The 1999/2000 Starter Pack Scheme Evaluation

Micro-Economic Impact and Willingness to Pay

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CONTENTS

CHAPTER 1: INTRODUCTION 6

BACKGROUND 6
OVERALL OBJECTIVE OF THE STUDY 6
EXPECTED OUTCOMES AND DELIVERABLES 6

CHAPTER 2: METHODOLOGY AND FRAMEWORK OF THE STUDY 8

THE PRELIMINARY PRA STUDY 8
THE FRAMEWORK OF THE MAIN STUDY 9
Sampling and sample design 9
IMPLEMENTATION OF THE MAIN STUDY 10
Training of field workers 10
Management of field work 11
Data processing 11

CHAPTER 3: THE DESCRIPTION OF THE SAMPLE 12

CONSTRUCTED LIVESTOCK ASSETS-BASED POVERTY INDEX 15

CHAPTER 4: HOUSEHOLD FOOD SECURITY 17

APPROACHES USED TO ASSESS THE NET IMPACT OF STARTER PACK 17
MAIZE PRODUCTION 18
LEGUME PRODUCTION 20
PERCEPTIONS OF MAIZE AND LEGUME CONTRIBUTION 22
Starter Pack contribution to maize production 23
Starter Pack contribution to legume production 24
FOOD SELF-SUFFICIENCY 25

CHAPTER 5: STARTER PACK RECIPIENTS AND THE USE OF IMPROVED AGRICULTURAL INPUTS 28

WHO RECEIVED THE STARTER PACK 28
HOW HOUSEHOLDS USED STARTER PACK INPUTS 30
Maize seed 30
Legume seed 31
Fertiliser 34
Starter Pack sales 34

CHAPTER 6: FARMERS' VALUATION OF STARTER PACK 35

THE VALUE OF STARTER PACK INPUTS TO FARMERS 35
Farmers' views on purchase of Starter Pack for cash 35
The credit value of Starter Pack inputs to farmers 38
WILLINGNESS TO PARTICIPATE IN A WORK-FOR-SP PROGRAMME 40

PRICE HOUSEHOLDS WOULD PAY FOR INDIVIDUAL SP CONTENTS 42
PRICE HOUSEHOLDS WOULD BE WILLING TO PAY FOR WHOLE PACK 43

CHAPTER 7 SMALLHOLDER HOUSEHOLD INTEGRATION INTO THE MARKET ECONOMY 45

SOURCES OF INCOME 45
EFFECT OF STARTER PACK ON HOUSEHOLD INCOME 46
SUBSTITUTION EFFECTS 48

CHAPTER 8 LABOUR 51

SUPPLY AND DEMAND 51

CHAPTER 9 CREDIT AND SAVINGS 54

CHAPTER 10 COMMUNITY RELATIONS 55

CHAPTER 11 CONCLUSIONS AND RECOMMENDATIONS 56

LIST OF TABLES

TABLE 1 EPAS VISITED IN PRELIMINARY STUDY 8
TABLE 2 SAMPLE DISTRIBUTION BASED ON PROPORTIONAL ALLOCATION 10
TABLE 3 SAMPLE SIZE DISTRIBUTION BY ADD AND REGION 12
TABLE 4 SAMPLE DISTRIBUTION BY SEX OF HOUSEHOLD HEAD 13
TABLE 5 NUMBER OF PEOPLE LIVING IN THE HOUSEHOLD 14
TABLE 6 SAMPLE COMPOSITION BY INHERITANCE TRADITION 15
TABLE 7 SAMPLE DISTRIBUTION BY 'LIVESTOCK ASSETS-BASED INDEX' 15
TABLE 8 SMALLHOLDER HOUSEHOLDS' MAIN STAPLE FOOD 17
TABLE 9 MEAN PRODUCTION OF MAIZE BY REGION (50-KG BAGS) 19
TABLE 10 MEAN PRODUCTION OF MAIZE BY POVERTY CATEGORY (50-KG BAGS) 20
TABLE 11 MEAN PRODUCTION OF MAIZE BY SEX OF HOUSEHOLD HEAD (50-KG BAGS) 20
TABLE 12 TOTAL LEGUME PRODUCTION BY REGION (50-KG BAGS) 21
TABLE 13 TOTAL LEGUME PRODUCTION BY POVERTY CATEGORY (50 KG BAGS) 22
TABLE 14 TOTAL LEGUME PRODUCTION BY SEX OF HEAD OF HOUSEHOLD (50 KG BAGS) 22
TABLE 15 PERCEPTION OF SP CONTRIBUTION TO TOTAL MAIZE PRODUCTION (50-KG BAGS) 23
TABLE 16 PERCEPTION OF SP CONTRIBUTION TO LEGUME PRODUCTION (50-KG BAGS) 24
TABLE 17 AVERAGE NUMBER OF MONTHS OF STAPLE FOOD BY REGION 25
TABLE 18 AVERAGE NUMBER OF MONTHS OF STAPLE FOOD BY SEX OF HOUSEHOLD HEAD 26
TABLE 19 AVERAGE NUMBER OF MONTHS OF STAPLE FOOD PRODUCED BY POVERTY 27
TABLE 20 STARTER PACK RECIPIENTS BY REGION 28
TABLE 21 STARTER PACK RECIPIENTS BY SEX OF HEAD OF HOUSEHOLD 28
TABLE 22 STARTER PACK RECIPIENTS BY SPHERE OF INFLUENCE 29
TABLE 23 STARTER PACK RECIPIENTS BY POVERTY 29
TABLE 24 HOW STARTER PACK MAIZE WAS USED BY POVERTY 30
TABLE 25 HOW STARTER PACK MAIZE WAS USED BY SPHERE OF INFLUENCE 31
TABLE 26 HOW STARTER PACK LEGUME SEED WAS USED BY REGION 31
TABLE 27 HOW STARTER PACK LEGUME SEED WAS USED BY SEX OF HOUSEHOLD HEAD 32
TABLE 28 HOW STARTER PACK LEGUME SEED WAS USED BY POVERTY 33
TABLE 29 HOW STARTER PACK LEGUME SEED WAS USED BY SPHERE OF INFLUENCE 33
TABLE 30 PRICE HOUSEHOLD WOULD BE WILLING TO BUY THE STARTER PACK FOR CASH BY REGION 36
TABLE 31 PRICE HOUSEHOLD WOULD BE WILLING TO BUY THE STARTER PACK FOR CASH BY SPHERE OF INFLUENCE 36
TABLE 32 PRICE HOUSEHOLD WOULD BE WILLING TO BUY THE STARTER PACK FOR CASH BY SEX OF HEAD OF HOUSEHOLD 37
TABLE 33 PRICE HOUSEHOLD WOULD BE WILLING TO BUY THE STARTER PACK FOR CASH BY POVERTY CATEGORY 37
TABLE 34 PRICE HOUSEHOLD WOULD BE WILLING TO BUY STARTER PACK WITH CREDIT AT 49% INTEREST BY REGION 38

TABLE 35 PRICE HOUSEHOLD WOULD BE WILLING TO BUY STARTER PACK WITH CREDIT AT 49% INTEREST BY SEX OF HEAD OF HOUSEHOLD 39
TABLE 36 PRICE HOUSEHOLD WOULD BE WILLING TO BUY STARTER PACK WITH CREDIT AT 49% INTEREST BY POVERTY 39
TABLE 37 NUMBER OF WEEKS WILLING TO DO CHITUKUKO FOR STARTER PACK 40
TABLE 38 PARTICIPATION IN STARTER PACK FOR WORK BY GENDER 41
TABLE 39 PARTICIPATION IN STARTER PACK FOR WORK BY POVERTY 41
TABLE 40 PARTICIPATION IN STARTER PACK FOR WORK BY REGION 42
TABLE 41 AVERAGE PRICE HOUSEHOLDS WOULD BE WILLING TO PAY FOR PACK COMPONENTS BY GENDER 43
TABLE 42 WILLINGNESS TO PAY BY POVERTY 44
TABLE 43 MAIN SOURCES OF INCOME BY POVERTY 45
TABLE 44: MAIN SOURCES OF INCOME BY GENDER 46
TABLE 45 MAIN SOURCES OF INCOME BY REGION 46
TABLE 46 INCOME FROM STARTER PACK BY GENDER 47
TABLE 47 PERCENTAGE OF SALES CONTRIBUTED BY SP1 PRODUCTS BY GENDER 47
TABLE 48 PERCENTAGE OF SALES CONTRIBUTED BY SP PRODUCTS, 1998-1999, BY POVERTY 48
TABLE 49 IN THIS SEASON (1999/2000), DID YOU PLANT ANY CROPS WHICH YOU WOULD NOT HAVE PLANTED IF YOU HAD NOT HAD THE STARTER PACK? 49
TABLE 50 IN THE 1999-2000 SEASON, WILL YOU SELL ANY CROPS WHICH YOU WOULD NOT HAVE SOLD IF YOU HAD NOT HAD THE STARTER PACK? 50
TABLE 51 DID THE SPS MAKE IT EASIER FOR YOU OR YOUR FAMILY MEMBERS TO WORK FOR OTHERS? 51
TABLE 52 AVERAGE NUMBER OF DAYS SPENT WORKING FOR OTHERS DURING LAST WEEDING PERIOD BY REGION 51
TABLE 53 AVERAGE NUMBER OF DAYS SPENT WORKING FOR OTHERS DURING LAST WEEDING PERIOD BY SPHERE OF INFLUENCE 52
TABLE 54 AVERAGE NUMBER OF DAYS SPENT WORKING FOR OTHERS DURING LAST WEEDING PERIOD BY SEX OF HEAD OF HOUSEHOLD 52
TABLE 55 AVERAGE NUMBER OF DAYS SPENT WORKING FOR OTHERS DURING LAST WEEDING PERIOD BY POVERTY CATEGORY 53
TABLE 56 HAS STARTER PACK IMPROVED YOUR ABILITY TO ACQUIRE CREDIT? 54
TABLE 57 HAS STARTER PACK IMPROVED YOUR ABILITY TO MAKE SAVINGS? 54
TABLE 58 HAS STARTER PACK AFFECTED COMMUNITY RELATIONS IN THE VILLAGE? 55
TABLE 59 WHICH GROUP HAS BENEFITED MOST FROM STARTER PACK? 55

LIST OF ACRONYMS

ADD	Agricultural Development Division
ADMARC	Agricultural Development and Marketing Cooperation
APIP	Agricultural Productivity Investment Project
BLADD	Blantyre Agricultural Development Division
DFID	Department For International Development
EPA	Extension Planning Area
FEWS	Famine Early Warning System
GOM	Government of Malawi
IGA	Income Generating Activity
KADD	Kasungu Agricultural Development Division
KRADD	Karonga Agricultural Development Division
LADD	Lilongwe Agricultural Development Division
MADD	Machinga Agricultural Development Division
MOAI	Ministry of Agriculture and Irrigation Development
MZADD	Mzuzu Agricultural Development Division
PRA	Participatory Rural Appraisal
RDP	Rural Development Project
RTC	Residential Training Centre
SFFRFM	Smallholder Farmer Fertiliser Revolving Fund of Malawi
SLADD	Salima Agricultural Development Division
SP1	1998/99 Starter Pack programme
SP2	1999/2000 Starter Pack programme
SPLU	Starter Pack Logistics Unit
SPS	Starter Pack Scheme
SPSS	Statistical Package for Social Sciences
SSC	Statistical Services Centre
SVADD	Shire Valley Agricultural Development Division
VAM	Vulnerability Assessment and Mapping

CHAPTER 1: INTRODUCTION

Background

The 1999-2000 Starter Pack Evaluation Programme concerned the National Level Starter Pack campaign under which the intention was that each rural household with land is provided with one pack containing 0.1 hectare worth of fertiliser and seed in time for the start of the rains. This was the second year of the Starter Pack campaign (SP2). The key objective of the Starter Pack campaign was to increase household food availability and combat household food insecurity. The 1998/99 and 1999/2000 Starter Pack campaigns were both designed to cover all rural smallholder households, rather than attempting to target beneficiaries based on areas of income/wealth groups. Nevertheless, it is likely that the campaigns might have had differential impact and it would be interesting to policy makers, if the differential welfare impact of the Starter Pack campaign on households were measured. The SP1 evaluation included a rudimentary attempt to assess farmers' willingness/capacity to pay for the Starter Pack in future, if funding for the packs would be reduced or withdrawn. The module 2-evaluation study was, therefore, intended to extend this analysis with the objective of providing a more reliable farmer valuation of the Starter Pack Scheme (SPS).

Overall objective of the study

The Module 2 evaluation study was commissioned in an attempt to assess the differential impact of the Starter Pack campaign on household food insecurity, assessing how Starter Pack inputs were used by different categories of households (measured by wealth and or landholding size), location, who benefited from the scheme and its impact on overall village welfare. It was meant to collect evidence which would be useful in the design of future safety net/poverty targeting programmes. It was also aimed at assessing different categories of farmers' willingness/capacity to pay for Starter Packs under a low or zero subsidy.

Expected outcomes and deliverables

The expected outcomes and deliverables of the Study have been to provide evidence on:

- The overall impact of Starter Pack campaign on household food security and welfare distinguishing between short and medium-term impact
- The differential impact of Starter Packs on households according to vulnerability.
- The use of Starter Pack inputs by different wealth groups, and how they benefited.
- The difference in Starter Pack impact between male- and female head households.
- Farmer's willingness and ability to pay for the pack with cash or labour if the subsidy were partially or fully withdrawn including whether the responses would vary according to the contents of the pack.

CHAPTER 2: METHODOLOGY AND FRAMEWORK OF THE STUDY

The study was implemented in two phases: the preliminary study and the main study.

The preliminary PRA study

The Participatory Rural Appraisal (PRA) studies carried out in the preliminary phase aimed to study a range of agricultural environments and poverty levels, which would help us to design the questionnaire for the main study. Using the Vulnerability Assessment and Mapping (1996)[1], six Extension Planning Areas (EPAs), stratified by level of poverty and sphere of influence, were sampled using systematic random sampling method. The intention was to sample two EPAs from the least poor cluster (dark green, light green), two from the moderately poor cluster (yellow) and two from the extremely poor cluster (orange, red). Due to a misclassification, the sample in fact contained only one village in the moderate poverty category while it had three in the least poor cluster (see Table 1). We believe that this did not greatly affect the results.

