of the institution being interviewed.

_____

5. Name of manager of the institution_____

6. Are you a mix public/private institution?___ Mix - public?___%, private?___%

7 Is your institution National?___ Foreign?___ or Mix. - national?___ % foreign?___%

8 What is your institution's legal status: Government?___, Cooperative?___, NGO?___, PVO?___, Foundation?___ International organization?___, Regional??_____

9. Size in Personnel: ≤10__; >10 - ≤50__; >50 - ≤100__; >100 - ≤200__; ≥200___

10. What is your institution's total annual gross sales revenue?_____

11. What percentage of this **total annual expenditure** gores to your fruit-related activities?____

12. Which of the following fruits are your activities related to?
Pineapple?_____, Mango?____, Banana?____, Orange?_____, Citrus/lime?_____

13. Which of the following fruit technology products do you have activities related to?: Farm Machinery?___, Biological (seed)?___, Agrichemical?___, Managerial (e.g. agronomic practices)?___ Post-harvest: Handling?___, Cold storage?___, Processing?____,

14. What shares of your **expenditure in fruit related activities** go to:
Fruits products themselves (pineapple, mango, banana, orange, citrus/lime)?____%
Fruit technology products (Machinery, biological, agrichemical, post-harvest)?____%

15 What shares of your **expenditure for technology products** go to each of them:
Farm Machinery?___%, Biological?___%, Agrochemical?___%, Post-harvest/processing?___%, Managerial (e.g. agronomic practices)?___%

16. In which proportions are your activities in fruit post-harvest technology relate to:
Pineapple?____%, Mango?___%, Banana?___%, Orange?___%, Citrus/lime?_____%

17. In which of the following fruit post-harvest technology activities is your institution engaged?
- Research (refer to glossary of key terms) in
  Technology development?___ Product development?___ Product testing?___
- Production of handling products?___ cold storage?____, Processing equipment?____
- Importing post-harvest handling products?_____ Cold Storage?____ Processing?____
- Exporting post-harvest handling products?_____ Cold Storage?____ Processing?____
- Wholesaling post-harvest handling products?____ Cold Storage?____ Processing?____
- Retailing post-harvest handling products?_____ Cold Storage?____ Processing?____
- Extension of post-harvest handling products?___ Cold Storage?____ Processing?____
- Using handling products?_____, cold storage?_____, Processing equipment?____

18. How much personnel do you employ in research activities (i.e , technology development, product development, and product testing) related to fruit post-harvest technology:
Nationals with degree equivalent to BSc. or above_____, Number of expatriates?_____

19. What is your annual expenditure in these research activities (i.e., technology development, product development, and product testing) related to post-harvest technology:? _____

20. In these activities related to technology development, product development and testing, what percentage of your total annual expenditure comes from?
Reinvesting your profit?___%, borrowing?____%, public funds or other grants?_____%

21. In which periods of the year are you generally the most active?_____
Why (give at most three main reasons) _____

22. In which periods of the year are you generally the less active?_____
Why (give at most three main reasons) _____

23. What proportions of your fruit post-harvest technology used or produced
Local handling products?_____, cold storage?_____, Processing equipment?____
Imported handling products?_____, cold storage?_____, Processing equipment?____

24. Who are your main suppliers of fruit post-harvest technology products (from whom you buy or receive products and services: e.g , cartons, containers, cold storage equipment, etc.)?
_____

25. Local suppliers being?_____ foreign suppliers?_____

26. Who are your main clients of post-harvest technology products (to whom do you sell)?
_____

27. Local clients being?_____ foreign clients?_____

28. In which other activities (outside fruit post-harvest technology) is your institution engaged?
_____

29. When was your institution established?_____

30. When did your institution start activities in the following technologies related to fruits: Farm Machinery?___, Biological (seed)?___, Agrichemical?___, Managerial (agronomic practices)?___ Post-harvest: Handling?____, cold storage?____, processing?____

MARKET FOR THE TECHNOLOGY· GROWTH AND POTENTIAL

31. Compared to the average volume of activity in the previous five years, would you say today that your institution has been:
growing?___, staying about the same?___, or losing ground?____

