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CADU

CHILALO AGRICULTURAL DEVELOPMENT UNIT

GENERAL AGRICULTURAL SURVEY
OF THE PROJECT AREA

by

Extension and Education
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PREFACE.

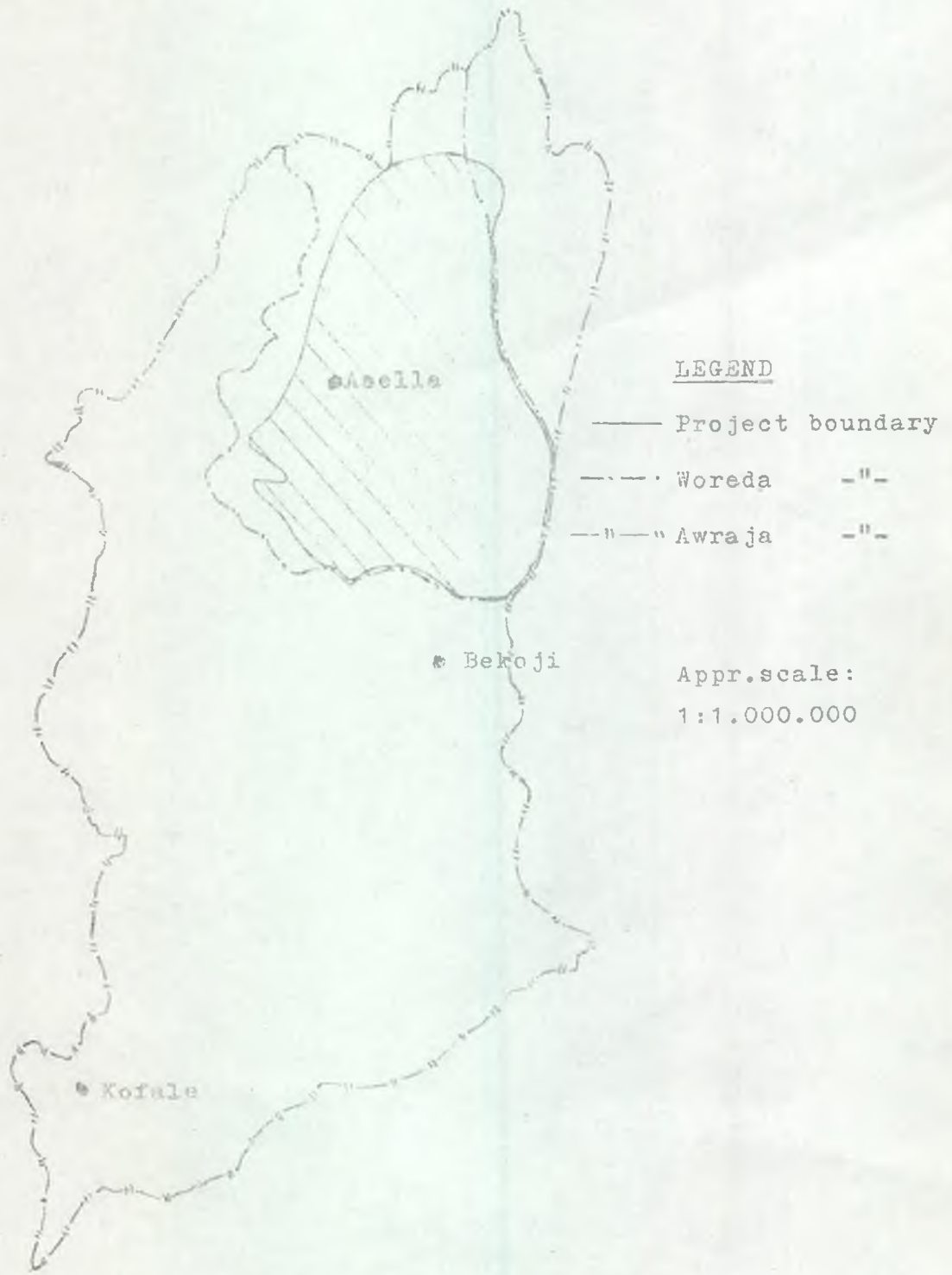
The main purpose of the survey is to give some information about general and agricultural conditions of the project area as a background for planning and introduction of activities, mainly within the Extension and Education Department of CADU. As the survey is covering several fields it must be considered as a teamwork. Assistance in many respects has been given by a number of specialists attached to CADU. Good co-operation has also been maintained with many officials and leaders in the project area.

The preparation of the survey started in September 1967. The questionnaire was constructed by Mr Arne Lexander with assistance from the heads of the crop production, animal production, forestry and extension and education departments. See appendix 1. The sampling was made by Miss Karin Torhall assisted by an interpreter. The interviews were conducted under Miss Torhall's supervision by six agricultural extension agents during the period December 1967 to March 1968. Before the interviews were carried out the agents were taught surveying methods, interviewing techniques and how to fill in the questionnaire. The training was given by Mr Lexander and Miss Torhall. The processing of the data collected has mainly been done by Miss Torhall assisted by two temporarily employed assistants. The compiling of the material has been done by Miss Torhall under the guidance and supervision of Ato Mezgebou Gebre Amlak and Mr Lennart Ohlsson.

INTRODUCTION OF THE PROJECT.

The Chilalo Agricultural Development Unit is building up a project in part of the subprovince of Chilalo (Chilalo Awraja). The districts (weredas) involved during the first phase of the project are Tiyo, Digelu and Tijo, Hetosa, part of Dodota and part of Sire. The whole area is located on the highlands and semi-highlands in Arussi province, east of Rift Valley. The altitude varies between about 1900 and 2900 metres above sea level with regard to the cultivated area. The extension of the project area is shown on the map on the next page.

CHILALC AWRAJA



The project is intended to be a multipurpose project with an integrated approach to development. However, the main fields of activities will be referred to agriculture. The experimentation and testing activities carried out mainly by the crop production, animal production and forestry departments are aiming at producing innovations, which then can be disseminated through the extension and education department.

OBJECTIVES OF THE SURVEY.

For planning of the activities a lot of background information is needed. A number of smaller more or less specialized and locally limited surveys have been carried out by the project from the very start of the planning period. Due to lack of resources it has not before been possible to make any larger survey concerning the whole project area. This survey, made on a sample of all farmers in the present project area, is an attempt to collect more reliable data on some important fields.