Table 1 EPAs visited in preliminary study

	Sphere of Influence		
Poverty Index	IGA	Mixed Agriculture	Maize
Green, light green		Nyambi, Mbawa	Mdolera
Yellow	Bilira		
Orange, red	Ulongwe		Chingale

Fieldwork for the preliminary study commenced on 15 February in the six sample EPAs. In each EPA, one village was randomly selected. Various PRA techniques such as Mapping, Ranking, Scoring, Timeline and Seasonal Calendar were applied to gain insight of the villages as regards information on household wealth categories, status of food security, Starter Pack inputs usage by various wealth categories, differential impact of Starter Pack between male- and female-headed households and the extent of households' willingness to pay for Starter Pack at a subsidised rate. In each village 10 households were randomly sampled for the interviews. A total of 54 sample

[1] Malawi Vulnerability Assessment and Mapping (VAM) Baseline 1996: A Quest for Causality, by L. Moriniere, S Chimwaza (USAID/FEWS Project) and E Weiss (University of Arizona), December 1996.

households were interviewed using a structured questionnaire. Data collection for the Preliminary study was successfully completed on 25 February and data processing finished on 2 March. From 2-5 March, the consulting team together with the managers of the study from Statistical Services Centre, Reading University, discussed the results, whose findings provided essential information for designing the main study questionnaire.

The framework of the main study

The main study comprised a household survey with a sample size of 1,200 households drawn from 120 villages distributed in 30 EPAs which were stratified using the FEWS Vulnerability Assessment Mapping (VAM) Poverty Index and Sphere of Influence clusters. The selected households were interviewed using a short, concise questionnaire that was administered by enumerators.

Sampling and sample design

The Starter Pack programme targeted all smallholder households throughout Malawi. Consequently, the survey used the smallholder households as its final sample unit. Smallholder household heads were included in the sample irrespective of whether they received Starter Pack or not because one of the key objectives of Module 2 was to ascertain whether households received and used a Starter Pack in the way the government envisaged or whether some households did not receive a Starter Pack or did not use the Starter Pack as intended for various reasons.

A multi-stage sample design was used for our study. In the first stage, the sampling units were EPAs. The 154 EPAs in the country were stratified according to the VAM (1996) Poverty Index and Sphere of Influence clusters (see Appendix 1). The EPAs were then sampled using stratified sampling and the allocation of the sample was equal number of EPAs for all Poverty Index groups and proportional to the size of the Sphere of Influence cluster (see Table 2).

In the second stage, the sampling unit was the village. In each of the selected EPAs, a complete list of villages from Starter Pack Logistics Unit (SPLU) villages database was used to draw a sample of four villages by simple random sampling.

At the third stage, the sampling unit was the smallholder household head. In each village, a complete list of household heads was compiled and 10 household heads

were sampled using a linear systematic sampling procedure. The final sample size from 30 EPAs and 120 villages was 1,200 household heads.

Table 2 Sample distribution based on proportional allocation

Sphere of Influence	Poverty Index					
	Dark green	Light green	Yellow	Orange	Red	Total
Estate	1	1	0	1	1	4
IGA	1	2	2	2	2	9
Maize	3	1	1	1	1	7
Mixed Agriculture	1	1	2	1	2	7
Urban	0	1	1	1	0	3
Total	6	6	6	6	6	30

Implementation of the main study

The preliminary study provided the framework of information that was used for designing the questionnaire for the main study (see Appendix 2). The designing of the structured questionnaire for the main study took place from 2-5 March. From 8-11 March, pretesting of the questionnaire was conducted in two villages in Zombwe EPA, Mzuzu ADD. Following the observations made during the pre-testing phase, a few modifications were made on the original questionnaire. Complete printouts of 1,500 questionnaires and 50 training manuals were ready on 25 March.

Training of field workers

Training of 24 Enumerators and 8 Supervisors took place from 28-31 March at Mponela and Zomba RTCs. At both venues, the first day was spent on familiarising the enumerators with the survey, which included such general issues as the reasons why the survey was held, its relevance to national and local development, the rationale of sampling and topics included in the survey. During the second day, the contents of the survey were explained in detail. Each individual question, concepts definitions, coverage, reference periods and interrelationships between different questions were fully explained. During the third day fieldworkers were on practicals where data collection methods were practised using various interviewing techniques. Each enumerator was then given an opportunity to interview at least two households. At the end of the training sessions an action plan was drawn up for fieldwork.

Management of field work

Soon after the training, supervisors were given a list of sample villages in each EPA (see Appendix 3). Effective fieldwork commenced on 4 April in all the three regions of the country. Initially, supervisors and enumerators embarked on a complete household listing and sampling of the household units in all the 120 sample villages. In each village, 10 household heads were then randomly sampled by the supervisors. Immediately after household sampling, enumerators embarked on household interviews. Field supervision was done by the eight supervisors and final checking of field forms was done by the consultants. Supervisors constantly worked with the enumerators to ensure that enumerators were following correct procedures of data collection. Once reasonable quantities of data was gathered, office-based checking was conducted to assess the overall consistency and plausibility of the data. All 1,200 questionnaires were finally collected and brought to Mzuzu ADD office on 15 May.

Data processing

Data was entered using a data entry form written in Dbase IV designed by a programmer contracted by the consultants. In order to prepare the raw data for statistical analysis and presentation, data cleaning and validation was made by producing summaries of the variables under study. The final version of the raw data was an SPSS file. Data was analysed using SPSS for Windows Version 9.

CHAPTER 3: THE DESCRIPTION OF THE SAMPLE

The 1999/2000 Starter Pack programme covered some 2.8 million smallholder households. The survey interviewed 1,200 household heads. The national distribution of the sample comprised 13.3%, 46.7% and 40% for the northern, central and southern regions respectively as shown in Table 3.

Table 3 Sample size distribution by ADD and region

ADD	Number	Regional %	National %
Karonga	40	25.0	3.3
Mzuzu	120	75.0	10.3
Northern Region	**160**	**100.0**	**13.3**
Salima	120	21.4	10.0
Kasungu	160	28.6	13.4
Lilongwe	280	50.0	23.3
Central Region	**560**	**100.0**	**46.7**
Machinga	280	58.3	23.3
Blantyre	80	16.7	6.7
Shire Valley	120	25.0	10.0
Southern Region	**480**	**100.0**	**40.0**
Total	**1,200**		**100.0**

The overall sample comprised 61% male and 39% female-headed households (see Table 4). Malawi's national average for female-headed households was 33% in the early 1990s[2]. This is one of the categories of smallholder farmers that is more vulnerable to poverty in general and food insecurity in particular (see Chapter 4). As regards the marital status of the household heads, 72.5% of the household heads in our sample were married, 11.0% were widowed/widower, 7.9% were divorced and 3.1% were single.

Farming is the predominant economic activity among the smallholder households as evidenced by the survey results which show that 93% of the sample households consider farming to be their main occupation. There are slight regional variations: 99% in the northern region, 95% in the central region and 86% in the southern region.

[2] Malawi Government (1994): The Situational Analysis of Poverty in Malawi.

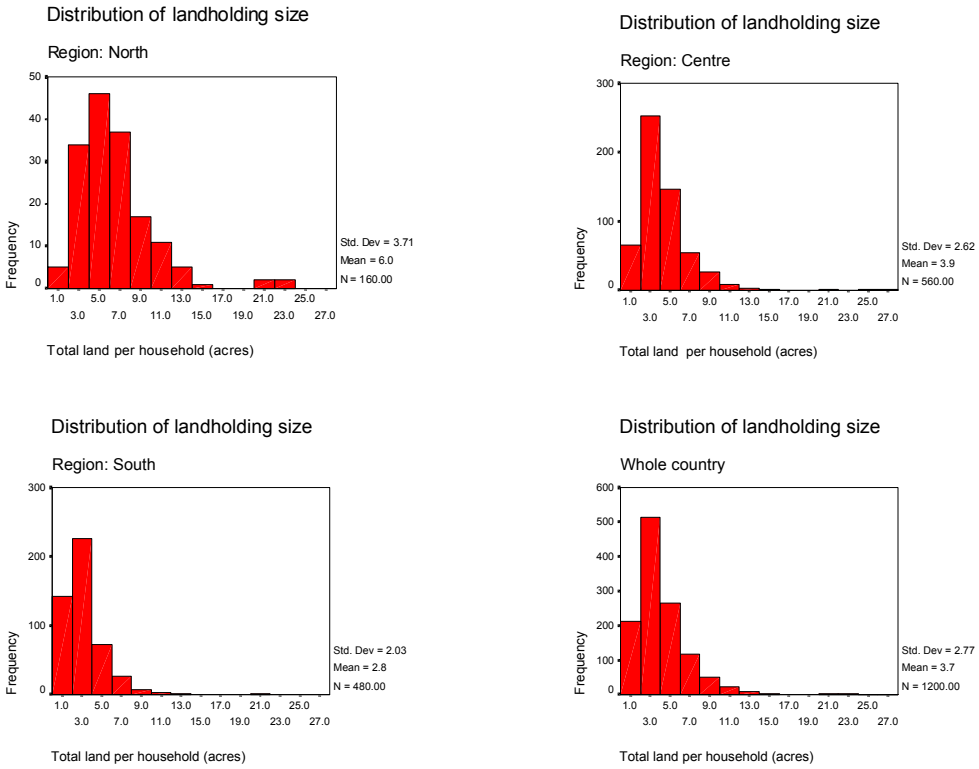
Table 4 Sample distribution by sex of household head

ADD	Male		Female		Total	
	N	%	N	%	N	%
Karonga	19	47.5	21	52.5	40	100
Mzuzu	71	59.2	49	40.8	120	100
Northern Region	**90**	**56.3**	**70**	**43.8**	**160**	**100**
Salima	92	76.7	28	23.3	120	100
Kasungu	118	73.8	42	26.3	160	100
Lilongwe	171	61.1	109	38.9	280	100
Central Region	**381**	**68**	**179**	**32.0**	**560**	**100**
Machinga	148	52.9	132	47.1	280	100
Blantyre	23	28.8	57	71.3	80	100
Shire Valley	86	71.7	34	28.3	120	100
Southern Region	**257**	**53.5**	**223**	**46.5**	**480**	**100**
Total	**728**	**60.7**	**472**	**39.3**	**1200**	**100**

Figure 1 shows the distribution of landholding size among our respondents. Nationally, the survey results show that 3.7 acres (1.48 hectares) is the mean landholding size of the sample households. However, the results show that there are regional variations in the mean holding size: the northern region had the highest mean land holding size of 6.0 acres (2.4 hectares), with the central and southern regions having mean land holding sizes of 3.9 acres (1.56 hectares) and 2.8 acres (1.12 hectares) respectively. The size of landholding has a significant impact on households' food and cash crop production, as well as on the use of improved food crop production technologies.

The household size of the sample households shows some variation between regions. The mean household size for the northern, central and southern regions are 5.2, 5.0 and 4.6 respectively (see Table 5). The mean family size is likely to have an impact on household labour supply for agricultural production (see Chapter 8).

Figure 1 Distribution of landholding sizes



The inheritance tradition of the sample households also shows significant variation among the regions. In the northern region, 92.5% of households follow the patrilineal system of inheritance while in the central region 53.9% of the sampled households follow the patrilineal system of inheritance (see Table 6). In the southern region, 51.9% of households in our sample follow the patrilineal system; this appears higher than we would have expected and is probably not a reflection of the south as a whole but of the particular villages in our sample.

Table 5 Number of people living in the household

	Region			
	North	Centre	South	Total
Minimum	1	1	1	1
Mean	5.2	5.0	4.6	4.9
Maximum	14	15	15	15
Std Deviation	3	2	2	2
Valid N	160	560	480	1,200

Table 6 Sample composition by inheritance tradition

	Region			
	North %	Centre %	South %	Total %
Patrilineal	92.5	53.9	51.9	58.3
Matrilineal	7.5	46.1	48.1	41.8
Total	100	100	100	100

Constructed livestock assets-based poverty index

During the preliminary study, respondents were asked to define a wealthy household in their socio-economic environment. Various indicators such as type of housing, possession of livestock and other assets and landholding size were discussed as a means of distinguishing households by their wealth status. Number of livestock assets owned was found to be a widely accepted indicator of wealth.

Table 7 Sample distribution by 'livestock assets-based index'

Category	Category number	Category Description	Number	%
No livestock	1	Very poor	302	25.2
Up to 4 chicken	2	Poor	203	16.9
Small number of chicken and/or goats	3	Moderately poor	280	23.3
Larger number of chicken and/or goats	4	Wealthier	287	23.9
Cattle and/or large number of goats and/or chicken	5	Wealthiest	128	10.7
Total			1200	100.0

Therefore in the main study questionnaire households were asked about the numbers of different types of livestock owned. The results were used to construct a 'livestock assets-based poverty (wealth) index'. This index was tested against other variables such as landholding size, degree of food self-sufficiency and household type, which are generally thought to be good indicators of poverty/wealth. It was found that the constructed index had a positive correlation with landholding size and degree of food self-sufficiency. The 'livestock assets-based index' has therefore been used when analysing the results of the main study to describe the wealth status of households in

our sample (see Table 7) and to distinguish the effects of Starter Pack on households in different poverty categories.

When we began the study, our hypothesis was that housing type might be used as a simple indicator of poverty, since it is frequently used for this purpose in other countries. In the questionnaire, information about housing type was included (see Section A of Appendix 3, which contains a factorial arrangement allowing a potential 18 different types of house). However, when the main resulting houseing types were compared with other poverty variables - landholding size, number of months which own food production lasted in 1998/99 and livestock assets - there was found to be no relationship. Using the Spearman Correlation Coefficient, it was found that the correlation coefficient of housing type and land holding size was -0.02, the correlation coefficient of housing type and number of months own food production lasted in 1998/99 was 0.01 and the correlation coefficient of housing type and our livestock-assets based index was 0.124. All these correlation coefficients were insignificant. This suggests that housing type is not in fact a good indicator of poverty/wealth in Malawi. As a result, housing type has not been used as an indicator of wealth when analysing the results of the main study.