32 What are the main (at most three) reasons for your growth performance?

_____

_____

33 In the near future, for Ghana as a whole, do you expect the market for fruit post-harvest technology to grow?____, stay about the same?____ shrink?____

34. What are the main (at most three) factors that determine this potential?

_____

_____

MOTIVATIONS FOR ENGAGING IN TECHNOLOGY RELATED ACTIVITIES

35. How did your institution get introduced to these fruit post-harvest technology?

_____

_____

36. What were the motivating factors that got you interested in fruit post-harvest technology.

_____

_____

PROSPECTS FOR INCREASING PRIVATE SECTOR PARTICIPATION

37 In your opinion, what would be needed to increase the production and utilization of improved fruit post-harvest technology in this country?

_____

_____

38. In your opinion, what would be needed to increase local private sector participation in activities related to this improved fruit post-harvest technology?

_____

_____

39. In your opinion, what would be needed to increase foreign (including U S., European, Japanese) private sector participation in activities related to fruit post-harvest technology?

_____

_____

40. **IMPORTANT:** The consultant must provide a comprehensive list of names and addresses of key ministries; public research organizations, development, and extension agencies; and all private enterprises engaged in activities related to the technology.

41. **IMPORTANT:** The local consultant will collect all available legal documentation (of the rules and procedures) related to technology, e.g. technology licensing procedures, patent law, intellectual property law, investment code, etc

42. **IMPORTANT:** The local consultant will also update (last 5 - 10 years) statistics on the use/production of fruit post-harvest technology products (cartons, containers, cold storage, processing) in Ghana in general, and by the institutions interviewed.

INTERVIEW OF THE MAJOR PRIVATE ENTERPRISES ENGAGED IN ACTIVITIES RELATED TO POULTRY FEED TECHNOLOGY

The following questionnaire is addressed to private and parastatal companies, i.e., commercial (for profit) enterprises, engaged in activities related to poultry feed technology.

1. Country is: **Kenya** 2. Commodity is: **Poultry** 3. Technology is: **Feed**

BASELINE DATA OF KEY ACTORS IN THE TECHNOLOGY

4 Name, address, and telephone of the enterprise being interviewed.

_____

5. Name of manager of the enterprise_____

6. Are you a mix public-private enterprise?___ Mix - public?___%, private?___%

7. Is your enterprise National?___ Foreign?___ or Mix: - national?___ % foreign?___%

8 What is your enterprise's legal status: Commercial parastatal?___ Private corporation?___ Cooperative?___, Other?_____

9. Size in Personnel: ≤10__; >10 - ≤50__; >50 - ≤100__; >100 - ≤200__; ≥200___

10 What is your enterprise's total annual gross sales revenue?_____

11 What percentage of this **total gross revenue** comes from your poultry related activities?____

12. Which of the following poultry products are your activities related to?
Eggs____, Chicks (breeding stocks)?____, Laying hens?___, Live broilers?____, Fresh broilers?____, Chilled/frozen broilers?____

13. Which of the following poultry technologies are your activities related to?
Production equipment (hatchery)?___, Biological (breeds, hormones, vaccines)?___, Agrichemical (growth regulators, animal protection)?___, Managerial (practices)?___, Poultry Feed?___, Cold storage?___ Poultry processing?____

14. What shares of your **poultry gross revenue** come from:
Poultry products (eggs; chicks; laying hens; live, fresh, chilled or frozen broilers)_____%
Poultry technology products (equipment, biological, agrichemical, managerial, feed)_____%

15 What shares of your **revenue generated by technology products** come from each of them:
Production equipment (hatchery)?___%, Biological (breeds, hormones, vaccines)?___%, Agrichemical (growth regulators, animal protection)?___%, Managerial (practices)?___%, Poultry Feed?___%, Cold storage?___% Poultry processing?____ %

16. What percentages of your feeds go to: Chicks?___%, Laying hens?___%, Broilers?___%

17. In which of the following poultry feed activities is your enterprise engaged?
- Research (refer to glossary of key terms) in
  Feed technology development?___ Feed Product development?___ Feed testing?___
- Production of feeds?___
- Import of feeds?_____ Export of feed products?_____ or both?____
- Wholesale of feeds?____ Retail ?_____ or both?____
- Extension of feeds?___
- Use of feeds?_____,