The main objectives of the survey can be summarized as follows:

1. To collect information on the present farming conditions of the project area, ie on the farmers' families, landownership, tenancy, farming methods, crops grown, animal husbandry, forestry, marketing habits, farming problems in general.
2. To get a foundation for selection of model farmers, ie progressive farmers who are willing to co-operate and try innovations suggested by the project and demonstrate it to others.
3. To support the agricultural extension agents in getting acquainted with their extension areas.

SAMPLING METHOD.

In Chilalo awraja a population census was made locally in the first half of 1966. According to the census the number of persons in the project area was more than 100 000,

which might mean 20 000 families.

The census is made for each wereda separately. The census is divided into balabat areas and balabat agent areas, and then subdivided into different landowners. All tenants with their families have been listed under each landowner. Each person's name, age, religion and occupation is written. Each landowner's place of residence and that of his tenants is included in the census. The sum of the number of persons in each balabat area and in each wereda is known but not the number of families or the average family size.

It was intended to take a sample of around 500 families. There are six extension agents, and this meant that each agent should get 80-90 families to interview. They should work in their own respective extension areas. An extension area covers one wereda or a half. In each wereda the number of farmer families was counted. The families where the head of the household was not a farmer were not counted, but if he was a farmer, also engaged in another occupation, his family was counted. The number of families was divided by 90 (or 180 if two agents should work in the same wereda). It was decided that each 30th family in some weredas and each 25th or 20th in others, which were smaller, had to be taken. When an agent's area covered balabat areas from two different weredas, the same procedure was applied to the whole of that agent's area. A random sampling was made by casting lots among 30 (25, 20) numbers to see with which family to start and then each 30th (25th, 20th) was taken out in the order they were put in the census files.

The area covered by each extension agent is shown on the map on the following page.

Reservations must be made concerning the reliability of the sample:

Firstly the population census is not very reliable:

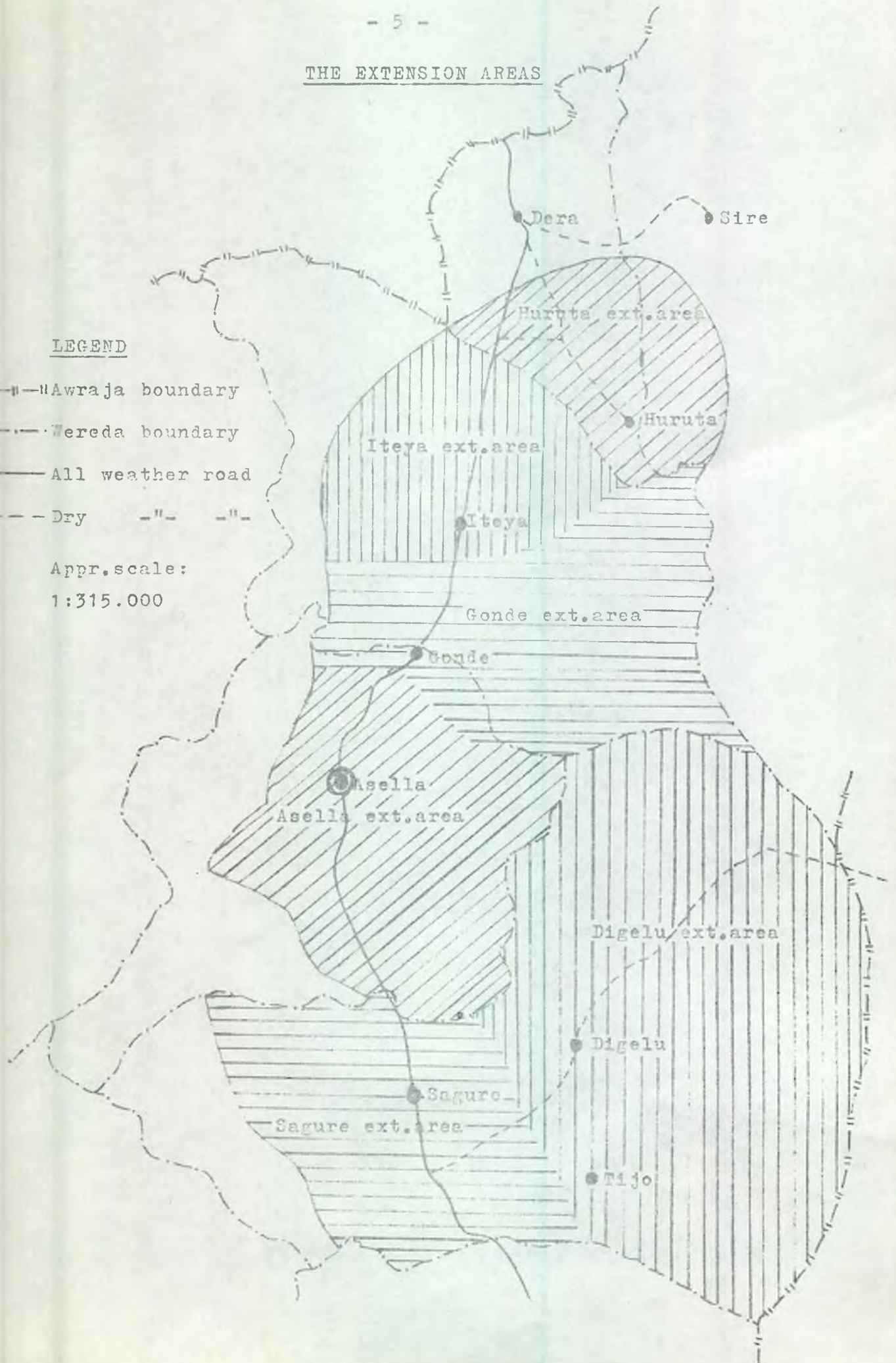
When this survey was carried out, it was found that many of the farmers which were picked out from the census were

THE EXTENSION AREAS

LEGEND

- ||-||-||-|| Awraja boundary
- - - - - Wereda boundary
- All weather road
- - - - - Dry " " "

Appr. scale:
1:315.000



not living in the area and had not been living there for years. How they got included in the census is hard to say. Whether these are a special sort of farmers and therefore influenced the result in some special direction or not is subject to guessing.