CHAPTER 4: HOUSEHOLD FOOD SECURITY

The overall objective of the Malawi Government policy on food security is to achieve improved food security and nutritional status of all households[3]. In order to accomplish its objective, the Starter Pack Scheme was launched in 1998/99 growing season, providing free inputs to farm families. Household food security has predominantly been associated with self-sufficiency in the production of maize. In the survey, 98.9% of smallholder households said that maize is one of their main staple foods (see Table 8).

Table 8 Smallholder households' main staple food

Main staple food	Count	Cases* %
Maize	1187	98.9
Rice	34	2.8
Millet	44	3.7
Cassava	162	13.5
Sorghum	16	1.3
Total	1443	120.3

*1200 valid cases.

Approaches used to assess the net impact of Starter Pack

The study has used three approaches to assess the impact of Starter Pack on food production and household food security:

- production has been compared on a year-to-year basis, comparing SP1 and SP2 years with 1997/98 (the year before the SPS was introduced).
- a control group has been used to compare food production and household food security of non-recipients with that of Starter Pack recipients.
- we have used farmers' perception on the impact of Starter Pack on food self-sufficiency (measured by number of months own food lasted in 1998/99).

While each approach has its weakness in assessing the impact of Starter Pack, the triangulation of the three approaches gives us robust confidence in assessing the impact of Starter Pack on food production and household food security.

[3] Malawi Government (1999), Food Security and Nutrition Bulletin.

The objective of the Starter Pack Scheme was to target all rural smallholder households. Hence there was no control group of non-recipients included in the design of the SPS. Nevertheless, the survey results revealed that there were some households in the sample who did not receive Starter Pack either in 1989/99 (16.1%) or in the 1999/2000 (15.7%). In order to determine the effects of Starter Pack Scheme on food production and household food security, there was need to have a control group of smallholder households and it was decided to use the non-Starter Pack recipients as the control group.

The non-Starter Pack recipient households can be used as control because they display almost similar characteristics with households who received Starter Pack in terms of household size, housing type, landholding size, age, sex, inheritance pattern and marital status. However, they displayed some differences in terms of poverty: slightly more poor households are found among non-Starter Pack recipients. Therefore, when interpreting the comparisons between recipients and non-recipients, we should be aware of the possible confounding effect of differences in poverty levels between the two groups.

Maize production

The survey asked questions about maize production in both SP1 and SP2. In Malawi, the essential element of household food self-sufficiency is the level of food availability attributed to food production by the household itself, rather than food availability on the market.

The objective was to assess the net impact of Starter Pack on production of maize. The findings show that maize production by Starter Pack recipients in the 1998/99 growing season was 5.0 50-kg bags higher than in the 1997/98 growing season (see Table 9), while expected maize production for 1999-2000 was 4.3 50-kg bags higher than in 1997/98. The 1997/98 growing season has been used as a base to compare maize production with SP1 and SP2 years because it is the most recent growing season without Starter Pack Scheme.

The difference in maize production between those sample households who received and those who did not receive Starter Pack was 5.7 50-kg bags for the 1998/99 season and was expected to be 2.4 50-kg bags in the 1999/2000 season.

The variation of maize production between years is largely attributed to the distribution and amount of rainfall as well as the amount of hybrid seed and fertiliser available. The 1997/98 growing season was bad due to poor weather while the 1998/99 witnessed a bumper harvest due to increased use of hybrid seed and fertiliser provided by the government and donor initiatives (including - but not only - Starter Pack). In 1999/2000, bad weather affected production in the southern ADDs of Machinga, Blantyre and Shire Valley. The question of disentangling with the effects of climate and government initiatives on overall maize production is quite a difficult one and challenges the efforts of isolating the effects of Starter Pack Scheme on maize production. However, the use of a control group in the survey sample provides the insight of Starter Pack influence on increased maize production. This is evident from the results of the study which show that in both Starter Pack years, sample households who received the packs produced significantly more maize than those who did not receive Starter Pack (see Table 9).

Table 9 Mean production of maize by region (50-kg bags)

	1997/98	Received SP or not in 1998-1999		Received SP or not in 1999-2000*	
Region		Yes	No	Yes	No
North	12.9	18.1	17.8	18.7	13.8
Centre	12.4	17.5	13.0	18.6	15.6
South	6.1	10.7	5.1	7.9	5.6
Malawi	10.0	15.0	9.3	14.3	11.9

*Farmers' forecasts.

As regards wealth status, the survey results (See Table 10) indicate that wealthier households with larger cropped areas and livestock are able to produce greater quantities of food maize both in bad years and good years. Nevertheless, while starting from a low base, the poorest category of sample households who received Starter Packs increased their mean maize production by 4.1 50-kg bags in 1998/99 compared with 1997/98 and expected to produce 3.4 50-kg-bags more in the 1999/2000 season than in 1997/98. For the wealthiest, the increase compared with 1997/98 is 3.6 50-kg bags in 1998/99 and 4.7 50-kg-bags in 1999/2000 (expected).

In the poorest category of households, Starter Pack recipient farmers produced 4.0 50-kg bags more than non-recipients in 1998/99, but expected to produce only 1.3 50-kg bags more in 1999/2000. We are unable to make similar comparisons for the

wealthiest households (category 5) as the sample size is too small for non-recipients, but in category 4, recipients produced 5.2 50-kg bags than non-recipients in 1998/99 but expected to produce only marginally more than non-recipients in 1999/2000.

Table 10 Mean production of maize by poverty category (50-kg bags)

	1997/98	Received SP or not in 1998-1999		Received SP or not in 1999-2000*	
Poverty Category		Yes	No	Yes	No
1	4.8	8.9	4.9	8.2	6.9
2	7.7	12.7	5.3	11.5	8.3
3	9.1	14.2	7.3	14.0	13.5
4	12.8	18.5	13.3	17.3	17.0
5	21.5	25.1	34.7[+]	26.2	17.1[++]

*Farmers' forecasts. [+] Sample size 16. [++] Sample size 18.

Mean production of maize by sex of household heads was also analysed (see Table 11). Female-headed households who received Starter Packs in the 1998/99 produced 5.3 50-kg bags more on average than their non-recipient counterparts. In the 1999/2000 growing seasons they expected to produce 3.2 50-kg bags more on average than those who did not receive Starter Pack. The study results further show that the male-headed households who received Starter Pack in the 1998/99 growing season produced 5.3 50-kg bags more than the control group on average, but expected to produce only 1.9 50-kg bags more than the control group in 1999/2000.

Table 11 Mean production of maize by sex of household head (50-kg bags)

Sex of head of household	1997-1998	Received SP in 1998-1999		Received SP in 1999-2000*	
		Yes	No	Yes	No
Male	11.3	17.2	11.9	16.6	14.7
Female	8.0	11.5	6.2	10.7	7.5
Malawi	10.0	15.0	9.3	14.3	11.9

*Farmers' forecasts.

Legume production

Legumes were included in the Starter Pack with the objective of improving soil fertility and income for the smallholder households. The legumes provided were basically groundnuts, soya beans and *Phaseolus* beans. The survey findings (see Table 12) show that respondents who received Starter Pack in 1998/99 and 1999/2000

growing seasons increased mean production of legumes by respectively 29% and 30% (expected) over 1997/98. Starter Pack recipients produced 2.4 50-kg bags of legumes on average in SP1 and SP2, compared with 1.6 50-kg bags and 2.1 50-kg bags respectively for non-recipients. However, the national figures disguise big regional variations. The study shows that in SP1, the southern region registered the highest increase in mean legume production (whether comparing year-on-year or using the control group), while there was little variation in the northern region. This scenario can probably be attributed to Starter Pack distribution problems with the legume component of the pack in the north. However, in 1999/2000 growing season the Starter Pack appears to have contributed to higher legume production in the northern region, while the south had virtually no incremental legume production, possibly due to climatic problems.

Table 12 Total legume production by region (50-kg bags)

	1997/98	Received SP or not in 1998-1999		Received SP or not in 1999-2000*	
Region		Yes	No	Yes	No
North	3.1	3.0	3.1	3.5	2.4
Centre	2.2	2.9	2.7	3.3	2.7
South	1.0	1.6	0.7	1.1	1.1
Malawi	1.9	2.4	1.6	2.4	2.1

*Farmers' forecasts.

Figures in Table 13 show total legume production by the wealth status of the sample households. In the 1998/99 growing season, mean legume production for the Starter Pack recipients directly increases in line with wealth. The poorest households who received Starter Pack had mean legume production of 1.2 50-kg bags in 1998/99 compared with 5.1 50-kg bags in the wealthiest category. When comparing Starter Pack recipients and the control group, we can see that in the 1998/99 season, the recipients among the poorest households produced 1.2 50-kg bags, compared with production of 0.4 bags by non-recipients. In the 1999/2000 season non-recipients in the poorest category produced more than Starter Pack recipients, but the trend is reversed in poverty categories 2 and 3 (poor and moderately poor). For the wealthiest category, Starter Pack recipients produced more legumes than non-recipients in both years.

Table 13 Total legume production by poverty category (50 kg bags)

	1997/98	Received SP or not in 1998-1999		Received SP or not in 1999-2000*	
Poverty Category		Yes	No	Yes	No
1	0.7	1.2	0.4	1.2	1.7
2	1.2	1.7	3.5	2.8	1.5
3	1.8	2.4	0.5	2.4	1.7
4	2.6	2.7	1.6	2.6	2.9
5	4.3	5.1	4.3	4.1	3.0
Malawi	1.9	2.4	1.6	2.4	2.1

* Farmers' forecasts.

Table 14 shows that female-headed households who received Starter Pack produced significantly more legumes than non-recipients in both the 1998/99 and 1999/2000 growing seasons. Male-headed households who received Starter Pack in 1998/99 produced more legumes than non-recipients, but slightly less in the 1999/2000 season. Irrespective of the variations in climatic conditions between the two Starter Pack years, the results show that female-headed households had a higher net gain of legume production in both years than male-headed households.

Table 14 Total legume production by sex of head of household (50 kg bags)

	1997/98	Received SP or not in 1998-1999		Received SP or not in 1999-2000*	
Sex of head of household		Yes	No	Yes	No
Male	2.0	2.7	2.3	2.8	2.9
Female	1.7	1.9	0.9	1.8	0.9
Malawi	1.9	2.4	1.6	2.4	2.1

*Farmers' forecasts.

Perceptions of maize and legume contribution

The survey sought farmers' views on Starter Pack's contribution to maize and legume production in order to assess the impact of the SPS from the farmers' perspective. The survey asked SP recipients to estimate how much of their total maize and legume production came from the pack in 1998/99 and was expected to come from it in 1999/2000.

Starter Pack contribution to maize production

At national level, farmers estimated a positive average net contribution of 3.7 50-kg bags to the 1998/99 crop and 3.5 50-kg bags to the 1999/2000 crop (see Table 15). The contribution is slightly higher for the 1998/99 season than the 1999/2000 season probably because 1998/99 was comparatively a better season in terms of weather than 1999/2000. Added to this effect might be the reason that 1998/99 farmer responses were based on actual production while those of 1999/2000 were forecasts, as the survey was conducted at a time when they had not yet harvested their 1999/2000 crop.

Table 15 Perception of SP contribution to total maize production (50-kg bags)

	1998/99	**1999-2000***
Malawi	3.7	3.5
Sex of household head		
Male	4.0	3.9
Female	3.4	2.9
Region		
North	3.7	2.9
Centre	3.9	4.4
South	3.6	2.8
Poverty categories		
1	3.0	2.6
2	3.6	3.3
3	3.9	3.8
4	4.1	4.1
5	4.6	3.8

*Farmers' forecast.

Regional comparison of results shows little difference between regions in terms of perception of Starter Pack contribution to total grain production for the 1998/99 growing season. However, there are significant differences for the 1999/2000 season, with central region marking the highest perceived contribution to average total grain production (4.4 50-kg bags). Analyses based on gender suggest that male-headed households consider that they benefited more from Starter Pack than female-headed households in both growing seasons. Interestingly, there is little difference between SP1 and SP2 on the basis of perceived contribution, in contrast with results based on comparing recipients with non-recipients which suggest a low contribution of 1.9 bags in 1999/2000.

An analysis of Starter Pack's contribution to total maize production in relation to poverty show a clear relationship between the average number of 50-kg bags perceived to have been contributed by Starter Pack and poverty for the 1998/99 season, with wealthier farmers producing more than poor farmers. The same result is true in general terms for 1999/2000 season (poverty category 5 is a slight exception).

Starter Pack contribution to legume production

Nationally, the results based on perception suggest that Starter Pack had a net contribution to legume production of 0.8 50-kg bags per farmer in 1998/99 and 0.6 bags (expected) in 1999/2000. Again the contribution is slightly higher for the 1998/99 season than the 1999/2000 season, probably due to poor weather in the south and delayed distribution of legume seed in the north. In contrast with our analysis based on comparison of recipients and non-recipients, the perceptions-based analysis suggests low levels of legume production attributable to Starter Pack in the north in 1999/2000.

Table 16 Perception of SP contribution to legume production (50-kg bags)

	1998/99	**1999-2000***
Malawi	0.8	0.6
Sex of household head		
Male	0.8	0.7
Female	0.8	0.5
Region		
North	2.3	0.4
Centre	0.7	0.8
South	0.4	0.4
Poverty categories		
1	0.5	0.4
2	0.6	0.4
3	0.9	0.7
4	0.7	0.6
5	1.9	1.1

*Farmers' forecast.

Relating Starter Pack contribution to total legume production in terms of sex of household head shows little difference between sex of household head in SP1, but suggests that male-headed households consider that they benefited more in SP2. In

terms of poverty, the general trend is similar to our year-on-year comparison and recipient/non-recipient comparison results, with the wealthy benefiting most from the Starter Pack's contribution to total legume production in both years.

Food self-sufficiency

The survey measured an increase in food self-sufficiency for smallholder households in terms of an increase in months of food stocks. In order to maximise the reliability of the answers, the question first set the scene by asking "How long did your staple food production last?" and then asked specifically "When was your harvest month?" and "When did your food run out?" (last month of food). The enumerator then calculated the difference between harvest month and last month of food and the calculations were checked by the supervisors and the consultants.