18. How much personnel do you employ in research activities (i.e., technology development, product development, and feed product testing) related to poultry feed technology:
Nationals with degree equivalent to BSc. or above_____, Number of expatriates?_____

19. What is your annual expenditure in these research activities (i.e., technology development, product development, and product testing) related to poultry feed technology:?_____

20. In these activities related to research activities (technology development, product development and testing), what percentages of your total annual expenditure come from?
Reinvesting your profit?___%; borrowing?____%, public funds or other grants?_____%

21. In which periods of the year are you generally the most active?_____
Why (give at most three main reasons) _____ _____

22. In which periods of the year are you generally the less active?_____
Why (give at most three main reasons) _____ _____ _____

23 What proportions of your feeds (volume) are:
Local feeds?_____% (which ingredients: Maize?___%, Sorghum?___%, _____%)
Imported feeds?____% (which ingredients: Maize?___%, Sorghum?___%, _____%)

24 Who are your main suppliers of poultry feeds (from whom you buy or receive products and services)?

_____ _____

25. Local suppliers being?_____ foreign suppliers? _____

26. Who are your main clients of poultry feeds (to whom do you sell)?

_____

27. Local clients being?_____ foreign clients?_____

28. In which other activities (outside poultry) is your enterprise engaged?

_____

29. When was your enterprise established?_____

30. When did your enterprise start activities in the following technologies related to poultry:
Production equipment (hatchery)?___, Biological (breeds, hormones, vaccines)?____, Agrichemical (growth regulators, animal protection)?____, Managerial (practices)?____, Poultry Feed?____, Cold storage?____, Poultry processing?_____

MARKET FOR THE TECHNOLOGY: GROWTH AND POTENTIAL

31. Compared to the average revenue in the previous five years, would you say today that your enterprise has been: growing?___, staying about the same?_ _, or losing ground?____

32. What are the main (at most three) reasons for your growth performance?

_____

_____

33. In the near future, for Kenya as a whole, do you expect the market for poultry feed technology to grow?____, stay about the same?____ shrink?____

34 What are the main (at most three) factors that determine this potential?

_____

_____

MOTIVATIONS FOR ENGAGING IN TECHNOLOGY RELATED ACTIVITIES

35. How did your enterprise get introduced to poultry feeds?

_____

_____

36. What were the motivating factors that got you interested in poultry feeds?

_____

_____

PROSPECTS FOR INCREASING PRIVATE SECTOR PARTICIPATION

37. In your opinion, what would be needed to increase the production and utilization of improved poultry feed technology in this country?

_____

_____

38. In your opinion, what would be needed to increase local private sector participation in activities related to this improved poultry feed technology?

_____

_____

39. In your opinion, what would be needed to increase foreign (including U.S., European, Japanese) private sector participation in activities related to poultry feed technology?

_____

_____

40. **IMPORTANT:** The consultant must provide a comprehensive list of names and addresses of key ministries; public research organizations, development, and extension agencies; and all private enterprises engaged in activities related to the technology.

41. **IMPORTANT:** The local consultant will collect all available legal documentation (of the rules and procedures) related to technology, e g. intellectual property law, patent law, technology licensing procedures, investment code, etc.

42. **IMPORTANT:** The local consultant will also update (last 5 - 10 years) statistics on the use/production of poultry feeds in Kenya in general, and by each enterprise interviewed.

INTERVIEW OF THE MAJOR PUBLIC INSTITUTIONS ENGAGED IN ACTIVITIES RELATED TO POULTRY FEED TECHNOLOGY

The following questionnaire is addressed to public and non-commercial (government, NGO, and PVO) institutions engaged in activities related to poultry feed technology.