From what has been revealed later many families have not been included in the census. Some of these might be newly moved in farmers, as the census was 1½ years old. Most of those who moved in are probably tenants, as tenants move more often than landowners do. If such is the case, it has made the proportion of tenants too small in the sample.

On the other hand, in many cases a dead man is said to be the landowner and the head of household, because the inheritors do not want to report the death and pay inheritance duty. From this follows that many real landowner families are put together under one head of household and thus that the number of landowners in the census is smaller than what actually exist.

Secondly it was difficult to make the sampling for the following reasons:

The Digelu agent and the Sagure agent had to share Digelu and Tijo wereda. It was impossible to make two equal parts by dividing the wereda along the balabat or balabat agent borders. Each 20th family in the whole wereda was picked out, and the families in four smaller balabat areas were given to the Digelu agent. In the fifth balabat there are two balabat agent areas. One agent area was given to the Sagure agent, and then the other agent area was divided between them according to where the families were living. Sometimes the family consisted of up to 50 persons in the census. This meant that many families were living within one family and it was impossible to decide into how many separate family units it should be divided. In these cases the precedent set by the census was followed and the family counted as one. The findings in the census were also used in the ca-

ses where a child was written as the head of household although there were farmers in the family. It was not known why this was done so.

For the Asella agent in Tiyo wereda each 30th farmer family from three of the four balabat areas that are on the highland was taken out. For the Gonde agent each 25th from the fourth balabat on the highland in Tiyo wereda was taken.

The Gonde agent shared also Hetosa wereda with the Iteya agent. As the balabats have areas in different places, the balabat borders could not be used for our agents. All balabat areas except one are situated on both high- and lowland. As the names of the places were not written in the census as in other weredas, it was decided to contact all the balabat agents and ask them where the farmers were living and if it was on high- or lowland. Among the farmer families on the highland area each 25th was picked out and the families were divided between the extension agents according to where they were living. By mistake both the agents interviewed the same farmers in some cases. In these cases the interviews conducted by the Gonde agent were used for processing and the Iteya agent's to control the correlation between the answers the two agents got. 13 families in the Iteya agent area lived in a balabat agent area where the agent did not get any assistance to locate them for interviewing. He found only one, and all 13 were excluded from the statistical calculations.

The Huruta agent is working in a part of Dodota wereda and a part of Sire wereda. Dodota wereda is mainly on the lowland. It has the same balabat and the same balabat agent in the whole wereda, so such borders could not be used in this survey. Those living in Huruta, which is on the highland, were counted, and the wereda governor picked out the families on the highland in the rest of the wereda. When also Sire wereda had been counted it was decided to take each 20th farmer. Sire wereda also consists of both high-

and lowland. Each 20th farmer on the highland area in one balabat was taken out, and from these farmers those nearest to Huruta were interviewed.

THE LOSS.

Together 483 families were sampled. Many farmers had died or left the area before the survey was made, and some of the persons still existing there were not farmers or not even men. Therefore the number of farmer families sampled and actually living in the project area was only 386. The agents obtained assistance from the leading persons in their areas to find the farmers. Of the 386 farmers 351 or 91% (or 61% of all sampled) were interviewed. Of the remaining 35 or 9%, 1 refused to answer, 5 were impossible to get informations from as they were deaf, insane or very old, and 29 were not at home, even though the agents tried two or three times to arrange a meeting with them. See table 1 on the following page.

LIMITATIONS OF THE SURVEY.

One must be aware not to draw too much conclusions from the findings in this survey. Except the limitations set by the sampling difficulties one must consider the uncertainty in the answers given by the farmers, who might have been afraid or unable to give correct answers, and the extension agents' insufficient experience in interviewing.

Some information has been left out from this report, as the answers were incomplete or regarded as less reliable.

In order to get an idea of how reliable the answers are one can compare the answers received by the two agents who have interviewed the same 27 farmers. The difference between the answers can depend on either the farmers, who can answer differently, or the agents who can make mistakes when noting the answers down.

A measure of the correlation is the Pearson correlation

Number of families sampled and interviewed and the results

Table 1

	Sampled	Not existing in the area			Sum
		unknown or left	dead	not a farmer	
Digelu	88	13	4	5	22
Sagure	86	11	2	2	15
Asella	81	13	0	1	14
Gonde	93	15	0	5	20
Iteya	57 x)	6	1	4	11
Huruta	78	10	4	1	15
Total project area	483	68	11	18	97

x) plus 13 more in one subarea where or

Reason why the remaining are not interviewed.

Existing of the sampled	Inter-viewed	Existing there but not interviewed			
		refuser	old, deaf insane	not at home	Sum
66	63	0	0	3	3
71	61	0	2	8	10
67	64	0	0	3	3
73	66	1	1	5	7
46	39	0	2	5	7
63	58	0	0	5	5
386	351	1	5	29	35

ly one person was found. All 13 excluded.

coefficient, which is +1, if the correlation is complete and 0, if there is no correlation at all. This can be used only on answers which consist of figures. In the questionnaire there are around 80 such questions, but on most of them many farmers have answered 0, and then it is no use to calculate on them. Four questions were chosen, where all or almost all farmers had answered with a figure above 0.

On the question about "age of head of household" the two agents had got different answers in 6 cases of the 27, but the correlation coefficient was 1,00. On the question about "distance in km to primary market" the answers differed in 13 cases of 26 (one never went to market), and the coefficient was 0,82. On the question about "area of barley grown" the answers differed in 8 cases of 26 (no information from one) and the coefficient was 0,95. The question "number of oxen owned" had been answered differently in 3 cases of 27, and the coefficient was 0,98.

These figures show quite a good correlation, but they can not be taken as a measure of the whole survey's reliability. Only the answers of the agents at Iteya and Gonde have been compared, and the other agents we do not know anything about in this respect. And the validity is not checked - both these two agents might have got the same wrong answers.

PROCESSING.

For the processing each extension agent's area was divided into four geographically defined subareas, except the Iteya agent area, which was divided into three parts, as one was left out. Percentages and averages were counted on each part for analyzing of local differences. However, there is some confusion about the names of the subareas and the drawing of borders between them. They are also too small to be statistically usable. Therefore, the figures for the different extension areas only are presented here. Also in

comparing these areas one should be careful in drawing conclusions. The figures for the whole project area are also included. These are not simply averages of the figures for the extension areas, because the areas are of different size and had to be given different weight at the counting of project averages.

FINDINGS.