Among the households who received Starter Pack, the mean number of months which staple food lasted was 8.7 months and 8.0 months respectively in the 1998/99 and 1999/2000 growing seasons compared to 6.4 months in the base year of 1997/98 when there was no Starter Pack. For both SP1 and SP2, the results indicate that those who received Starter Pack had their food last longer than the control group. In SP1, recipients' food lasted 2.6 months longer than that of non-recipients on average, while in 1999/2000 it was expected to last 1.1 months longer. This indicates that Starter Pack has had a positive impact on food self-sufficiency.

Table 17 Average number of months of staple food by region

Region	1997-1998	Received SP in 1998-1999		Received SP in 1999-2000*	
		Yes	No	Yes	No
North	6.5	9.3	5.7	8.1	7.2
Centre	7.2	8.9	7.8	9.2	7.9
South	5.5	8.3	5.2	6.7	5.4
Malawi	6.4	8.7	6.1	8.0	6.9

*Farmers' forecast.

However, the regional comparison shows that northern and southern regions had higher than average net benefits from Starter Pack in terms of additional number of months of food in 1998/99 (see Table 17), while the central region had a lower than average net benefits. For the 1999/2000 growing season, on the other hand, the results suggest greater benefits for the north and centre than for the south in terms of

additional number of months food stocks were expected to last. Again, the result in the south is probably explained by the bad weather in Machinga, Blantyre and Shire Valley ADDs.

When comparing recipients with the control group in 1998/99 there was no significant difference. However, for 1999/2000 it was found that female-headed households expect to benefit more than male-headed households in terms of food self-sufficiency. This concurs with the result that female-headed households expected more gains in terms of production from SP2 than male- headed households in 1999/2000, as noted in our recipient/non-recipient comparison in Table 11. However, it contrasts with the perceptions of the contribution of Starter Pack to maize production in Table 15.

Table 18 Average number of months of staple food by sex of household head

	1997-1998	Received SP in 1998-1999		Received SP in 1999-2000*	
		Yes	No	Yes	No
Male	6.6	9.0	6.4	8.3	7.8
Female	6.1	8.3	5.8	7.5	5.5
Malawi	6.4	8.7	6.1	8.0	6.9

*Farmers' forecast.

Again, an analysis of the average number of months food stocks last based on the wealth/poverty categories for those that received Starter Pack suggests that poorer households benefited more. Both in terms of year-on-year comparisons and in terms of comparisons between Starter Pack recipients and non-recipients, the increase in average number of months of food stocks of the poorest categories in SP1 and SP2 is greater than that of the richer households (see Table 19)[4]. This implies that the Starter Pack programme assisted in improving food self-sufficiency for the most vulnerable group of smallholder households.

[4] The sample sizes for non-recipients in category 5 are too small to allow reliable control group comparisons for this category.

Table 19 Average number of months of staple food produced by poverty

Poverty category	1997/98	Received SP in 1998-1999		Received SP in 1999-2000*	
		Yes	No	Yes	No
1	5.0	7.6	5.1	7.0	5.4
2	5.5	8.3	4.6	7.3	6.0
3	6.5	8.7	6.4	8.3	7.6
4	7.6	9.5	8.0	8.9	7.9
5	8.3	9.8	10.1+	8.8	9.6++
Malawi	6.4	8.7	6.1	8.0	6.9

*Farmers' forecasts. + Sample size 16. ++ Sample size 18.

CHAPTER 5: STARTER PACK RECIPIENTS AND THE USE OF IMPROVED AGRICULTURAL INPUTS

Who received the Starter Pack

The study shows that 84% of the sampled households received Starter Pack both during the 1998/99 and 1999/2000 national level Starter Pack campaigns, with a slight increase in the percentage of recipients in the north and south and decrease in the centre between SP1 and SP2 (see Table 20).

Table 20 Starter pack recipients by region

	Region			Malawi
	North	Centre	South	
Year	%	%	%	%
1998/1999	83.1	89.1	78.1	83.9
1999/2000	91.3	80.9	86.0	84.3

The results depict a slight variation between male and female-headed households in terms of Starter Pack recipients for the 1998/99 campaign, as 85.6% of the sampled male-headed households received Starter Pack whilst only 81.4% of the sampled female-headed households received Starter Pack during the 1998/99 season. This is different from the 1999/2000 campaign, in which results show no difference (see Table 21).

Table 21 Starter pack recipients by sex of head of household

	Sex of head of household		Malawi
	Male	Female	
Year	%	%	%
1998/1999	85.6	81.4	83.9
1999/2000	84.2	84.5	84.3

An assessment in terms of Spheres of Influence shows that almost the same number of households received Starter Pack from spheres influenced by maize-dominated and mixed agriculture in 1998/99 and 1999/2000. However the results show a different scenario for EPAs classified as estate-dominated, IGA-dominated and urban-dominated agriculture. Slightly more households from spheres influenced by estates,

mixed agriculture and IGA-dominated agriculture received Starter Pack during the 1999/2000 Starter Pack campaign than in the 1998/99 campaign. On the other hand, far more households from the urban-dominated agriculture received Starter Pack during the 1998/99 Starter Pack campaign than they did in the 1999/2000 campaign (see Table 22). This variation might have been due to lack of control during the 1998/99 campaign on beneficiaries[5].

Table 22 Starter Pack recipients by Sphere of Influence

Sphere of Influence Categories	Received SP 1998/99	Received SP 1999/2000
	%	%
Maize- dominated	90.7	89.6
Mixed agriculture- dominated	85.0	89.6
Estate- agriculture dominated	77.5	82.5
IGA- dominated	78.6	82.2
Urban dominated	90.0	68.3
Malawi	83.9	84.3

In terms of poverty, it appears that there was a bias in favour of wealthier households in the 1998/99 distribution programme, which was greatly reduced in 1999/2000 (see Table 23). This probably coincides with the reduction in urban bias between SP1 and SP2.

Table 23 Starter Pack recipients by poverty

Piverty category	Received SP 1998/99	Received SP 1999/2000
	%	%
1	77.5	81.5
2	78.3	85.2
3	88.9	86.4
4	88.2	84.0
5	87.5	85.9
Malawi	83.9	84.3

[5] It was difficult for the incumbent government to bar urban households from benefiting for fear of losing political support in the impending elections as Starter Pack was seen as a major political campaign tool.

How households used Starter Pack inputs

In the Starter Pack campaign the pack comprised 2 kg of maize seed, 2 kg of legume seed, 5 kg of Urea and 10 kg of 23: 21: 0+4S. How farmers used the Starter Pack is important in assessing its impact on production. Our study attempted to assess how sampled households used each component of the Starter Pack.

Maize seed

Results of the study show that of those sampled households which received Starter Pack during the 1999/2000 campaign, 89.2% planted all of the maize seed that they received. The rest reported that they had either just planted some of it or eaten it or stored it or given it away or it was stolen or their packs were without the maize seed. When a comparison was made between male- and female-headed households, it was noted that more male-headed households which received Starter Pack planted all the maize seed (91%) than female-headed households (86%). An analysis of how maize seed was used in terms of our livestock-assets based poverty index shows that patterns of usage varied only slightly between poverty categories (see Table 24).

Table 24 How Starter Pack maize was used by poverty

	Poverty Categories					
	1	2	3	4	5	Malawi
	%	%	%	%	%	%
Didn't receive	0.8	0.6	0.8	0.4	0.0	0.6
Planted all of it	86.2	88.4	90.9	90.5	90.9	89.2
Planted some of it	5.7	4.6	2.9	3.7	4.5	4.2
Ate it	0.8	0.0	0.4	0.4	0.0	0.4
Stored it	4.5	5.8	4.5	4.6	2.7	4.5
Gave it away	1.6	0.0	.4	0.4	0.9	0.7
Stolen	0.4	0.6	0.0	0.0	0.9	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Relating use of maize seed to Spheres of Influence shows that in maize-dominated, estate-dominated and IGA-dominated agriculture, more households of those who received Starter Pack in the 1999/2000 campaign planted all the maize seed than households in mixed agriculture and urban-dominated agriculture (see Table 25).

Table 25 How Starter Pack maize was used by Sphere of Influence

	Sphere of Influence Categories					
	Maize-dominated	Mixed agriculture-dominated	Estate-agriculture dominated	IGA-dominated	Urban-dominated	Malawi
	%	%	%	%	%	%
Didn't receive	0.8	0.4	0.0	0.3	2.4	0.6
Planted all of it	91.2	79.7	90.2	96.3	85.4	89.2
Planted some of it	3.6	8.4	6.1	0.7	3.7	4.2
Ate it	0.8	0.4	0.8	0.0	0.0	0.4
stored it	3.2	9.6	2.3	2.4	4.9	4.5
Gave it away	0.4	0.4	0.8	0.3	3.7	0.7
Stolen	0.0	1.2	0.0	0.0	0.0	0.3
	100.0	100.0	100.0	100.0	100.0	100.0

Legume seed

Legume seed was incorporated in the Starter Pack with an aim of improving soil fertility amongst smallholder gardens. Achievement of this aim, however, greatly depends on how beneficiaries used the legumes. Results of the survey show that the majority (64.6%) of the sampled households who received Starter Pack in the 1999/2000 growing season planted all the legume seed. It is interesting to note that 20% of the sampled households who received Starter Pack in the season ate the legume seed. Perhaps this happened because of late receipt of Starter Pack in some areas of the country or merely due to the fact that the recipients were after satisfying their immediate consumption needs.

Table 26 How Starter Pack legume seed was used by region

	Region			
	North	Centre	South	Malawi
	%	%	%	%
Didn’t receive	20.0	2.7	1.7	4.8
Planted all of it	35.9	75.9	62.2	64.6
Planted some of it	10.3	7.7	3.9	6.5
Ate it	32.4	10.2	27.1	20.3
stored it	1.4	2.7	4.1	3.1
Gave it away	0.0	0.9	0.2	0.5
Other	0.0	0.0	0.7	.3
Total	100.0	100.0	100.0	100.0

Regional comparison of results on use of legume seed for the sampled households who received Starter Pack in the 1999/2000 season shows that the highest percentage of households who planted all the legume seed were from the centre, followed by those in the south and then those in the north (only 35.9%). This might be because distribution of Starter Pack ended with ADDs in the northern region which coincided with shortage of legume seed in the country such that at some point distribution of Starter Pack had to proceed without legume seed.

Analysis of legume usage based on gender reveals that more male- headed households who received Starter Pack planted all the legume seed (70.6%) than female-headed households (55.3%, see Table 27). A higher percentage of female- headed households who received Starter Pack ate the legume seed (27.6%) than male- headed households (15.5%). When use of legume seed in the 1999/2000 campaign was assessed in relation to the livestock-assets based poverty index, we found that more people planted all the legume seed in poverty categories 3-5 than in categories 1-2 (see Table 28). The results also show that incidences of households eating the legume seed were greater among households in the poorest two categories. This suggests that some poor households opted for short-term consumption benefits from the legume seed rather than the intended long- term benefit of improving soil fertility.

Table 27 How Starter Pack legume seed was used by sex of household head

	Sex of household head		
	Male	Female	Total
	%	%	%
Didn't receive	4.8	3.9	6.0
Planted all of it	70.6	55.3	64.6
Planted some of it	6.9	6.0	6.5
Ate it	15.5	27.6	20.3
Stored it	2.8	3.5	3.1
Gave it away	0.3	0.8	0.5
other	0.0	0.8	0.3
Total	100.0	100.0	100.0

Table 28 How Starter Pack legume seed was used by poverty

	Poverty categories					
	1	2	3	4	5	Total
	%	%	%	%	%	%
Didn't receive	5.3	4.1	3.3	2.5	12.7	4.8
Planted all of it	58.0	52.9	70.2	75.1	61.8	64.6
Planted some of it	8.6	5.8	5.4	6.6	5.5	6.5
Ate it	23.7	33.7	17.4	12.0	16.4	20.3
Stored it	2.4	2.9	3.3	3.3	3.6	3.1
Gave it away	1.6	0.0	0.0	0.4	0.0	0.5
Other	0.4	0.6	0.4	0.0	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Responses from the sampled households who received Starter Pack in the 1999/2000 campaign based on Sphere of Influence show that households from maize-dominated agriculture had the biggest proportion of those who indicated that they had planted all the legume seed, followed by those from IGA-dominated agriculture, urban-dominated agriculture, estate-dominated agriculture and lastly mixed agriculture (see Table 29). Meanwhile, mixed agriculture and estate-dominated agriculture had the highest proportion of households where people ate the legume seed.

Table 29 How Starter Pack legume seed was used by Sphere of Influence

	Sphere of Influence categories					
	Maize-dominated	Mixed agriculture	Estate agriculture	IGA-dominated	Urban-dominated	Total
	%	%	%	%	%	%
Didn't receive	6.4	7.2	0.0	3.7	3.7	4.8
Planted all of it	80.8	48.8	56.8	67.2	65.9	64.6
Planted some of it	3.2	11.6	5.3	4.4	11.0	6.5
Ate it	8.4	27.2	34.8	20.6	11.0	20.3
Stored it	0.8	4.4	1.5	4.1	4.9	3.1
Gave it away	0.4	0.4	0.0	0.0	3.7	0.5
Other	0.0	0.4	1.5	0.0	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Fertiliser

Of those sample households who received Starter Pack in the 1999/2000 growing season, over 94% applied all the fertiliser that they had received in every ADD except Shire Valley, where only 59% applied all of it. Most of the rest sold it, stored it or gave it away. In Blantyre ADD 100% of those sampled had applied all of the fertiliser.

The results of the survey also show little difference according to sex of head of household, with 94%-95%of male-headed and female-headed households applying all of the fertiliser. Results based on our livestock assets-based poverty index give the same picture, except for the wealthiest households where slightly under the average (89%) applied all the fertiliser - selling or giving away most of the rest.

Starter Pack sales

Not all households who received Starter Pack in the 1999/2000 campaign used the inputs as envisaged; there were some who used the inputs differently to gain alternative benefits. However, we feel that efforts in the study to investigate whether there were some households which sold the inputs have not yielded a true picture as most respondents were not open enough to disclose that they had sold the inputs despite mechanisms[6] put in place at the design stage of the study. Perhaps this was so because respondents might have been fearing drastic consequences following earlier threats by government to prosecute anyone who would be found selling the packs during distribution period. As such it has not been possible, through the results of the study, to capture fully the alternative benefits of Starter Pack arising from sales.