1. Country is: **Kenya** 2. Commodity is: **Poultry** 3. Technology is: **Feed**

BASELINE DATA OF KEY ACTORS IN THE TECHNOLOGY

4. Name, address, and telephone of the institution being interviewed.

_____

5. Name of manager of the institution_____

6. Are you a mix public-private institution?___ Mix - public?___%, private?___%

7. Is your institution National?___ Foreign?___ or Mix: - national?___ % foreign?___%

8. What is your institution's legal status: Government?___ Cooperative?___ NGO?___, PVO?___, Foundation?____, International organization?____, Regional?____

9. Size in Personnel: ≤10_ , >10 - ≤50_; >50 - ≤100_; >100 - ≤200_; ≥200___

10. What is your institution's total annual expenditures?_____

11. What percentage of these **total expenditures** goes to your poultry related activities?____

12. Which of the following poultry products are your activities related to?
Eggs____, Chicks (breeding stocks)?____, Laying hens?___, Live broilers?____, Fresh broilers?____, Chilled/frozen broilers?___

13. Which of the following poultry technologies are your activities related to?
Production equipment (hatchery)?___, Biological (breeds, hormones, vaccines)?___, Agrichemical (growth regulators, animal protection)?___, Managerial (practices)?___, Poultry Feed?___, Cold storage?___ Poultry processing?____

14. What shares of your **expenditures related to poultry** go to:
Poultry products (eggs; chicks; laying hens, live, fresh, chilled or frozen broilers)_____%
Poultry technology products (equipment, biological, agrichemical, managerial, feed)_____%

15. What shares of your **expenditures generated by technology products** go to each of them:
Production equipment (hatchery)?___%, Biological (breeds, hormones, vaccines)?___%, Agrichemical (growth regulators, animal protection)?___%, Managerial (practices)?___%, Poultry Feed?___%, Cold storage?___% Poultry processing?____%

16. What percentages of your feeds go to: Chicks?___%, Laying hens?___%, Broilers?___%

17 In which of the following poultry feed activities is your institution engaged?

- Research (refer to glossary of key terms) in
  Feed technology development?___ Feed Product development?___ Feed testing?___
- Production of feeds?___
- Import of feeds?_____ Export of feed products?_____ or both?____
- Wholesale of feeds?____ Retail ?_____ or both?____
- Extension of feeds?___
- Use of feeds?_____,

18. How much personnel do you employ in research activities (i.e., technology development, product development, and feed product testing) related to poultry feed technology:
Nationals with degree equivalent to BSc. or above_____, Number of expatriates?_____

19 What are your annual expenditures in these research activities (i.e , technology development, product development, and product testing) related to poultry feed technology:?_____

20. In these activities related to research activities (technology development, product development and testing), what percentages of your total annual expenditure come from?
Reinvesting your profit?___%; borrowing?____%, public funds or other grants?_____%

21 In which periods of the year are you generally the most active?_____
Why (give at most three main reasons) _____

22 In which periods of the year are you generally the less active?_____
Why (give at most three main reasons) _____

23. What proportions of your feeds (volume) are:
Local feeds?_____% (which ingredients· Maize?___%, Sorghum?___%, _____%)
Imported feeds?____% (which ingredients. Maize?___%, Sorghum?___%, _____%)

24. Who are your main suppliers of poultry feeds (from whom you buy or receive products and services)?

_____

25. Local suppliers being?_____ foreign suppliers?_____

26. Who are your main clients of poultry feeds (to whom do you sell)?

_____

27. Local clients being?_____ foreign clients?_____

28. In which other activities (outside poultry) is your institution engaged?

_____

29. When was your institution established?_____

30. When did your institution start activities in the following technologies related to poultry:
Production equipment (hatchery)?____, Biological (breeds, hormones, vaccines)?____, Agrichemical (growth regulators, animal protection)?____, Managerial (practices)?____, Poultry Feed?____, Cold storage?____, Poultry processing?_____

MARKET FOR THE TECHNOLOGY: GROWTH AND POTENTIAL

31. Compared to your volume of activities in the previous five years, would you say today that your institution has been: growing?___, staying about the same?___, or losing ground?____

32 What are the main (at most three) reasons for your growth performance?

_____

_____

33 In the near future, for Kenya as a whole, do you expect the market for poultry feed technology to grow?____, stay about the same?____ shrink?____

34. What are the main (at most three) factors that determine this potential?

_____

_____

MOTIVATIONS FOR ENGAGING IN TECHNOLOGY RELATED ACTIVITIES

35. How did your institution get introduced to poultry feeds?

_____

_____

36. What were the motivating factors that got you interested in poultry feeds?

_____

_____

PROSPECTS FOR INCREASING PRIVATE SECTOR PARTICIPATION

37 In your opinion, what would be needed to increase the production and utilization of improved poultry feed technology in this country?