FAMILY.

Table 2. Family size and additional occupation.

The table shows the average number of family members in the different extension areas. With family means persons living in the same compound and sharing household. The first columns show the number of adults - that is persons who are 15 years old or more - separated into males and females. - Then the number of children between 10 years and 14 years, 11 months is shown and then children less than 10 years and in the last column the average total family size. - The column "add.occ." shows the percentage of farmers in an area who have any additional occupation beside farming. The occupations found are medicinman, blacksmith, tailor, weaver, carpenter, butcher, trader, priest and musician.

	Adults		Children				Total family size	Add. occ.
	M	F	≥ 10 yrs		< 10 yrs			
			M	F	M	F		
Digelu	1,6	1,8	0,5	0,4	1,2	1,5	7,0	11,1
Sagure	1,5	1,5	0,6	0,3	1,1	1,4	6,4	13,1
Asella	1,3	1,2	0,4	0,3	1,1	1,3	5,5	0,0
Gonde	1,7	1,7	0,5	0,4	1,3	1,2	6,8	10,6
Iteya	1,8	1,7	0,4	0,4	1,2	1,1	6,5	5,1
Huruta	1,5	1,2	0,4	0,3	0,9	1,1	5,5	1,7
Proj.area	1,6	1,5	0,5	0,3	1,1	1,3	6,3	5,1

Table 3. Literacy.

The three first columns show the percentage of all persons of 10 years or more who can read and write, only read or neither read nor write. - The three following columns show the percentage of families, out of all families interviewed in the area, which have at least some member who can read and write or only read. - The last three columns show how many persons, in % of all above 10 years, who have been to school more than 4 years resp. less than 4 years.

	Literate persons			Literate families			Attended school		
	R+W	R	O	R+W	R	O	≥4y	<4y	Oy
Digelu	6	0,4	93	28	2	70	2	3	91
Sagure	7	3	87	23	2	75	5	4	90
Asella	13	0	87	27	0	73	3	11	85
Gonde	10	0,4	90	32	2	67	4	6	90
Iteya	12	0	88	38	0	62	5	8	87
Huruta	10	2	88	36	5	59	5	7	88
Proj.area	10	0,9	90	31	2	68	4	6	89

When comparing the number of people who can read and write with the number of persons who have been to school, one finds that one has to count both those who have been to school more than 4 years and those who have been to school less than 4 years to get the same figure as the number of those who are literate. One considers it, however, necessary for a person to have been at least 4 years in school to be permanently literate. Therefore half of those who say that they are literate are not so in the real sense of the word.

Table 4. Years of residence, tribe and religion of the head of the household.

The first two columns show how many years on an average the farmers in an area have lived at the place where they are living now resp. in Chilalo awraja. The average is counted only on those who answered both questions. - The "tribe" columns show the percentage of amharas, arussi gallas, shoagalas and people of any other tribe among the farmers. - The "religion" columns show the percentage among the farmers of orthodox christians and muslims.

	Years of residence		Tribe				Religion	
	pres. place	Chilalo	Amh.	Arussi gal.	Shoa gal.	Others	Ort.	Muslim
Digelu	37	37	13	48	40	0	54	46
Sagure	28	30	15	26	57	2	74	26
Asella	28	31	45	31	22	2	70	30
Gonde	33	37	23	26	44	3	74	26
Iteya	35	36	15	44	41	0	56	44
Huruta	34	39	31	41	19	7	57	43
Proj.area	33	35	24	35	37	3	65	35

The people does not seem to be very much moving. They have stayed 33 years on an average in their present place, varying from 1 month to 80 years. In Chilalo they have been living 35 years, which is nearly the same. This means that if they have moved, they have not moved around within Chilalo but moved in from other awrajas.

In order to see if tenants are moving more than landowners the average years of residence were counted for the two groups separately. The tenants have stayed in their present place for 27 years on an average, and landowners have been living there for 38 years. The difference is significant at the 0,5%-level.

Table 4a. Distribution of landowners and tenants by tribal groups.

In order to see if there is any correlation between tribal origin and landowning the proportion of landowners and tenants of different tribes has been counted. The table shows the percentage of landowners and tenants in the respective tribal groups.

	Amhara	Arussi galla	Shoa galla	Other tribes	All tribes
Landowners	39	71	34	18	48
Tenants	61	29	66	32	52

Table 5. Traditional associations.

This table shows how many families, in % of all families interviewed, that belong to different social associations. The sum is the average number of groups the families belong to.

	maha-ber	ider bete	sen-bete	debo, jige	shan-ko	ekub	axion	sum
Digelu	51	83	44	97	57	16	2	3,5
Sagure	54	89	46	97	72	22	3	3,8
Asella	50	100	50	86	95	11	0	3,9
Gonde	35	98	39	94	97	12	2	3,8
Iteya	23	92	26	92	87	5	0	3,3
Huruta	49	46	7	78	75	9	0	2,6
Proj.area	45	85	36	91	80	13	1	3,5

Mahaber is from the beginning a religious association. The members meet on a certain saint's day once a month at different members' houses in turn.

Ider is an association where people meet to discuss and to get help in time of emergency. Anybody can enter it. The members contribute money and get help when they have to organize a funeral or when an accident has occurred.

Senbete resembles mahaber but is attached to a church instead of a saint. It is held every sunday after service in houses outside the church compound. The members bring food in turn and discuss common problems.

Jige and debo are the amharic resp. the galinya name for the same thing and means a system where the farmers in a group help each other with farming and work one day on each member's farm.

Shango is a sort of discussion group.

Ekub is a saving club which can be characterized as a combined bank and lottery. The members pay a certain amount each month and cast lot among themselves to see who shall get the whole sum. One who has won cannot win again untill every member has won once.

Axion is a group of recent date, imposed by Community Development. It is a group created by persons who join together under the supervision of a village level worker to solve a problem common to all the group members. An axion can be a temporary formation but can also last for a long period, depending on the kind of undertaking that the members try to solve.

LANDOWNERS

Table 6. Landownership.