[6] The necessary mechanisms put in the design of the study were two-fold for both enumerators and supervisors namely: (a) Not to write names of respondents on the questionnaires during interviews to avoid suspicion of being an informant to the Malawi Government on the selling of the Starter Pack inputs; (b) During introductory remarks prior to conducting the interviews, to mention to the respondent that the enumerator belongs to an Independent Organisation (and a non-Malawi Government employee) based at Reading University in the United Kingdom that required to collect information on population and other various social, economic and agricultural aspects. Respondents were further advised that the information accruing of the interviews would strictly be treated as confidential and that they were free and flexible to supply the information so required without fear or prejudice.

CHAPTER 6: FARMERS' VALUATION OF STARTER PACK

This section focuses on farmers' willingness to pay for the Starter Packs in future either with cash or labour if the subsidy were partially or fully withdrawn. It will give farmer valuation of the Starter Pack as a whole and individual components of the pack. The chapter will also present results of the farmers' knowledge of the cost of Starter Pack, the cash price they would be willing to pay for the pack, the price they would be willing to pay for the Starter Pack with credit at 49% annual interest[7], and the price they would pay for individual pack components. Finally, we present the respondents' answers to the questions about how much they would be prepared to pay for the pack by working on a public works programme. This is of particular interest for discussions about targeting, since inclusion in a public works programme might provide a convenient method of self-targeting.

The value of Starter Pack inputs to farmers

In the section of the questionnaire entitled Willingness to Pay, farmers were first asked if they knew the cost of Starter Pack. The results show that only 2% knew its cost. Although Starter Pack was a free handout to the farming community, one would have expected them to know its cost/value for them to appreciate. Anecdotal evidence suggests that some households were selling for between MK100 and MK150.

Farmers' views on purchase of Starter Pack for cash

When respondents were asked how much they would be willing to pay for the packs after they had been told the actual cost of Starter Pack was MK450.00, results show that only a small proportion of the sample (6.3%) was willing to pay more than MK400 cash (see Table 30). However, about one-third of the respondents replied that they would be willing to buy Starter Pack at a price in the MK200-300 range and another one-third at a price in the MK100-200 range. The sequential (descending) order in which this question was asked is important for the clarity of the result (see Section G of the questionnaire in Appendix 3).

[7] This was the rate prevailing at Malawi Rural Finance Company in March 2000.

Table 30 Price household would be willing to buy the Starter Pack for cash by region

	Region			
	North	Centre	South	All
Price (MK)	%	%	%	%
>400	5.6	5.7	7.1	6.3
400-300	15.6	19.3	16.3	17.6
<300-200	30.0	27.9	30.4	29.2
<200-100	38.1	28.2	33.3	31.6
<100	10.6	18.9	12.9	15.4

The analysis done by Sphere of Influence shows that 10% of farmers in mixed agriculture would be willing to pay more than MK400 for Starter Pack, followed by 7% of farmers in urban-dominated areas and 6% in maize-dominated areas. The lowest proportions of farmers who would be willing to pay for packs valued at more than MK400 are in IGA dominated areas and estate agriculture. These areas recorded lower proportions possibly because in estate agriculture most farmers work in estates and the responsibility of purchasing inputs rests with estate owners. As for low percentage under IGA dominated, these people heavily depend on IGAs for their survival and would rather use MK400 for their IGAs to get immediate benefits than purchase inputs which will give them benefits after a longer period.

Table 31 Price household would be willing to buy the starter pack for cash by Sphere of Influence

	Sphere of Influence					
	M	MA	EA	IGA	U	All
Price (MK)						
>400	6.1	9.6	3.8	4.7	6.7	6.3
400-300	19.3	16.1	19.4	15.8	20.0	17.6
<300-200	27.1	25.7	36.3	30.3	29.2	29.2
<200-100	26.8	36.8	21.3	36.7	29.2	31.6
<100	20.7	11.8	19.4	12.5	15.0	15.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

M: Maize dominated
MA: Mixed agriculture dominated
EA: Estate agriculture dominated
IGA: Income generating activities dominated
U: Urban dominated

The responses by gender show that men are prepared to pay more than women if asked to pay cash, as Table 32 illustrates. This is probably because female-headed households are relatively poorer and would prefer free issues.

Table 32 Price household would be willing to buy the Starter Pack for cash by sex of head of household

	Sex of household head	
Price (MK)	Male (%)	Female (%)
>400	6.7	5.5
400-300	19.8	14.2
<300-200	32.1	24.6
<200-100	29.7	34.5
<100	11.7	21.2

The same question was analysed using our livestock-assets based poverty index. The results are presented on Table 33.

Table 33 Price household would be willing to buy the starter pack for cash by poverty category

	Poverty category					
	1	2	3	4	5	All
Price (MK)	%	%	%	%	%	%
>400	5.0	4.9	6.4	7.0	9.4	6.3
400-300	15.2	17.2	18.2	18.5	20.3	17.6
<300-200	27.2	30.5	30.0	29.3	29.7	29.2
<200-100	29.5	34.0	32.1	31.7	31.3	31.6
<100	23.2	13.3	13.2	13.6	9.4	15.4

The general trend is as expected: when the Starter Pack is priced at over MK300, then the wealthier the household category, the higher the proportion willing to pay. When the pack is priced at under MK100, more people in the poorest category are willing to pay. These results indicate that the differences in wealth status of farmers will determine expenditure patterns for inputs. The poorer sections of society have difficulty in mobilising resources and will only do so for their survival and hence cannot spare their money for inputs. The better off categories are able to invest cash in farming. However, it should be noted that there is little difference between poverty categories when the price is MK200-300 or MK100-200.

The credit value of Starter Pack inputs to farmers

The survey also questioned farmers if they would be willing to buy Starter Pack if they were to get a loan at the interest rate of 49%. This was based on the assumption that there may be some farmers who do not have cash but would buy the pack if they could obtain a loan to finance the purchase[8].

The results show that 15% of the sample households would be willing to buy Starter Pack with credit at 49% interest. This is an improvement compared to only 6% who would be willing to buy on cash basis. The trend is consistent, with more households willing to pay higher prices in the presence of a loan, leaving fewer households saying they can only acquire the pack at lower prices.

Table 34 Price household would be willing to buy starter pack with credit at 49% interest by region

	Region			
	North	Centre	South	All
Price (MK)	%	%	%	%
>400	10.0	14.3	17.5	15.0
400-300	15.6	25.4	17.1	20.8
<300-200	27.5	24.5	26.7	25.8
<200-100	31.9	26.1	27.5	27.4
<100	15.0	9.8	11.3	11.1
	100.0	100.0	100.0	100.0

An analysis of the responses by Sphere of Influence show that 38% of farmers in estate-dominated agricultural areas would be willing to purchase Starter Pack on credit at over MK400. Estate tenants often get inputs on loan from estate owners and are later deducted after sales of produce. This compares with only 12% in mixed agriculture who would buy Starter Pack on loan at 49% interest.

Gender analyses show differences between male and female respondents (see Table 35). Seventeen percent of male-headed households showed that they would be willing to purchase Starter Pack while only 12% of the female farmers would purchase a Starter Pack at more than MK400. This is probably because poor female-headed households are risk averse and would not easily opt for a loan due to lack of

[8] This assumption appears to be born out by the survey results, although some poorer farmers might be averse to the risk of taking on a loan at such a high interest rate.

collateral. Nevertheless, it is interesting that there is very little difference between male- and female-headed households in the middle range of MK200-300.

Table 35 Price household would be willing to buy starter pack with credit at 49% interest by sex of head of household

	Sex of household head		
	Male	Female	All
Price (MK)	%	%	%
>400	17.2%	11.7%	15.0%
400-300	23.4%	16.7%	20.8%
<300-200	25.4%	26.3%	25.8%
<200-100	24.6%	31.8%	27.4%
<100	9.5%	13.6%	11.1%

The analysis by poverty or welfare categories show that in general wealthier categories are more willing to buy Starter Pack on loan at higher prices (see Table 36). The wealthier categories have collateral with which they can enter into loan agreement knowing that they can pay off using alternative ways, unlike those poor households. However, again it appears that in the central price ranges of MK200-300 and MK100-200, willingness to pay is similar across poverty categories.

Table 36 Price household would be willing to buy starter pack with credit at 49% interest by poverty

	Poverty category					
	1	2	3	4	5	All
Price (MK)	%	%	%	%	%	%
>400	14.6	14.3	15.4	16.4	13.3	15.0
400-300	14.6	20.7	23.2	23.7	23.4	20.8
<300-200	25.8	25.1	25.7	26.8	24.2	25.8
<200-100	29.5	27.1	25.7	26.1	29.7	27.4
<100	15.6	12.8	10.0	7.0	9.4	11.1

The general picture as shown by the foregoing results is that more people would be willing to purchase Starter Packs on loan than on a cash basis. Relatively high proportions (26-30%) however, across the wealth categories still feel they would only be willing to purchase Starter Packs at MK100-200, while 7-16% would only be prepared to pay up to MK100.

Willingness to participate in a work-for-SP programme

The study asked farmers whether they would be willing to participate in a Starter Pack for public works programme (Chitukuko) in the event that Starter Pack is not completely free but available for sale at MK450.00. This was done to assess whether self targeting would work to assist those sections of the farming community which are more resource poor and cannot afford to pay cash for the inputs. The study results show that 98% of the farmers would be willing to participate in public work for a Starter Pack for a period of two (2) weeks. There are 46% who would be willing to work for four weeks and others in decreasing proportions would be willing to work longer periods. Wages for ganyu labour are currently quoted in the range of MK18-25 per day. Taking the lower end of this range (MK18), our results imply that almost all of the sample households would be willing to pay a work-equivalent of MK252 (2 weeks' work) for the Starter Pack. If the requirement were set at 4 weeks (equivalent to MK504) just under half of our sample would participate.

Table 37 Number of weeks willing to do chitukuko for Starter Pack

	Number	%
Not willing to work for SP	22	1.8
up to 2 weeks	1178	98.2
up to 4 weeks	549	45.8
up to 6 weeks	300	25.0
up to 8 weeks	215	17.9
more than 8 weeks	111	9.3
Total	1200	100.0

Analysis by gender of farmers participation in Starter Pack for public works reveals that if the requirement to qualify for Starter Pack were set at 4 weeks' work or more, a greater percentage of women would receive the pack, while at 2 weeks a work-for-SP scheme would be largely gender-neutral (see Table 38).

Table 38 Participation in Starter Pack for work by gender

	Male	Female
	%	%
Not willing to work for SP	1.4	2.5
up to 2 weeks	98.6	97.5
up to 4 weeks	42.0	51.5
up to 6 weeks	22.4	29.0
up to 8 weeks	15.8	21.2
more than 8 weeks	8.5	10.4

More women would see a work-for-SP programme as an opportunity to obtain inputs for use in their gardens as they experience difficulties getting cash to purchase inputs. A poverty analysis of the same question show that if the requirement to qualify were set at four weeks, around 48% of the poorest category of the livestock-assets based poverty index would benefit while only 38% of the wealthiest category would participate. At two weeks, a work-for-SP programme would be poverty-neutral (see Table 39).

Table 39 Participation in Starter Pack for work by poverty

	Poverty code 5 categories				
	1	2	3	4	5
	%	%	%	%	%
Not willing to work for SP	2.6	1.0	1.1	1.7	3.1
up to 2 weeks	97.4	99.0	98.9	98.3	96.9
up to 4 weeks	47.7	46.3	51.1	41.8	37.5
up to 6 weeks	21.9	26.6	30.4	23.3	21.9
up to 8 weeks	14.9	18.7	21.1	19.2	14.1
more than 8 weeks	6.3	8.4	10.0	12.9	7.8

Regional analysis of farmers' willingness to participate in Starter Pack for work programme shows that as the period of work gets longer, a smaller proportion of farmers in the north are willing to work compared with the central and southern regions. For instance, at 4 weeks, only 34% of farmers in the north would participate compared with 44% in the centre and 52% in the south (see Table 40).

Table 40 Participation in Starter Pack for work by region

	Region		
	North	Centre	South
	%	%	%
Not willing to work for SP	1.3	2.5	1.3
up to 2 weeks	98.8	97.5	98.8
up to 4 weeks	33.8	43.9	51.9
up to 6 weeks	17.5	23.9	28.8
up to 8 weeks	11.9	18.6	19.2
more than 8 weeks	7.5	8.6	10.6

It should be added that many farmers know how to value their time. The preliminary PRA study results indicated that where they have employment opportunities close to urban areas or trading centres, farmers are able to compare how much they would earn working on ganyu in terms of cash against the same period for Starter Pack. When they find that they can earn more on those days they prefer to provide casual labour and buy Starter Pack or other inputs. A reasonable period (e.g. 4 weeks) would favour those who are worse off through a self-targeting method.

Price households would pay for individual SP contents

This section looks at responses on Starter Pack components and how much value the farmers attach to them. It will look at the components of the pack individually and then at combinations in terms of how much farmers would be willing to pay.

The individual components of the pack in 1999/200 were: maize (2kg), fertiliser (10 kg basal, 5 kg top dressing) and legume (2 kg). When asked to value the maize component, male-headed households said they would be willing to pay MK52 for it (on average) compared with MK46 for female-headed households (see Table 41). Legumes were the component seen as having the lowest monetary value, with male-headed households willing to pay MK41 for it (on average) compared with MK36 for female-headed households.

Table 41 Average price households would be willing to pay for pack components by gender

	Sex of household head	
	Male (MK)	Female (MK)
Maize only	52	46
Fertiliser only	135	113
Legume only	41	36
Cereal and legume	90	78
Cereal and fertiliser	174	147
Legume and fertiliser	162	141
A complete starter pack	266	229

The fertiliser component was most highly valued component, with male-headed households willing to pay MK135 for it (on average) compared with MK113 for female-headed households. The reason for this is that fertiliser is difficult to share amongst households and has to be bought on a seasonal basis. Fertiliser has again a higher value pegged to it by the farmers because it improves crop yields considerably and therefore contributes to their food production. Shire Valley is an exception: our results show that 79% of farmers there are unwilling to pay more than K100 for the fertiliser component. Probably farmers do not value fertiliser much in Shire Valley because their crops benefit from the rich soils and do not need fertilisers.