_____

_____

38. In your opinion, what would be needed to increase local private sector participation in activities related to this improved poultry feed technology?

_____

_____

39. In your opinion, what would be needed to increase foreign (including U.S., European, Japanese) private sector participation in activities related to poultry feed technology?

_____

_____

40. **IMPORTANT:** The consultant must provide a comprehensive list of names and addresses of key ministries; public research organizations, development, and extension agencies, and all private enterprises engaged in activities related to the technology.

41 **IMPORTANT:** The local consultant will collect all available legal documentation (of the rules and procedures) related to technology, e.g. intellectual property law, patent law, technology licensing procedures, investment code, etc.

42. **IMPORTANT:** The local consultant will also update (last 5 - 10 years) statistics on the use/production of poultry feeds in Kenya in general, and by each institution interviewed.

INTERVIEW DES PRINCIPALES ENTERPRISES PRIVÉES CONCERNÉES PAR LA TECHNOLOGIE AGROCHIMIQUE DANS LA FILIÈRE MAÏS AU CAMEROUN

Ce questionnaire s'adresse aux entreprises privées et parapubliques commerciales concernées par les produits chimiques de protection du maïs au Cameroun.

1 Pays: **Cameroun** 2 Filière. **Maïs** 3. Technologie. **Protection des végétaux**

BANQUE DE DONNEES DES PRINCIPAUX INTERVENANTS

4 Nom, addresse, et téléphone de l'enterprise interviewée.

_____

5 Nom du directeur ou gérant de l'entreprise _____

6. L'entreprise est-elle mixte?___ Si oui, part publique?___%, privée?___%

7. Est-elle Camerounaise?___; Etrangère?___; ou partie Camerounaise?___ %, étrangère?___%

8. Quel est son statut légal: Parapublique commerciale?___ Société privée SARL?___ Coopérative?___ Autre (à préciser)?_____

9 Total personnel: ≤10__; >10 - ≤50__; >50 - ≤100__; >100 - ≤200__; ≥200___

10 Quel est le **chiffre d'affaire annuel** de votre entreprise?_____

11. Quelle part de ce **chiffre d'affaire total** provient de vos activités liées au maïs?____%

12 Vos activités concernent-elles directement les produits du maïs suivants: Maïs graine?___, farine de maïs?_____

13 Vos activités concernent-elles des produits relatifs aux technologies suivantes: Equipement/mécanisation agricole?___, Biologique (semences)?___, Post-récolte/transformation?___, Agrochimique (engrais, protection des cultures)?___, Gestion (pratiques culturales)?___

14. Quelle part du **chiffre d'affaire de votre secteur maïs** provient:
Directement des produits du maïs (maïs-graine, farine de maïs)?_____%
De technologie liée au maïs (mécanique, biologique, agrochimique, agronomique)?___%

15 Quelle part du revenu **des produits technologiques liés au maïs** provient de ces technologies. Mécanique?___%, Biologique?___%, Post-récolte/transformation?___%, Agrochimique?___%, Gestion (pratiques agronomiques)?___%

16. Quelle part de vos produits agrochimiques du maïs concerne les domaines suivants: Herbicides maïs?___% Insecticides maïs?___%, Fongicides maïs?___%, Autres phytosanitaires (à préciser)_____%

17. Dans quels domaines d'activité de protection des végétaux appliquée au maïs est engagée l'entreprise:
- Recherche (distinguez selon le glossaire) pour
  Générer la technologie?___ Développer le produit?___ Tester le produit?___
- Production des produits agrochimiques (phytosanitaires et herbicides)?____
- Importation de produits agrochimiques?____ exportation ?____ ou les deux?____
- Vulgarisation de produits phytosanitaires et herbicides?____
- Grossiste de produits agrochimiques?___ détaillant?___ ou les deux?___
- Utilisateur de produits phytosanitaires et herbicides?_____