The first two columns show the percentage of landowners and tenants among the farmers interviewed. With tenants means here both sharecroppers and contract farmers. Concerning the definitions of these words see page 17. - The following columns concern only the landowners. First comes the average size of area owned resp. area cultivated by the landowner himself. The farmers have given the answers in different measurements

and all were transformed into hectar according to the following: 1 kert = 1 tinad = 1 masa = 1 pair of oxe (what one pair of oxen can plow in a day) = $\frac{1}{4}$ ha; 1 tefer = 20 tinad = $\frac{1}{8}$ gasha = 5 ha; 1 gasha = 8 tefer = 40 ha. The size of a tefer is always the same or 5 ha. The size of a kert is also always the same or $\frac{1}{4}$ ha. The size of a tinad, however, varies from farm to farm. It depends on the strength of the oxen, the hardness of the soil and the length of the farmer's working day. Therefore different farmers give different answers of how many tinads there are on a tefer. It varies from 13 to 30 tinad. This means that a tinad can vary from 0,38 to 0,17 ha. However, here is the average of 0,25 ha for a tinad used to make it possible to calculate statistically. - The next column shows the average number of years the farmers have owned their land and the next ones the percentage of different kinds of tenures among the landowners interviewed.

	<u>Occupation</u>		<u>Area in ha</u>		<u>Yrs of owner-ship</u>	<u>Kind of tenure</u>		
	<u>L-own.</u>	<u>Ten.</u>	<u>owned</u>	<u>culti- vated</u>		<u>Gebar</u>	<u>Semon</u>	<u>Others</u>
Digelu	62	38	24	7	24	92	3	5
Sagure	43	57	10	6	34	85	8	8
Asella	28	72	11	4	33	95	0	0
Gonde	38	62	10	6	27	96	8	0
Iteya	59	46	4	3	9	87	9	0
Huruta	67	33	4	2	22	79	10	8
Proj.area	48	52	11	5	24	88	6	4

As has been said before, the proportion landowners-tenants in the sample might be wrong.

Within the extension areas there were some differences between the subareas in these proportions. Thus there were more landowners around the village itself in Digelu area, while in Asella area there was a majority of tenants around the town. - Most of the owners, or 85%, own the land alone, while the remaining own it together with somebody, mostly a brother. -

Out of the land owned, which varies in size among the owners from 0,5 ha to 105 ha, they cultivate almost half of it themselves. The rest is either used as grazing land or leased out to tenants. Of the sampled landowners only 1/5 have te-

nants. Many of these have only one tenant, but some have up to 9, and the average number of tenants among these who have is 2,6.

Gebar, which is the very most common kind of tenure in all areas, means that the owner has acquired the land by purchase, grant or inheritance. He pays landtax, education tax and health tax direct to the Government. He can sell, lease or mortgage his land, and it is heritable.

Semon means that the land has been apportioned by the church and that the owner pays asrat, education tax and health tax to the church. Instead of paying landtax he either gives services to the church or pays for the services of the priests. The land is sellable, leaseable and heritable.

Other kinds are very uncommon. A few farmers hold maderia land, which means that it is government land, granted to government employees in place of salary or pension for the period of office or for life time. The owner pays asrat, health tax and education tax. It is not sellable or heritable.

Some farmers said they hold sekela land, which is the same as maderia land.

Some have mirit, which means land which was distributed to balabats by the government and from where the balabats used to get a certain part of the taxes. This is now counselled and those who have mirit land now might have bought it from a balabat, and they pay land tax, health tax and education tax.

Tax payment.

70% of the landowners pay landtax themselves. Of those who hold gebar and 2/3 pay it themselves, while 1/3 don't. Those who have answered that somebody else pays the tax usually mean the man who is entered in the land register at the provincial office of the Ministry of Finance as the head of a particular gasha. He collects the taxes from the other owners on that gasha. Sometimes the tax is paid by someone who owns the land together with the interviewed landowner.

Of the semon land owners half pay landtax themselves.

Of the five maderia owners two pay tax and both the two mirit owners pay themselves.

TENANTS.

Table 7. Sharecropping and contract farming.

The table shows the percentage of different kinds of tenancy relationships, out of the total sum of sharecropping agreements plus contracts in each extension area.

	<u>Sharecropping agreements</u>								<u>Contract</u>	
	<u>Ekol arash</u>		<u>Siso ar.</u>		<u>Irbo ar.</u>		<u>Sum</u>		<u>v</u>	<u>w</u>
	v	w	v	w	v	w	v	w	v	w
Digelu	15	4	58	12	0	0	73	15	4	0
Sagure	19	14	39	8	3	0	61	22	0	3
Asella	13	0	53	0	0	0	67	0	0	2
Gonde	14	16	44	19	0	0	58	35	0	5
Iteya	35	15	25	25	0	0	60	40	0	0
Huruta	35	0	40	0	0	0	75	0	5	5
Proj.area	20	8	45	10	0,5	0	65	18	1	3

v = verbal; w = written

Ekol arash means that the sharecropper borrows oxen and implements from the landowner. If he also borrows seeds for planting, he has to pay the seeds back after harvesting, before the sharing of the harvest takes place. Then the sharing is made on a fifty-fifty basis.

Siso arash means that the sharecropper owns oxen and implements himself and provides half of the seeds for planting. When sharing the harvest, the sharecropper gets 2/3 and the landowner 1/3.

Irbo arash means that the sharecropper owns oxen and implements himself, and he takes all seeds needed from his own. At sharing he gives 1/4 of the products to the landowner.

In both Ekol, Siso and Irbo arash asrat is set aside before sharing takes place.

Contract means that the landowner doesn't contribute any investment. In the contract is stated the amount of grains and other products the tenant has to pay in rent, independent of the size of the harvest. The tenant doesn't pay asrat.

The number of tenants interviewed is 182, but the total sum of holdings is 190, because some tenants hold land in two different places. 1/5 of the agreements are written among the sharecroppers interviewed and 3/4 among the contract far-

mers. On the other hand, only 2,5% of the agreements which the interviewed landowners have with their tenants are written. This discrepancy can be explained only by the fact that the tenants sampled are not tenants of the landowners sampled. That a sharecropping agreement is written does not mean better security for the tenant. He can in any case be evicted after harvest.

Table 8. Tenant circumstances.

The first column shows the average size in hectar of the area rented by the tenants. - Then comes the average number of fragments that area is divided into. - The two following columns show how long time on an average the tenancy has lasted untill now resp. will run from now. In most cases, however, nothing is agreed upon the last matter. - The column "rent paid" shows how big part of the harvest the sharecroppers pay on an average, in % of the whole harvest. - For the question whether the tenant owns any land beside what he rents the percentage of both the yes- and the no-answers are here presented. Only the yes-answers would not say much, as the agents in many cases have not filled in any answer at all on that question.