Price households would be willing to pay for whole pack

After asking respondents to value individual components of the pack and then combinations (which involved roughly adding up the individual components), we again asked them to say how much they would be willing to pay for the whole pack in cash. This time the question came after the respondents had looked at each separate pack component and established its value, so it acted as a confirmation or a check to farmers original valuation of the Starter Pack.

The responses showed a slight increase in the prices that respondents would be willing to pay for the Starter Pack (cash) compared with the first time the question was asked. The livestock assets poverty index-based analysis shows that the average price which farmers say they are willing to pay for a pack varies only slightly between poverty categories (see Table 42). The range is MK239 in category 1 (poorest) to

MK266 in category 4 (wealthy). The average price which people are prepared to pay for a whole pack is MK252 – exactly coinciding with the conclusion derived on the basis of participation in a SP-for-work scheme, where almost all respondents said they would be prepared to work for 2 weeks for the pack.

Table 42 Willingness to pay by poverty

	Poverty category				
	1	2	3	4	5
Maize only	48	47	51	51	48
Fertiliser only	126	122	127	134	113
Legume only	36	39	39	42	40
Maize and legume	82	83	87	89	87
Maize and fertiliser	161	160	161	171	160
Legume and fertiliser	150	148	154	165	146
A complete starter pack	239	247	252	266	253

It should however, be noted that responses in this section may have been biased. Some people only expressed willingness to pay for Starter Pack for cash at a low price because they did not want to attach a high price to the same packs they received free for two seasons. Their feeling rather is that the scheme should continue being free or only sold at a minimal price. Also, we should be aware that although people expressed willingness to pay around MK252 for the pack, they might not actually have the cash to pay for it if the pack was offered at this price. They might need the alternatives of participation in a work-for-SP programme or credit facilities to enable them to purchase the pack at this price.

CHAPTER 7 SMALLHOLDER HOUSEHOLD INTEGRATION INTO THE MARKET ECONOMY

Smallholder farmers in Malawi are predominantly subsistence because a high part of their total production is retained with households for consumption and only a small surplus is offered for sale. However, the degree of consumption and commercialisation varies with type of economic activity and household wealth.

Sources of income

Survey respondents were asked to list their three main sources of income throughout the season. For 70.6% of respondents, crops are one of their primary sources of income, while sale of livestock is an important source of income for only 1.8%. Casual wage labour (ganyu, as distinct from salaried employment) forms an important source of income for 25.8% of the sample households, and small business activities form an important source of income for 32.5% of the sample households (see Table 43). Ganyu wage labour occurs as a primary source of income among 24% of male and 28% of female-headed households, suggesting that this source of income is slightly more important for women than for men (see Table 44). However, it is also most predominant in the richest category of households (41.4% in livestock-based poverty category 5 compared with 25-26% in poverty categories 1 and 2). Small business activities are slightly more predominant as a main income source in the southern region (see Table 45).

Table 43 Main sources of income by poverty

	Poverty category					
	1	2	3	4	5	Malawi
	%	%	%	%	%	%
Crops	56.5	68.8	75.5	78.2	78.9	70.6
Remittances	12.3	6.4	6.8	7.7	8.6	8.5
Small business	35.2	32.2	33.8	27.5	35.2	32.5
Pension	0.3	0.0	1.4	0.7	1.6	0.8
Artisan	8.0	7.4	8.6	10.2	4.7	8.2
Wages	25.2	25.7	19.8	25.4	41.4	25.8
Sale of livestock	0.0	1.5	1.4	2.1	6.3	1.8
Salary	1.7	3.5	3.6	2.5	1.6	2.6

Note: 1193 valid cases, 1799 responses. Percentages are based on the number of responses divided by the number of households. One household could have quoted more than one source of income, therefore the percentages add up to more than 100%.

Table 44: Main sources of income by gender

	Male	Female	Total responses
	%	%	%
Crops	74.3	64.8	70.6
Remittances	5.0	14.1	8.6
Small business	30.9	35.0	32.5
Pension	1.1	0.2	0.8
Artisan	10.2	5.1	8.2
Wages	24.2	28.4	25.8
Sale of livestock	1.4	2.4	1.8
Salary	3.5	1.3	2.6

Note: 1193 valid cases, 1799 responses. Percentages are based on the number of responses divided by the number of households. One household could have quoted more than one source of income, therefore the percentages add up to more than 100%.

Table 45 Main sources of income by region

	North	Centre	South	Total Responses
	%	%	%	%
Crops	85.6	77.3	57.7	70.6
Remittances	8.8	7.6	9.6	8.5
Small business	43.8	18.3	45.3	32.5
Pension	2.5	0.2	0.8	0.8
Artisan	3.8	6.5	11.7	8.2
Wages	30.6	26.1	23.9	25.8
Sale of livestock	11.3	0.2	0.4	1.8
Salary	2.5	1.6	3.8	2.6

Note: 1193 valid cases, 1799 responses. Percentages are based on the number of responses divided by the number of households. One household could have quoted more than one source of income, therefore the percentages add up to more than 100%.

Effect of Starter Pack on household income

Respondents were asked the question for SP1: "Of all your sources of income how much came from the Starter Pack (including sale of components of the pack if you sold any?)". While 84.6% reported receiving no income from Starter Pack, 10.8% of households reported that Starter Pack contributed a small amount (less than one quarter of their total household income). Less than 5% of respondents received more than a quarter of their income from Starter Pack. Small amounts of SP-related income were reported to be more important for male-headed households than the female-headed households (see Table 46). In terms of poverty categories, their was no significant difference between the poorest and the wealthiest households in terms of SP-related income.

Table 46 Income from Starter Pack by gender

	Sex of household head		Total
	Male	Female	
	%	%	%
None	82.1	88.3	84.6
Less than 1/4	13.7	6.4	10.8
Less than 1/2	3.0	4.2	3.5
Between 1/2 and 3/4	0.8	0.8	0.8
More than 3/4	0.1	0.2	0.2
All	0.1	0.0	0.1
Total	100.0	100.0	100.0

Respondents were asked to estimate the contribution of Starter Pack to total amount of maize offered for sale (in 50-kg bags). It was noted that significant market surplus of maize came from Starter Pack (16.5% of total maize sold by the respondents in 1998/99). Of total legume sales by respondents in 1998/99, 14.4% were attributed to Starter Pack. Male-headed households sold on average 1.5 50-kg bags of maize, while female-headed households sold 0.6 50-kg bags. However, for male-headed households, 14.6% of sales were contributed by Starter Pack while for female-headed households the contribution was 24.0% (see Table 47).

Table 47 Percentage of sales contributed by SP1 products by gender

Sex of head of household	Maize	Legumes
	%	%
Male	14.6	15.2
Female	24.0	12.4
All	16.5	14.4

Likewise, the poorest households reported a higher proportion of their sales as coming from Starter Pack (32.4%, poverty category 1) than wealthiest households (12.6%, poverty category 5) (see Table 48).

Table 48 Percentage of sales contributed by SP products, 1998-1999, by poverty

Poverty category	Maize	Legumes
	%	%
1	32.4	25.7
2	15.3	15.9
3	13.2	11.0
4	15.6	22.9
5	12.6	7.0
All	16.5	14.4

Smallholder households in Malawi irrespective of wealth are still in transition to commercialisation and produce predominantly for consumption. Starter Pack therefore, did not allow many sample households get wholly integrated into the market economy but rather enabled households to produce surplus food for consumption. The most vulnerable (poor and female-headed) households had highest proportion of their market surplus contributed by Starter Pack.

Substitution effects

Food security in Malawi is heavily dependent on household maize production and agricultural-related income sources. We have shown that the main source of income for the poorer households is crop sales. While maize is still the preferred crop, being equated with household food security, legumes and oil seeds - groundnuts, beans, pigeon peas and soya beans - are an important source of cash and dietary protein. When survey respondents were asked if they had planted any crops which they would not have planted if they had not received Starter Pack (i.e. which they planted because of Starter Pack) in the 1999/2000 season, 52.4% of the sample households reported that Starter Pack had allowed them to grow hybrid maize, 28.6% groundnuts, 21.7% soya beans and 5.4% beans respectively (see Table 49).

Table 49 In this season (1999/2000), did you plant any crops which you would not have planted if you had not had the Starter Pack?

	Yes	No	
	%	%	Total
Hybrid maize	52.4	47.6	1197
Tobacco	1.8	98.2	1198
Rice	0.1	99.9	1199
Beans	5.4	94.6	1200
Groundnuts	28.6	71.4	1198
Cassava	1.3	98.7	1198
Sweet potatoes	2.3	97.7	1199
European potatoes	0.6	99.4	1200
Soya beans	21.7	78.3	1197
Pigeon peas	0.1	99.9	1200
Cow peas	0.3	99.8	1200
Millet	0.5	99.5	1200
Sorghum	0.0	100.0	1200
Bananas	0.0	100.0	1200
Cotton	0.6	99.4	1200
Paprika	0.3	99.7	1200
Chilli	0.0	100.0	1200
Tomato	0.1	99.9	1200
Vegetables	0.8	99.2	1200
Water	0.0	100.0	1200
Sunflower	0.0	100.0	1200

When respondents were asked if they would sell any crops this year which they would not be selling if they had not received Starter Pack (i.e. which they will sell because of Starter Pack), 5.8% of the sample households reported that Starter Pack would allow them to sell hybrid maize, 5.6% groundnuts, 5.7% soya beans, 3.3% sweet potatoes and 2.7% beans respectively (see Table 50). This suggests that there was some (limited) impact on sales of produce resulting from Starter Pack.

Table 50 In the 1999-2000 season, will you sell any crops which you would not have sold if you had not had the Starter Pack?

	Yes	No	
	%	%	Total
Hybrid maize	5.8	94.2	1199
Tobacco	1.9	98.1	1198
Rice	0.8	99.2	1200
Beans	2.7	97.3	1200
Groundnuts	5.6	94.4	1199
Cassava	2.0	98.0	1197
Sweet potatoes	3.3	96.7	1199
European potatoes	0.9	99.1	1200
Soya beans	5.7	94.3	1195
Pigeon peas	0.3	99.8	1200
Cow peas	0.3	99.7	1200
Millet	0.6	99.4	1200
Sorghum	0.1	99.9	1200
Bananas	0.3	99.8	1200
Cotton	1.5	98.5	1200
Paprika	0.3	99.8	1200
Chilli	0.1	99.9	1200
Tomato	0.8	99.3	1200
Vegetables	0.7	99.3	1200
Water	0.0	100.0	1200
Sunflower	0.0	100.0	1200

CHAPTER 8 LABOUR

Supply and demand

The adoption of the Starter Pack was thought to create more demand for labour and therefore boost on-farm employment opportunities for rural households especially the disadvantaged households (landless labourers, female-headed households, tenants, etc.) who earn their livelihood on return to their labour during lean season when they have little food for subsistence. Certain tasks in the technical packages such as weeding, fertilising and harvesting require more causal workers. However, Starter Pack may also increase the time which people work on their own gardens, reducing the supply of labour. The results show that the majority of people who work for others saw no change owing to Starter Pack. Of those who perceived a change in labour market conditions owing to Starter Pack, on balance Starter Pack made it easier to work for others, although some reported greater difficulty (see Table 51).

Table 51 Did the SPS make it easier for you or your family members to work for others?

	%
Made it easier	36.1
No change	55.1
Made it more difficult	8.8

Note: % of those who said they work for others.

The study found out that on average households spent 7.8 days working for others during the last weeding period (the period of greatest demand for labour in the agricultural cycle). In the northern region, the average was 10.3 days while in the centre the average was 7.1 days and in the south 7.6 days (see Table 52).

Table 52 Average number of days spent working for others during last weeding period by region

Region	Mean	Std Deviation	N
North	10.3	13.9	112
Centre	7.1	11.5	305
South	7.6	10.7	206

In terms of Spheres of Influence, the highest average number of days worked per household was in maize-dominated areas (10.3 days), while the lowest was in estate-dominated areas (6.5 days) (see Table 53).

Table 53 Average number of days spent working for others during last weeding period by Sphere of Influence

Sphere of Influence categories	Mean	Std Deviation	N
Maize dominated	10.3	16.0	154
Mixed agriculture dominated	6.6	10.1	169
Estate agriculture dominated	6.5	7.6	47
IGA dominated	6.8	9.5	177
Urban dominated	8.7	11.1	76

Table 54 shows that male-headed households spent on average 8.2 days working for others in the last weeding period, compared with 7.3 on average for female-headed households. This may be because female-headed households find it harder to search for employment opportunities. Table 55 indicates that the average for poorer households was higher than for wealthier households. It appears that poor households hope to increase their access to food and income by working for wealthier farmers who have the capacity to employ poorer households for payment in cash or kind. As the poorest households produce less food for themselves than the wealthiest households (see Chapter 4), during lean periods they work for the better-off farmers to meet their subsistence requirements.

Table 54 Average number of days spent working for others during last weeding period by sex of head of household

	Mean	Std Deviation	N
Male	8.2	12.4	378
Female	7.3	10.7	245

Table 55 Average number of days spent working for others during last weeding period by poverty category

Poverty category	Mean	Std Deviation	Valid N
1	8.9	12.8	175
2	7.7	10.2	104
3	7.4	10.6	140
4	7.7	12.5	137
5	6.5	11.9	67

It seems, therefore, that Starter Pack initiative had a limited impact on the labour market in rural areas. Some poor households such as landless labourers and female-headed households probably increased their income and access to food by working for wealthier farmers who hired in poor neighbours and relatives for their farm activities.

CHAPTER 9 CREDIT AND SAVINGS

Agricultural inputs such as fertiliser and hybrid maize seeds are increasingly becoming unaffordable due to escalating costs. The prospects of enhanced yields and income offered by Starter Pack entail production costs and their associated risks. While Starter Pack provided an injection of food and cash, extra inputs were needed to realise efficient output. Among the wealthiest households, 19% claimed that Starter Pack made it easier to acquire credit (see Table 56) - with 23% finding it easier to acquire credit in category 4 (wealthy). As poorest households are risk averse and have limited collateral for credit, less proportion of the poorest households (12%) claimed that Starter Pack made it easier for them to acquire credit.

Table 56 Has Starter Pack improved your ability to acquire credit?