18 Combien de personnes emploie l'entreprise dans les activités de recherche sur la protection du maïs (génération de technologie, développement et test de produits)? Indiquez: Nationaux avec diplôme équal ou supérieur à: ingénieur, licence, ou équivalent:____, et Expatriés:_____

19 Combien dépensez-vous au total par an dans la recherche sur la technologie de protection du maïs (génération de technologie, développement et test de produit) dans le secteur maïs)?_____

20 Dans ces activités de recherche sur la technologie de protection du maïs (génération de technologie, développement et test de produits), quel pourcentage de ces dépenses totales provient de
Profit réinvesti?___%, crédit?____%, fonds publics or autres dons?_____%

21 A quelles périodes de l'annéee, l'entreprise a-t-elle le plus d'activité?_____
Pourquoi (on ne notera au plus que les trois raisons principales)
_____

22 A quelles periodes de l'annee, est-elle généralement la moins active?_____
Pourquoi (on ne notera au plus que les trois raisons principales)
_____

23. Quelles proportions de vos produits phytosanitaires et herbicides du maïs sont d'origine: Locale?____%, importée?____%

24. Quels sont vos principaux fournisseurs de produits de phytosanitaires et herbicides du maïs?
_____

25. Lesquels fournisseurs sont locaux?_____ étrangers?_____

26. Quels sont vos principaux clients de produits phytosanitaires et herbicides du maïs?
_____

27. Lesquels clients sont locaux?_____ étrangers?_____

28 Dans quelles autres activités en dehors du maïs l'entreprise est-elle engagée?
- En dehors de l'agrochimie?_____
- Dans le domaine agrochimique (citez les cultures ou animaux concernés)
_____

29. Si vous avez des activités d'agrochimie en dehors du maïs, quelles parts reviennent aux: Maïs?___%, autres céréales?___%, coton?___%. café et cacao?___%, autre culture (précisez)_____%, animaux (précisez)_____%

30. En quelle année l'entreprise a-t-elle été créée?_____

31 En quelle année l'entreprise a-t-elle commencé, dans le secteur maïs, des activites de recherche ou autres concernant les technologies suivantes· Equipement/mécanisation agricole?____, Biologique (semences)?____, Post-récolte/transforamtion?____, Agrochimiques?____, Gestion (pratiques agronomiques)?____

MARCHÉ DE LA TECHNOLOGIE AGROCHIMQUE· CROISSANCE ET POTENTIEL

32 Quand vous comparez vos résulats actuels au chiffre d'affaire moyen des cinq années précédentes, concernant les produits phytosanitaires et herbicides du maïs, trouvez-vous que votre entreprise a progresé?___, est au même niveau?___, a décliné?____

33. Quelles en sont les principales raisons (on ne retiendra au plus que les trois principales)?

_____

_____

34. Dans le futur immédiat, pour tout le Cameroun en général, pensez-vous que le marché des produits phytosanitaires et herbicides du maïs va-t-il:
croître?____, rester à peu près le même?____ ou décliner?____

35. Quelles sont les principales raisons de votre pronostique (on ne retiendra au plus que les trois raisons prinipales)?

_____

_____

MOTIVATIONS POUR LES ACTIVITÉS LIÉES A L'AGROCHIMIE

36. Comment l'entreprise a-t-elle été introduite aux produits phytosanitaires et herbicides du maïs?

_____

_____

37 Quels sont les facteurs qui ont suscité l'intérêt de l'entreprise dans ces activités?

_____

_____

PERSPECTIVES POUR ACCROÎTRE LA PARTICIPATION DU SECTEUR PRIVÉ

38. Selon vous, que faudrait-il pour acroître la production et l'utilisation de phytosanitaires et herbicides du mais au Cameroun?

_____

_____

39. Que faudrait-il selon vous pour accroître la participation du secteur privé dans les activités liées à cette technologie agrochimique?

_____

_____

40 Que faudrait-il selon vous pour accroître la participation des privés étrangers (américains, européens, japonais, etc) dans cette technologie agrochimique?