	Area rented	No of fragments	Length of tenancy		Rent paid	Owns land	
			To now	From now		yes	no
Digelu	3,0	2,0	14	0	40	0	35
Sagure	4,6	2,4	12	4	42	7	49
Asella	4,5	1,7	2	2	-	3	64
Gonde	3,2	3,4	15	7	-	17	2
Iteya	3,4	2,8	16	-	39	10	26
Huruta	1,1	-	15	-	32	5	26
Proj.area	3,5	2,4	14	4	37	13	65

CROP PRODUCTION.

Table 9. Crops grown.

The table shows for each kind of crop first the percentage, out of all families interviewed, who grow that kind, and then the area they grow it on, on an average among those who grow it.

	Wheat		Barley		Maize		Teff	
	%	ha	%	ha	%	ha	%	ha
Digelu	54	0,8	97	2,0	0	0	6	0,7
Sagure	32	1,2	89	1,7	0	0	10	0,7
Asella	56	1,7	84	1,7	19	0,6	27	0,5
Gonde	79	2,2	92	1,3	15	0,6	5	0,6
Iteya	87	1,6	82	1,3	23	0,6	13	0,7
Huruta	66	0,9	83	0,8	22	0,9	24	0,4
Proj.area	64	1,4	81	1,5	11	0,7	11	0,7

	Sorghum		Flax		Peas		Beans	
	%	ha	%	ha	%	ha	%	ha
Digelu	0	0	41	0,8	62	0,7	59	0,4
Sagure	0	0	69	0,6	54	0,7	62	0,4
Asella	23	0,3	31	0,3	34	0,3	36	0,4
Gonde	8	0,4	36	0,8	32	0,5	64	0,4
Iteya	3	0,1	21	1,0	26	0,9	44	0,4
Huruta	26	0,4	21	0,3	24	0,3	45	0,4
Proj.area	8	0,4	34	0,7	37	0,6	48	0,4

Beside these rather common crops a few farmers also grow lentils, rape, vegetables, onion - especially around Asella and Dera - and hops.

Table 10. Proportion between crops grown.

The table shows the proportionate size of area used for the different crops in % of all cultivated land in an extension area. The less important crops are excluded, because all together they are grown on less than 1% of all cultivated land.

	Wheat	Barley	Maize	Teff	Sorghum	Flax	Peas	Beans
Digelu	12	58	0	1	0	10	12	7
Sagure	27	42	0	2	0	12	11	6
Asella	28	56	3	3	2	2	3	3
Gonde	47	30	3	0,7	0,7	8	4	6
Iteya	42	32	4	3	0,1	6	7	5
Huruta	28	32	11	5	6	4	3	9
Proj.area	31	41	3	2	1	8	7	6

Table 11. Soil burning and seed sources.

The first two columns show those who burn the soil in heaps (guy) in % of all interviewed farmers and those who don't. - The following two columns show what they plant immediately after the burning, in % of those farmers who burn. - The last four columns tell from where the farmers get seeds for planting, ie the percentage of farmers who get them from the different sources, out of all farmers.

	Burning soil		Planting afterwards		Seed sources			
	yes	no	wheat	barley	own	neigh-bour	mar-ket	land-owner
Digelu	38	59	4	96	83	11	25	6
Sagure	70	25	0	98	72	8	44	8
Asella	36	61	39	78	89	14	28	16
Gonde	18	1,5	0	100	86	15	21	17
Iteya	10	72	0	100	95	8	5	3
Huruta	7	91	25	100	79	10	47	52
Proj.area	31	49	10	94	84	11	30	9

That the percent in column 3 and 4 become more than 100 depends on that some farmers have answered with two or more alternatives.

Beside wheat and barley some farmers plant teff, flax, peas and beans after the burning.

Also in the columns for seed sources the percent is higher than 100, because many farmers have some seed of their own and get the rest from neighbours, market or the landowner. If those who get from the landowner are calculated in percent only of the tenants instead of out of all farmers, the figures in the last column will be a little more than doubled.

Table 12. Use of fertilizer.

Fertilizer means here manure. The first two columns tell how many, in % of all farmers interviewed, who use manure for fertilizing resp. the percentage who don't. - Thereafter is shown the percent who use it on different crops, calculated out of those who grow the respective crops this year (the season 1967-68). Some farmers have answered on what crops they usually use fertilizer, even if they don't grow those crops this year. Others have answered the fertilizer question only concerning the crops they grow this year. As then the figures don't tell what all farmers usually use fertilizer on, it was decided to count what a farmer said he uses fertilizer on only if he grows that kind of crop this year and to calculate the percentage out of only those who grow it this year and not out of all farmers.

	<u>Use fertilizer</u>		<u>Use fertilizer on</u>					<u>beans+le- gynes</u>
	<u>yes</u>	<u>no</u>	<u>wheat</u>	<u>barley</u>	<u>maize</u>	<u>sorghum</u>		
Digelu	90	3	26	66	0	0	37	
Sagure	56	34	14	19	0	0	31	
Asella	67	33	44	54	75	0	34	
Gonde	71	3	31	72	20	0	4	
Iteya	79	18	35	78	44	0	5	
Huruta	48	50	28	48	7	31	42	
Proj.area	68	23	32	59	43	19	27	

On other kinds of crops only one or two persons use fertilizer. In Sagure area there are some farmers who use it on their grass land.

Table 13. Weed problems.

This table shows how many, in % of all farmers, who have mentioned the respective weeds as one of the three most important ones on their fields. The figures in the head refer to figures in a long list of weeds mentioned, from which the most common ones have been picked out to be presented here.