	Yes	No
	%	%
1	12.4	87.6
2	14.5	85.5
3	17.2	82.8
4	22.8	77.2
5	18.9	81.1

It was also evident that the Starter Pack initiative was perceived as improving the household's ability to make savings, especially at the wealthier end of the spectrum. In categories 3, 4 and 5 over 30% claimed that Starter Pack improved their ability to make savings (see Table 57). Even in the poorer categories (1 and 2), 20-23% of respondents thought that Starter Pack had helped them to save. This was probably because Starter Pack provided extra food and cash from crop sales, allowing households to reduce expenditure and/or increase income inflows.

Table 57 Has Starter Pack improved your ability to make savings?

	Yes	No
	%	%
1	19.7	80.3
2	22.5	77.5
3	30.5	69.5
4	36.3	63.7
5	32.0	68.0

CHAPTER 10 COMMUNITY RELATIONS

The preliminary PRA study suggested that Starter Pack was generally appreciated by farmers. The survey carried out in the main study tried to find out whether the pack was perceived to have contributed positively or negatively to community relations in villages and which poverty/wealth groups had benefited most from the pack. These questions caused some difficulty for enumerators, as respondents were reluctant to answer them. For this reason they were placed at the end of the questionnaire. The results showed that half of respondents identified little change in community relations; almost one-third felt that community relations had improved with the pack; but a significant 17% felt that the pack had contributed to a worsening of community relations (see Table 58). This may have been because of unhappiness about Starter Pack registration or distribution in some villages, when certain individuals and groups may have been perceived to influence outcomes. Clearly, care should be taken in future that such processes are perceived by the community to be as fair as possible. Meanwhile, in terms of poverty/wealth groups, villagers agreed that the poorest groups had benefited much more from Starter Pack than the wealthiest (see Table 59).

Table 58 Has Starter Pack affected community relations in the village?

	%
Worsened	16.9
No change	52.5
Improved	30.5
Total	100

Table 59 Which group has benefited most from starter pack?

	%
Poorest	51.5
Poor	35.8
Wealthy	9.3
Wealthiest	3.4
Total	100

CHAPTER 11 CONCLUSIONS AND RECOMMENDATIONS

- Our 'livestock assets-based poverty index' shows that 65% of the population is poor, having no livestock assets at all (25%) or only a few small animals.
- In 1998/99 and 1999/2000, 84% of households received Starter Pack. In SP2, there was a reduction in the urban, pro-wealthier group bias of SP1.
- Maize production from Starter Pack was estimated at over five 50-kg bags per household in 1998/99, but production from Starter Pack was expected to be less in this year's harvest.
- Wealthy households produce more maize than poor households, but poor households appear to have increased production by more than wealthy households both in relative and absolute terms in 1998/99.
- Starter Pack led to big increases in legume production, but there were major regional variations which were partly caused by distribution problems.
- In terms of food self-sufficiency, a comparison between Starter Pack recipients and non-recipients suggests that Starter Pack increased food self-sufficiency by 2.6 months on average in 1998/99, but was expected to increase it by only 1.1 months on average in 1999/2000. In SP1 poor households benefited more, but there were no gender differences; while in SP2 poor and female-headed households expected to benefit more than wealthy and male-headed households.
- An overwhelming majority planted all of the maize seed and used all of the fertiliser (except in Shire Valley ADD where the fertiliser was applied by only 59% of recipients), but use of the legume seed varied greatly by region, gender and poverty category, with poor, female-headed households eating more of it.
- On willingness to pay for the pack, it was clear that very few respondents would pay the price of the pack (MK450) in cash (only 6%). Slightly more (15%) were willing to pay MK450 for the pack if they could obtain a loan.
- Almost all respondents (98%) were willing to work up to 2 weeks on a public works programme to obtain a Starter Pack and 46% were willing to work up to 4 weeks. Thus, if the government wanted almost everybody to work for the pack

they could set the requirement at 2 weeks, but if they could only afford to distribute packs to half the population they could set the requirement at 4 weeks.

- At the 4-week requirement level, a work-for-Starter Pack programme would encourage more participation from poor and female-headed households than from wealthy and male-headed households.
- The average price that people say they would be willing to pay cash for the pack is MK252 (which is exactly the cash equivalent of 2 weeks work) - and this hardly varies by poverty category. However, it is not clear that everyone would actually have the cash to pay if the pack were to be offered at this price.
- The main sources of income for our respondents were crops, small business and ganyu labour. Ganyu labour seems to be more important for female-headed households than for male-headed households.
- Starter Pack contributed to the income of only 15% of households in the sample. It contributed more frequently to the income of poor and female-headed households than to that of wealthy and male-headed households.
- On average, households spent 7.8 days working for others in the last weeding season. The pack appear to have had some impact on the labour market, making it easier for 36% to work for others and harder for 9%.
- Starter Pack had a positive impact on saving and ability to acquire credit, especially in the wealthier categories of household.
- Starter Pack generally improved community relations and was perceived to have benefited the poor much more than the wealthy.

APPENDIX 1: Selected EPAs stratified by VAM Poverty Index and Sphere of Influence clusters

EPA	EPA name	Poverty	sphere of influence
5	Bowe	1	maize
39	Kalira	1	maize
43	Kandeu	3	maize
45	Kaphuka	4	maize
51	Chipala	1	estate
53	Chitipa South (Kavukuku)	3	mixed agric
54	Khombedza	2	iga
56	Linga	1	mixed agric
62	Lobi	5	maize
67	Magoti	5	iga
68	Maiwa	3	iga
73	Manyamula	2	mixed agric
76	Matapwata	5	estate
77	Mayani	4	mixed agric
86	Mitole	1	iga
87	Mjinge	2	maize
97	Mphompha	5	mixed agric
98	Mpilipili	2	iga
101	Mpingu	3	urban
103	Mponela	1	maize
116	Nakachoka	2	urban
118	Nankumba	4	iga
119	Nampeya	3	iga
123	Ngwelero	3	mixed agric
128	Nsanama	2	estate
130	Nsipe	5	mixed agric
137	Nyachilenda	5	iga
146	Thondwe	4	urban
148	Thyolo Boma	4	estate
151	Ulongwe	4	iga

APPENDIX 2: Main study questionnaire

Questionnaire Number: ☐

Starter Pack 1999-2000 Evaluation

MODULE 2 : MICROECONOMIC IMPACT AND WILLINGNESS TO PAY STUDY

Enumerator _____ Date _____

Supervisor _____ Date _____

Checked by:	Name:	Date:	
Entered by:	Name:	Date:	

A. Identification panel

ADD _____ RDP _____
EPA _____ Section _____
Village _____

Before starting the interview complete the following information <u>without</u> asking the interviewee:

1. Inheritance tradition — Patrilineal ☐1 Matrilineal ☐2
2. Type of house — Makeshift shelter ☐1 Round house ☐2 Square house ☐3
3. Walls — Mud ☐1 Unburnt brick ☐2 Burnt brick ☐3
4. Roof — Grass ☐1 Iron ☐2

The interview starts here:

B. Household characteristics

Head of household

1. Sex	Male ☐1 Female ☐2	2. Age ----------
3. Marital status	Single ☐1 Married ☐2 Married husband/wife living away ☐3 Divorced ☐4 Widow/ widower ☐5	4. Household size (number of people including children) _____

5. Main occupation of head of household (**Read out all the options**)	Farmer	□1	6. Educational level	None	□1
	Small business	□2		Standard 1-5	□2
	Rural Artisan	□3		Standard 6-8	□3
	Government employee	□4		Secondary	□4
	Private employee	□5		Tertiary/University	□5
	Tenant/Estate worker	□6		Adult literacy	□6

7. Land holding size	How much land are you cultivating this season?	_____	Acres
	How much land do you have?	_____	Acres

C. Wealth indicators

Livestock

1. Do you keep any livestock? *Yes* □1 *No* □2

2. How many of the following animals do you own? (**Read out each type of animal in the list and note down the number against it. Put zero for none**).

Type	*Number*	*Type*	*Number*
Chicken	_____	Pigs	_____
Doves	_____	Sheep	_____
Ducks	_____	Donkeys	_____
Rabbits	_____	Goats	_____
Guinea fowls	_____	Cattle	_____
	_____	Oxen	_____

Assets

3. Do you have any of the following? (**Read out each option**).

Ox-cart	*Yes* □1 *No* □2	Plough/Ridger	*Yes* □1 *No* □2
Hoe	*Yes* □1 *No* □2		

D. Starter Pack

1. Did you receive Starter Pack this season? *Yes* □1 *No* □2

➢ If No go to section **E Household Food Security**

Grain seed

Please ask for the grain that was distributed in the village, e.g. maize or rice

2.What did you do with the (grain) seed? (**Do not read out**)	Didn't receive	□1	Planted all of it	□2
	Planted some of it	□3	Ate it	□4
	Exchanged for food	□5	Sold it	□6
	Stored it	□7	Gave it away	□8
	Other, specify			
3. If you sold it, what did you use the money for? **(Do not read out)**	Staple food	□1	Relish	□2
	Sugar	□3	Medicine	□4
	School fees	□5	Agricultural inputs/implements	□6
	Animals	□7		
	Other, specify			

Fertiliser

4. What did you do with the fertiliser? **(Do not read out)**	Didn't receive	□1	Applied all of it	□2
	Applied some of it	□3		□4
	Exchanged for food	□5	Sold it	□6
	Stored it	□7	Gave it away	□8
	Other, specify			
5. If you sold it, what did you use the money for? (**Do not read out**)	Staple food	□1	Relish	□2
	Sugar	□3	Medicine	□4
	School fees	□5	Agricultural inputs/implements	□6
	Animals	□7		
	Other, specify			

Legume seed

Please ask for the legume that was distributed in the village, e.g. groundnuts, soya beans.

6. What did you do with the (legume) seed? **(Do not read out)**	Didn't receive	□1	Planted all of it	□2
	Planted some of it	□3	Ate it	□4
	Exchanged for food	□5	Sold it	□6
	Stored it	□7	Gave it away	□8
	Other, specify			
7. If you sold it, what did you use the money for? (**Do not read out**)	Staple food	□1	Relish	□2
	Sugar	□3	Medicine	□4
	School fees	□5	Agricultural inputs/implements	□6
	Animals	□7		
	Other, specify			

E. Household food security

1. What is your main staple food crop? (**Multiple responses are allowed**)

Maize	□1
Rice	□2
Millet	□3
Cassava	□4
Sorghum	□5
Banana	□6

2. Did you receive a Starter Pack last season (1998-1999)? *Yes* □1 *No* □2

3. How much of your grain did you harvest in the following cropping seasons ? (50 Kg bags)

Cropping Season	Total Production	Contribution from Starter Pack Scheme
1997 / 1998		
1998 / 1999		
1999 / 2000 Expected		

4. How much of your legumes did you harvest in the following cropping seasons ? (50 Kg bags)

Cropping Season	Total Production	Contribution from Starter Pack Scheme
1997 / 1998		
1998 / 1999		
1999 / 2000 Expected		

5. How long did your staple food production last?

Cropping Season	Harvest month	Last month of food	Number of months
1997 / 1998			
1998 / 1999			
1999 / 2000 Expected			

6. Did you buy any food on the market in the following seasons?

	Yes	*No*
1997/1998	□1	□2
1998/1999	□1	□2
1999/2000	□1	□2

IF all responses are NO, go to section F

7. How do you compare the level of staple food availability on the market for the following harvests?
(**Read out only "Plenty, Enough and Scarce"; DO NOT read out "Don't remember" but tick if that is the case**)

7.a Three months **before** harvest

	Plenty	*Enough*	*Scarce*	*Don't remember*
1998	□1	□2	□3	□4
1999	□1	□2	□3	□4
2000	□1	□2	□3	□4

7.b Three months **after** harvest

	Plenty	*Enough*	*Scarce*	*Don't remember*
1998	□1	□2	□3	□4
1999	□1	□2	□3	□4

F. INTEGRATION INTO THE CASH ECONOMY

1. What are your <u>main</u> sources of cash income?
(**Read out all options so that the respondent is aware of them; tick no more than three options**)

Crops	□1	Remittances	□2
Small business	□3	Pension	□4
Artisan	□5	Wages	□6
Sale of livestock	□6	Salary	□8

2. If crops are a source of income indicate the most important
(**Tick up to a maximum of three; DO NOT read out the options**)

Maize	□1	Tobacco	□2	Rice	□3
Beans	□4	Ground nuts	□5	Cassava	□6
Sweet potatoes	□7	European potatoes	□8	Soya beans	□9
Pigeon peas	□10	Cowpeas	□11	Millet	□12
Sorghum	□13	Bananas	□14	Cotton	□15
Paprika	□16	Chilli	□17	Tomatoes	□18
Vegetables	□19	Water melon	□20	Sunflower	□21
Other _____	□	Other _____	□	Other _____	□

3. Of all your sources of income how much came from the Starter Pack (including sale of components of the pack if you sold any)?
(**Read out the options**)

None	Less than ¼	Less than ½	Between ½ and ¾	More than ¾	All
□1	□2	□3	□4	□5	□6

Sale of grains (maize)

4. How many 50 Kg bags of Maize were offered for sale in 1997/98 ? _____

5. How many 50 Kg bags of Maize were offered for sale **last season** (1998/1999) ? _____

6. Of these bags, how many were contributed by Starter Pack Maize ? _____

Sale of grains (legumes)

7. How many 50 Kg bags of Legumes were offered for sale in 1997/98 ? _____

8. How many 50 Kg bags of Legumes were offered for sale **last season** (1998/1999) ? _____

9. Of these bags, how many were contributed by Starter Pack Legumes ? _____

Planting crops and the Starter Pack

10. This season (1999/2000), did you plant any crops which you would **not** have planted if you had **not** had the Starter Pack (**these crops can include Starter Pack crops**) (**DO NOT read out the options**)

Maize	□1	Tobacco	□2	Rice	□3
Beans	□4	Ground nuts	□5	Cassava	□6
Sweet potatoes	□7	European potatoes	□8	Soya beans	□9
Pigeon peas	□10	Cowpeas	□11	Millet	□12
Sorghum	□13	Bananas	□14	Cotton	□15
Paprika	□16	Chilli	□17	Tomatoes	□18
Vegetables	□19	Water melon	□20	Sunflower	□21
Other	□	Other _____	□	Other _____	□