_____

_____

41 **IMPORTANT:** Le consultant camerounais fournira la liste exhaustive (noms et adresses) des ministères, organismes publics de recherche, développement, et vulgarisation, entreprises privées avec activités liées à la technologie agrochimique dans la filière mais.

42. **IMPORTANT:** Le consultant camerounais collectera tous documents de réglementation relatifs aux produits agrochimiques liés au mais· par example, textes des procédures de license, propriété intellectuelle (brevets), code d'investissement, etc .

43 **IMPORTANT:** Il fournira les statistiques (des 5-10 dernières années) de la production et de l'utilisation des produits phytosanitaires et herbicides du mais au Cameroun, et par les entreprises interviewées.

INTERVIEW DES PRINCIPALES INSTITUTIONS PUBLIQUES CONCERNÉES PAR LA TECHNOLOGIE AGROCHIMIQUE DANS LA FILIÈRE MAÏS AU CAMEROUN

Ce questionnaire s'adresse aux institutions publiques, non commerciales, concernées par les produits chimiques de protection du maïs au Cameroun.

1 Pays· **Cameroun** 2. Filière. **Maïs** 3. Technologie **Protection des végétaux**

BANQUE DE DONNEES DES PRINCIPAUX INTERVENANTS

4. Nom, addresse, et téléphone de l'institution interviewée.

_____

5. Nom du directeur ou gérant de l'institution _____

6 L'institution est-elle mixte?___ Si oui, part publique?___%, privée?___%

7. Est-elle Camerounaise?___; Etrangère?___; ou partie Camerounaise?___ %, étrangère?___%

8. Quel est son statut légal: Institut gouvernemental?___ ONG?___ Organisation Bénévole Privée (OBP)?___, Coopérative?___ Autre (à préciser)?_____

9. Total personnel: ≤10__; >10 - ≤50__; >50 - ≤100__; >100 - ≤200__; ≥200___

10. Quel est le budget annuel de dépenses de l'insitution?_____

11. Quelle part de ce **budget de dépenses** va à vos activités liées au maïs?____%

12 Vos activités concernent-elles directement les produits du maïs suivants: Maïs graine?___, farine de maïs?_____

13 Vos activités concernent-elles des produits relatifs aux technologies suivantes: Equipement/mécanisation agricole?___, Biologique (semences)?___, Post-récolte/transformation?___, Agrochimique (engrais, protection des cultures)?___, Gestion (pratiques culturales)?___

14. Quelle part **de ce budget de dépenses** est consacrée:
Directement des produits du maïs (maïs-graine, farine de maïs)?_____%
De technologie liée au maïs (mécanique, biologique, agrochimique, agronomique)?___%

15 Quelle part du revenu **des produits technologiques liés au maïs** provient de ces technologies: Mécanique?___%, Biologique?___%, Post-récolte/transformation?___%, Agrochimique?___%, Gestion (pratiques agronomiques)?___%

16 Quelle part de vos produits agrochimiques du maïs concerne les domaines suivants. Herbicides maïs?___% Insecticides maïs?___%, Fongicides maïs?___%, Autres phytosanitaires (à préciser)_____%

17 Dans quels domaines d'activité de protection des végétaux appliquée au maïs est engagée l'institution:

- Recherche (distinguez selon le glossaire) pour
  Générer la technologie?___ Développer le produit?___ Tester le produit?___
- Production des produits agrochimiques (phytosanitaires et herbicides)?____
- Importation de produits agrochimiques?____ exportation ?____ ou les deux?____
- Vulgarisation de produits phytosanitaires et herbicides?____
- Grossiste de produits agrochimiques?___ détaillant?___ ou les deux?___
- Utilisateur de produits phytosanitaires et herbicides?_____

18 Combien de personnes emploie l'institution dans les activités de recherche sur la protection du maïs (génération de technologie, développement et test de produits)? Indiquez: Nationaux avec diplôme équal ou supérieur à: ingénieur, licence, ou équivalent:____, et Expatriés:_____

19 Combien dépensez-vous au total par an dans la recherche sur la technologie de protection du maïs (génération de technologie, développement et test de produits) dans le secteur maïs)?_____