	1	2	3	4	5	6	7	8
Digelu	38	2	0	0	0	35	13	94
Sagure	10	7	0	3	3	44	2	90
Asella	7	2	0	7	3	53	2	78
Gonde	21	11	8	18	32	70	11	97
Iteya	28	3	15	5	23	85	3	100
Huruta	2	28	7	14	16	95	0	84
Proj,area	17	9	4	8	12	62	5	90

List of weeds:

No	Latin	Anharic	Galinya
1	Avena sp	Sinar	Germa
2	Bidens sp	Chigogot	Metene
3	Datura sp	Atefaris	Benji
4	Galinsoga sp	Abadabo	Abadabo
5	Galium sp	Ashekt, Ashket	--
6	Guizotia sp	Mech	Hada
7	Rumex sp	Tult	Dengego
8	Snowdenia sp	Muja	Muja

Except these weeds, of which the latin names are found, there are three (or two?) more common weeds, which were not possible to identify. These are Shult(amh) or Shulti(gal), which is mentioned by a considerable number of farmers in the southern area, and Asendabo(amh), which is found in the whole project area, and Shabe or Shobe, which is more common in the southern than in the northern parts and which some people say is the same as Shult. Thirty one other weeds have occasionally been mentioned. The ones identified are Amaranthus, Andropogon, Cerastium, Commelina, Cotula, Cynodon, Hibiscus, Lathyrus, Lolium, Melethris, Polygonum, Protea, Rhamnus and Urtica.

Table 14. Diseases and worm problems.

This table shows, in % of all farmers, those who have mentioned different diseases on crops and different insects or worms as one of the three most important on their fields. The figures in the head refer to a list of five diseases mentioned, where the remaining two are not identified and

not important, resp. a list of nine insects or worms, where of the remaining five one just means "worms" and four are not important and not identified.

	Diseases			Insects, worms			
	1	2	3	1	2	3	4
Digelu	19	65	0	38	2	3	0
Sagure	74	46	11	33	41	0	0
Asella	39	8	5	27	3	0	0
Gonde	80	41	36	76	6	0	27
Iteya	90	97	21	85	26	3	46
Huruta	91	62	69	90	0	29	81
Proj.area	63	50	13	58	12	6	24

List of diseases and insects and worms:

	No	Anharic	Galinya	English
Diseases	1	Wag	Wag	Rust
	2	Bird	Kora	Frost
	3	Arenano	Dufie	Snut
Insects, worms	1	Mesek	Mesek	Cutworm
	2	Serekartom	Serekortom	-
	3	Temech	Siko	Armyworm
	4	Pena	Korupisa	Grasshopper

Table 15. Stores and pest problems in stores.

The first column shows the percentage of farmers, out of all farmers, who own stores. - The four following columns show the average number of stores owned, separated in small, medium size and big ones, calculated on those who own stores. - Thereafter comes the percentage of farmers, out of those who own stores, who have problems with insects resp. rodents in their stores.

	Store- owners	Number of stores				Problems with	
		small	medium	big	total	insects	rodents
Digelu	87	0,5	0,9	0,3	1,7	2	100
Sagure	80	0,9	0,8	0,5	2,2	22	100
Asella	91	1,2	0,7	0,2	2,1	33	100
Gonde	94	0,5	1,1	0,7	2,2	52	98
Iteya	90	0,3	1,7	0,3	2,3	71	100
Huruta	84	1,0	1,3	0,2	2,5	67	98
Proj.area	88	0,7	1,0	0,4	2,2	39	99

Interest in changing of farming methods.

When asked if they were interested in changing their present farming methods almost all farmers answered yes. Then they were asked which of different mentioned things they thought would increase the output from their farms. Almost all believed in better ploughs, better seeds, fertilizers and more frequent weeding, while more than half of them also thought that handhoes, insecticides, better stores, more and better grass land and up-graded cattle would be good. Only for handhoes there was no interest in the northern part of the project area.

FORESTRY.

Table 16. Fuel used, eucalyptus planting and erosion.

The two first columns show the percentage of farmers using wood resp. manure as fuel, out of all farmers interviewed.- The third and fourth columns show how many, in % of all farmers, who have planted eucalyptus on their land, resp. how many they planted on an average among those who planted. - The last columns indicate on how many's land, in % of all farms, erosion is observed by the extension agents. The agents themselves decided as to whether the erosion should be called mild or severe.

	<u>Fuel used</u>		<u>Farmers No of eu-</u>		<u>Erosion observed</u>		
	<u>wood</u>	<u>manure</u>	<u>who plan-</u>	<u>ted euc. planted</u>	<u>no</u>	<u>mild</u>	<u>severe</u>
Digelu	76	57	38	519	44	24	30
Sagure	41	87	31	684	66	20	15
Asella	84	70	41	359	11	47	42
Gonde	71	64	11	351	80	14	6
Iteya	95	79	27	114	38	49	10
Huruta	60	83	43	490	24	29	47
Proj.area	70	73	36	419	45	29	26

The number of eucalyptus trees planted, which is around 400 on an average, varies from 5 to 10 000.

ANIMAL PRODUCTION.

Table 17. Animals owned.

The table shows for each kind of domestic animal the percentage of farmers owning that kind of animal, out of all farmers interviewed, and how many of that kind they own on an average among those who own it.

	Oxen		Lactating cows		Dry cows		Other cattle		Sheep	
	%	no	%	no	%	no	%	no	%	no
Digelu	86	3,0	84	2,8	51	3,7	89	5,1	87	11,5
Sagure	80	3,0	77	3,1	57	3,3	80	7,4	85	8,3
Asella	86	2,7	66	1,8	63	3,0	67	3,9	69	7,0
Gonde	91	2,8	65	1,7	55	2,4	83	4,1	77	5,7
Iteya	97	2,6	49	2,4	59	2,0	67	3,7	62	5,2
Huruta	86	2,4	62	1,9	50	2,7	69	3,3	67	4,7
Proj.area	87	2,8	68	2,3	56	2,9	77	4,9	76	7,5

	Goats		Horses		Donkeys		Mules		Poultry	
	%	no	%	no	%	no	%	no	%	no
Digelu	25	3,1	68	2,5	24	4,7	14	1,7	27	4,6
Sagure	7	4,5	77	2,4	41	2,1	15	1,1	38	4,1
Asella	25	5,0	39	1,4	48	1,8	13	1,0	41	4,0
Gonde	30	4,1	41	2,0	68	1,6	14	1,2	73	3,7
Iteya	31	5,4	36	1,6	72	1,7	8	1,0	38	2,9
Huruta	19	4,2	52	1,4	59	1,4	14	1,1	33	3,8
Proj.area	23	4,3	53	2,0	51	1,7	13	1,2	42	3,8

Table 18. Animal diseases.

The table shows for each kind of disease first how many farmers, in % of all farmers interviewed, who have had the disease among their animals, then the average number of cases among those who had the disease and in the last column the average number of animals that died among those who had the disease.