_____

11. Last season (1998-1999), did you plant any crops which you would **not** have planted if you had **not** had the Starter Pack (**these crops can include Starter Pack crops**) (**DO NOT read out the options**)

Maize	□1	Tobacco	□2	Rice	□3
Beans	□4	Ground nuts	□5	Cassava	□6
Sweet potatoes	□7	European potatoes	□8	Soya beans	□9
Pigeon peas	□10	Cowpeas	□11	Millet	□12
Sorghum	□13	Bananas	□14	Cotton	□15
Paprika	□16	Chilli	□17	Tomatoes	□18
Vegetables	□19	Water melon	□20	Sunflower	□21
Other	□	Other _____	□	Other _____	□

_____

Selling crops and the Starter Pack

12. Last season (1998-1999), did you sell any crops which you would **not** have sold if you had **not** had the Starter Pack (**these crops can include Starter Pack crops**)
(**DO NOT read out the options**)

Maize	□1	Tobacco	□2	Rice	□3
Beans	□4	Ground nuts	□5	Cassava	□6
Sweet potatoes	□7	European potatoes	□8	Soya beans	□9
Pigeon peas	□10	Cowpeas	□11	Millet	□12
Sorghum	□13	Bananas	□14	Cotton	□15
Paprika	□16	Chilli	□17	Tomatoes	□18
Vegetables	□19	Water melon	□20	Sunflower	□21
Other	□	Other _____	□	Other _____	□

_____

13. In the 1999-2000 season, will you sell any crops which you would **not** have sold if you had **not** had the Starter Pack (**these crops can include Starter Pack crops**)
(**DO NOT read out the options**)

Maize	□1	Tobacco	□2	Rice	□3
Beans	□4	Ground nuts	□5	Cassava	□6
Sweet potatoes	□7	European potatoes	□8	Soya beans	□9
Pigeon peas	□10	Cowpeas	□11	Millet	□12
Sorghum	□13	Bananas	□14	Cotton	□15
Paprika	□16	Chilli	□17	Tomatoes	□18
Vegetables	□19	Water melon	□20	Sunflower	□21
Other	□	Other _____	□	Other _____	□

_____

G. Willingness to pay

1. Do you know the cost of Starter Pack ? *Yes* □1 *No* □2

Tell them that 1 Starter Pack costs 450 Malawi Kwacha (MK)

2. At what price would you be willing and able to buy the Starter Pack for cash? (MK)
(**Ask sequentially**)

More than 400	400-300	Less than 300-200	Less than 200-100	Less than 100
□1	□2	□3	□4	□5

3. At what price would you be willing and able to buy the Starter Pack with credit at 49% annual interest rate? (MK)
(**DO NOT read out the options, do not ask sequentially**)

More than 400	400-300	Less than 300-200	Less than 200-100	Less than 100
□1	□2	□3	□4	□5

4. If Starter Pack is completely NOT FREE next season, but available for sale at MK 450, would you be willing to participate in Starter Pack Scheme for Public Work Programme (Chitukuko) in which you work:
(**Read out sequentially**)

More than 8 weeks	*Yes* □1	*No* □
Up to 8 weeks	*Yes* □1	*No* □
Up to 6 weeks	*Yes* □1	*No* □
Up to 4 weeks	*Yes* □1	*No* □
Up to 2 weeks	*Yes* □1	*No* □

5. What price would you be willing and able to pay if the **contents** of the Starter Pack are varied as follows:
(The **size** of the minipacks of cereal, legume and fertiliser will not change)

	Price (MK)
Cereal Only	_____
Fertiliser Only	_____
Legume Only	_____
Cereal + Legume	_____
Cereal + Fertiliser	_____
Legume + Fertiliser	_____
Now that you have looked at the components of the Starter Pack how much would you be willing to pay for the whole pack?	_____

H. Labour

1. During the last weeding period, how many days did you spend working for others? _____

2. Did the Starter Pack Scheme make it easier for you or your family members to work for others? (**Read out the options**)

Don't work for others	Made it easier	No change	Made it more difficult
□1	□2	□3	□4

3. Did the Starter Pack scheme increase your need for labour? *Yes* □1 *No* □2

3.a. If yes, by how many days? _____

4. Did the Starter Pack Scheme make it easier for you or your family members to employ labour? (**Read out the options**)

Don't employ labour	Made it easier	No change	Made it more difficult
□1	□2	□3	□4

I. Credit and Savings

1. Has Starter Pack improved your ability to acquire credit? *Yes* □1 *No* □2

2. Has Starter Pack improved your ability to make savings? *Yes* □1 *No* □2

J. Community

1. Has the Starter Pack affected community relations in your village?
(**Read out the options**)

Worsened	Not changed	Improved
□1	□2	□3

2. Which group do you think has **benefited most** from the Starter Pack in your village?
(**Read out the options**)

Poorest	Poor	Wealthy	Wealthiest
□1	□2	□3	□4

APPENDIX 3: List of villages in the main study sample

VILLAGE	RDP	DISTRICT	EPA	SECTION
Bweya	Dowa West	Dowa	Bowe	Kachala
Chimgolo	Dowa West	Dowa	Bowe	Chimbuli 1
Elisa	Dowa West	Dowa	Bowe	Katambo 2
M'bwabwa	Dowa West	Dowa	Bowe	Chimkoka 1
Chigugu	Kasungu	Kasungu	Chipala	Kaswalipande
Chisinga	Kasungu	Kasungu	Chipala	kapiri
Mphero	Kasungu	Kasungu	Chipala	Chilowamatambe
Nyanja	Kasungu	Kasungu	Chipala	Chilowamatambe
Chalaghala 2	Chitipa	Chitipa	Chitipa South	Nthalire
Lukomo	Chitipa	Chitipa	Chitipa South	Karopa
Mazimero	Chitipa	Chitipa	Chitipa South	Suje
Namapanje	Chitipa	Chitipa	Chitipa South	Nkhumano
Bisa	Ntchisi	Ntchisi	Kalira	Kalira
Chambankuya	Ntchisi	Ntchisi	Kalira	Chafumbwa
Katangala	Ntchisi	Ntchisi	Kalira	Salamba
Pingama	Ntchisi	Ntchisi	Kalira	Salamba
Ganya	Ntcheu	Ntcheu	Kandeu	Kandeu
Kadzombe	Ntcheu	Ntcheu	Kandeu	Tchauya
Tsanulani	Ntcheu	Ntcheu	Kandeu	Tchauya
Zoyeyana	Ntcheu	Ntcheu	Kandeu	kampanje
Chabinda	Dedza Hills	Dedza	Kaphuka	Kamtedza
Gooke	Dedza Hills	Dedza	Kaphuka	Makwinja
Kayesela	Dedza Hills	Dedza	Kaphuka	Chilanga
Kumaano	Dedza Hills	Dedza	Kaphuka	Kaphuka
Chifundo 1	Salima	Salima	Khombedza	Makioni East
Chimtumbuka	Salima	Salima	Khombedza	kasache
Mtalimanja	Salima	Salima	Khombedza	Matenje North
Solomoni	Salima	Salima	Khombedza	Matenje North
Chopera 2	Nkhotakota	Nkhotakota	Linga	Mpamantha
Kamkuwazi	Nkhotakota	Nkhotakota	Linga	Kasamba West
Kamkuwazi	Nkhotakota	Nkhotakota	Linga	Sasani
Unknown	Nkhotakota	Nkhotakota	Linga	Mpondagaga
Kadzinja	Thiwi Lifidzi	Dedza	Lobi	Kanjedza
Katenje	Thiwi Lifidzi	Dedza	Lobi	Chimwankhuku
Liyabunya	Thiwi Lifidzi	Dedza	Lobi	Chimoto South
Mfutso	Thiwi Lifidzi	Dedza	Lobi	Kanjedza
Chapasuka	Nsanje	Nsanje	Magoti	Nkhalango
Magaleta	Nsanje	Nsanje	Magoti	Tsanya A
Mnembe	Nsanje	Nsanje	Magoti	Mnangali
Nyatchitchi	Nsanje	Nsanje	Magoti	Tsanya C
Chembe	Zomba	Zomba	Maiwa	Wetta
Karonga	Zomba	Zomba	Maiwa	Lifaru
Malukula	Zomba	Zomba	Maiwa	Chilemba
Mbaluku	Zomba	Zomba	Maiwa	Dimu
Bejeman Zimba	Central Mzimba	Mzimba	Manyamula	Manyamula 2
Chimimba	Central Mzimba	Mzimba	Manyamula	Kalweya
Chingati Chirwa	Central Mzimba	Mzimba	Manyamula	Zachulu

Kamuzalula Gondwe	Central Mzimba	Mzimba	Manyamula	Kapiri
Chirombo	Thyolo	Thyolo	Matapwata	Chingazi
Mwitere	Thyolo	Thyolo	Matapwata	Matapwata
Namagonya 1	Thyolo	Thyolo	Matapwata	Makande North
Naphiyo I	Thyolo	Thyolo	Matapwata	Naphiyo
Kamgunda	Dedza Hills	Dedza	Mayani	Thombozi
Likangala	Dedza Hills	Dedza	Mayani	Ngoma
Mgawi	Dedza Hills	Dedza	Mayani	Tchetsa
Mtitimila	Dedza Hills	Dedza	Mayani	Matope
Kwitho	Chikwawa	Chikwawa	Mitole	Lusuli
Liwonde	Chikwawa	Chikwawa	Mitole	Liwonde
Mpangeni	Chikwawa	Chikwawa	Mitole	Lusuli
Ntchembere	Chikwawa	Chikwawa	Mitole	Dulansanje
Emfeni	Central Mzimba	Mzimba	Mjinge	Edingeni 1
Malata	Central Mzimba	Mzimba	Mjinge	Kamuntchenja
Msuku	Central Mzimba	Mzimba	Mjinge	Edingeni 1
Zikoti Saka	Central Mzimba	Mzimba	Mjinge	Mwitha
Bingo	Rumphi	Rumphi	Mphompha	Mphompha A
Katatawe	Rumphi	Rumphi	Mphompha	Uzumara
Mwachilubilira	Rumphi	Rumphi	Mphompha	Mphompha A
Visachi	Rumphi	Rumphi	Mphompha	Uzumara
Chimwala	Mangochi	Mangochi	Mpilipili	Sangala
Kantande	Mangochi	Mangochi	Mpilipili	Chitundu
Mawale	Mangochi	Mangochi	Mpilipili	Chitundu
Onani	Mangochi	Mangochi	Mpilipili	Chitundu
Chiponde	Lilongwe West	Lilongwe	Mpingu	Kafisi
Msanjama	Lilongwe West	Lilongwe	Mpingu	Kandele
Ndoliro	Lilongwe West	Lilongwe	Mpingu	Sinumbe
Zalera	Lilongwe West	Lilongwe	Mpingu	Chankhandwe
Chidothi	Dowa West	Dowa	Mponela	Kasalika
Nkhamanga	Dowa West	Dowa	Mponela	Kawere A
Phwetekere	Dowa West	Dowa	Mponela	Kadyamaliro
Sese 1	Dowa West	Dowa	Mponela	Namwiri A
Kalonga	Kawinga	Machinga	Nampeya	Mwenye
Limela	Kawinga	Machinga	Nampeya	Maniya
Mluku	Kawinga	Machinga	Nampeya	Nkisa
Mmina	Kawinga	Machinga	Nampeya	Nthibwiribwi
Mbapi	Bwanje Valley	Mangochi	Nankumba	Mbapi
Morgen	Bwanje Valley	Mangochi	Nankumba	Tsekwere
Mtherereka	Bwanje Valley	Mangochi	Nankumba	Mbapi
Yesaya	Bwanje Valley	Mangochi	Nankumba	Mangombo
Chimbalonga	Zomba	Zomba	Ngwelero	Linyama
Edward	Zomba	Zomba	Ngwelero	Masale
Kalumeya	Zomba	Zomba	Ngwelero	Linyama
Lihowa	Zomba	Zomba	Ngwelero	Linyama
Kamjonanga	Kawinga	Machinga	Nsanama	Likwakwa
Makanjira	Kawinga	Machinga	Nsanama	Kambulaje
Malopa	Kawinga	Machinga	Nsanama	Kambulaje
Ntholowa	Kawinga	Machinga	Nsanama	Khuzumba
Gongonya	Ntcheu	Ntcheu	Nsipe	Madzanje
Hauya/Kamiza	Ntcheu	Ntcheu	Nsipe	Mwalawoyera
Kalipeta	Ntcheu	Ntcheu	Nsipe	Pheza

Khozi	Ntcheu	Ntcheu	Nsipe	Pheza
Chindikano	Nsanje	Nsanje	Nyachilenda	Kadyanganda
Chiutale	Nsanje	Nsanje	Nyachilenda	Nyaukaka
Fatchi 2	Nsanje	Nsanje	Nyachilenda	Nyansato
Padziko	Nsanje	Nsanje	Nyachilenda	Muima
Lipoche	Zomba	Zomba	Thondwe	Jigi
Mbengule	Zomba	Zomba	Thondwe	Mbwana
Ndala Chikolongo	Zomba	Zomba	Thondwe	Potani
Songolo	Zomba	Zomba	Thondwe	Mlenga
Magareta	Thyolo	Thyolo	Thyolo Boma	Namileme
Ndalama	Thyolo	Thyolo	Thyolo Boma	Nachipere
Phalira (Namileme)	Thyolo	Thyolo	Thyolo Boma	Namileme
William	Thyolo	Thyolo	Thyolo Boma	Mianga
Chitala	Balaka	Balaka	Ulongwe	Mdenga
Chitalo	Balaka	Balaka	Ulongwe	Mdenga
Hindahinda	Balaka	Balaka	Ulongwe	Mndenga
Malidadi	Balaka	Balaka	Ulongwe	Chisawa
Chipeni	Lilongwe East	Lilongwe	Nakachoka (Mkwinda)	Ngala
Kaliati	Lilongwe East	Lilongwe	Nakachoka (Mkwinda)	Dzawe
Kataila	Lilongwe East	Lilongwe	Nakachoka (Mkwinda)	Ngwanji
Mphamba	Lilongwe East	Lilongwe	Nakachoka (Mkwinda)	Dzawe