20. Dans ces activités de recherche sur la technologie de protection du maïs (génération de technologie, développement et test de produits), quel pourcentage de ces dépenses totales provient de:
Profit réinvesti?___%; crédit?____%, fonds publics or autres dons?_____%

21. A quelles périodes de l'annéee, l'institution a-t-elle le plus d'activité?_____
Pourquoi (on ne notera au plus que les trois raisons principales.)
_____

22. A quelles périodes de l'année, est-elle généralement la moins active?_____
Pourquoi (on ne notera au plus que les trois raisons principales.)
_____

23 Quelles proportions de vos produits phytosanitaires et herbicides du maïs sont d'origine: Locale?____%, importée?____%

24 Quels sont vos principaux fournisseurs de produits de phytosanitaires et herbicides du maïs?
_____

25 Lesquels fournisseurs sont locaux?_____ étrangers?_____

26. Quels sont vos principaux clients de produits phytosanitaires et herbicides du maïs?
_____

27. Lesquels clients sont locaux?_____ étrangers?_____

28. Dans quelles autres activités en dehors du maïs l'institution est-elle engagée?
- En dehors de l'agrochimie?_____
- Dans le domaine agrochimique (citez les cultures ou animaux concernés)
_____

29. Si vous avez des activités d'agrochimie en dehors du maïs, quelles parts reviennent aux: Maïs?___%, autres céréales?___%, coton?___%, café et cacao?___%, autre culture (précisez)_____%, animaux (précisez)_____ ____%

30. En quelle année l'institution a-t-elle été créée?_____

31 En quelle année l'institution a-t-elle commencé, dans le secteur maïs, des activités de recherche ou autres concernant les technologies suivantes: Equipement/mécanisation agricole?____, Biologique (semences)?____, Post-récolte/transforamtion?____, Agrochimiques?____, Gestion (pratiques agronomiques)?____

MARCHÉ DE LA TECHNOLOGIE AGROCHIMIQUE: CROISSANCE ET POTENTIEL

32. Quand vous comparez le volume des activités actuelles à la moyenne des cinq années précédentes, concernant les produits phytosanitaires et herbicides du maïs, trouvez-vous que votre institution : a progresé?___, est au même niveau?___, a décliné?____

33 Quelles en sont les principales raisons (on ne retiendra au plus que les trois principales)?

_____

_____

34. Dans le futur immédiat, pour tout le Cameroun en général, pensez-vous que le marché des produits phytosanitaires et herbicides du maïs va-t-il:
croître?____, rester à peu près le même?____ ou décliner?____

35 Quelles sont les principales raisons de votre pronostique (on ne retiendra au plus que les trois raisons prinipales)?

_____

_____

MOTIVATIONS POUR LES ACTIVITÉS LIÉES A L'AGROCHIMIE

36 Comment l'institution a-t-elle été introduite aux produits phytosanitaires et herbicides du maïs?

_____

_____

37. Quels sont les facteurs qui ont suscité l'intérêt de l'institution dans ces activités?

_____

_____

PERSPECTIVES POUR ACCROÎTRE LA PARTICIPATION DU SECTEUR PRIVÉ

38 Selon vous, que faudrait-il pour acroître la production et l'utilisation de phytosanitaires et herbicides du mais au Cameroun?

_____

_____

39 Que faudrait-il selon vous pour accroître la participation du secteur privé dans les activités liées à cette technologie agrochimique?

_____

_____

40 Que faudrait-il selon vous pour accroître la participation des privés étrangers (américains, européens, japonais, etc.) dans cette technologie agrochimique?

_____

_____

41 **IMPORTANT:** Le consultant camerounais fournira la liste exhaustive (noms et adresses) des ministères, organismes publics de recherche, développement, et vulgarisation; entreprises privées avec activités liées à la technologie agrochimique dans la filière mais.

42. **IMPORTANT:** Le consultant camerounais collectera tous documents de réglementation relatifs aux produits agrochimiques liés au mais: par example, textes des procédures de license, propriété intellectuelle (brevets), code d'investissement, etc..

43. **IMPORTANT:** Il fournira les statistiques (des 5-10 dernières années) de la production et de l'utilisation des produits phytosanitaires et herbicides du mais au Cameroun, et par les institutions interviewées