	Rinderpest			C.B.F.P.			Anthrax			Blackleg		
	% far- mers	No ca- ses	No dea- ths	%	C	D	%	C	D	%	C	D
Digelu	21	5	4	3	3	3	6	8	4	5	5	3
Sagure	51	7	5	8	20	14	44	3	3	38	2	2
Asella	55	3	1	0	0	0	0	0	0	0	0	0
Gonde	38	4	3	2	2	2	5	1	1	20	2	2
Iteya	33	5	3	5	1	1	8	1	1	23	2	2
Huruta	38	4	3	5	3	3	19	2	2	52	2	2
Proj.area	40	5	4	7	14	11	14	3	2	22	2	2

	F.M.D.			Liverfluke			Hersemange			Footrot		
	%	C	D	%	C	D	%	C	D	%	C	D
Digelu	5	3	1	35	8	7	6	2	1	5	4	5
Sagure	43	11	1	43	5	5	48	5	4	30	3	1
Asella	0	0	0	0	0	0	2	6	3	0	0	0
Gonde	11	6	-	12	6	5	9	5	2	3	3	2
Iteya	13	6	0	15	10	7	0	0	0	3	10	10
Huruta	10	5	1	33	4	4	9	3	1	2	2	1
Proj.area	13	8	4	23	6	5	13	4	3	7	3	3

As sometimes the number of cases and sometimes the number of deaths is not given, the average in the two columns are not exactly comparable. It can occur that the average number of deaths is as high as or higher than the average number of cases, even if many sick animals were saved. This statistical fault could be avoided if one counted both averages only on those who have answered both how many cases and how many deaths. These are so few, however, that in that way one would miss a lot of information which the others have given about one of the questions.

Table 19. Vaccinations and seasonal movements.

The first column shows the percentage of cattlemen who have vaccinated their cattle against Rinderpest. - The second column shows how many years ago they vaccinated on an average among those who vaccinated. - The third one shows the average number of cattle treated the last time they vaccinated. - Next one shows how many unvaccinated animals the cattle-

owners have on an average, and the fifth column indicates how big % these unvaccinated animals are out of all cattle owned. - The last column shows the percentage of cattleowners who move their cattle to lowland during the big rainy season.

<u>Vaccination against Rinderpest</u>						
	<u>% who</u>	<u>No of</u>	<u>No of</u>	<u>No not</u>	<u>% not</u>	<u>% who</u>
	<u>vacc.</u>	<u>yrs ago</u>	<u>cattle</u>	<u>vacc.</u>	<u>vacc.</u>	<u>move</u>
			<u>vacc.</u>	<u>now</u>	<u>now</u>	
Digelu	94	1,1	5,0	3,0	26	74
Sagure	93	0,7	4,4	1,9	14	71
Asella	39	0,2	3,6	4,3	34	73
Gonde	62	1,2	3,3	5,7	51	65
Iteya	69	1,3	3,4	3,7	42	79
Huruta	85	3,5	1,8	2,9	37	66
Proj.area	74	1,0	4,0	3,5	31	71

Rinderpest seems to be the only disease the farmers vaccinate their cattle against. A couple of farmers have vaccinated against Anthrax and Blackleg.

From other sources than this survey it has been revealed that the farmers vaccinate their young calves more often than their matured cows and that they have them vaccinated only once instead of three times, which it ought to be.

The number vaccinated last time plus the number unvaccinated now is not as high as the total number of cattle owned. This discrepancy is due to the fact that some farmers had vaccinated some of their cattle before and that some farmers only buy already vaccinated cattle and that some buying and selling had taken place since the vaccinations.

Grazing.

In the Digelu area the large majority of the farmers are depending to about the same extent on own and on rented grazing land. In the other areas the majority seems to be more relying on rented land for grazing than on their own land.

Table 20. Additional feeding.

This table shows the percentage of farmers giving different kinds of supplementary feeding to the different kinds of animals listed below. The % is counted out of the number of owners of the respective groups of livestock.

	Cattle						Sheep, goats		
	Hay	Straw	Salt	Boji	Abish	Tobacco	Hay	Straw	Salt
Digelu	52	92	94	95	60	63	13	43	43
Sagure	64	93	80	95	46	39	2	28	31
Asella	29	90	86	54	25	34	0	17	21
Gonde	38	100	86	54	56	46	0	23	20
Iteya	26	92	92	62	41	38	4	15	11
Huruta	17	94	81	42	15	13	0	14	23
Proj.area	39	94	86	68	41	39	3	25	27

	Sheep, goats cont.			Horses, mules, donkeys					
	Boji	Abish	Tobacco	Hay	Straw	Salt	Boji	Abish	Tobacco
Digelu	55	18	14	15	52	52	67	19	10
Sagure	85	6	23	18	53	33	84	8	14
Asella	56	2	25	0	25	18	43	0	45
Gonde	20	5	19	2	23	9	17	4	4
Iteya	30	11	22	3	23	16	35	10	16
Huruta	12	0	23	43	68	13	11	0	0
Proj.area	45	7	18	7	42	24	44	7	8

Boji is the amharic name for a sort of volcanic ash, which is described as both sweet and salty.

Abish is the amharic name for a spice.

In the northern part of the project area some farmers also give their animals "atella", which is the residue of the local beer tella. A few farmers around Digelu give boji, abish, straw and salt also to their poultry.

More additional feeding is given during the dry season than during the rainy season. This is certainly true regarding feed such as hay and straw and also salt and abish, while boji and tobacco are given to about the same extent the whole year.

LIVING CONDITIONS.

Settlement pattern.

The extension agents observed the settlement pattern in the area where each interviewed farmer was living. The following is a compilation of their observations:

Digelu: A slight majority lives in scattered homesteads. Near the village Digelu there is a tendency to more group settlement.

Sagure: A majority seems to live in group settlements, but scattered homesteads are quite common.

Asella: The majority lives in group settlements, but scattered homesteads are quite common also here.

Gonde: The large majority lives in scattered homesteads.

Iteya: The large majority lives in scattered homesteads.

Huruta: A slight majority lives in scattered homesteads, the rest in group settlements.

Table 21. Building standard.

This table shows the percentage of farmers, out of all farmers interviewed, owning only tukuls, which is thatched roofed chickahouses, resp. korkorubet also, which is tinroofed houses, resp. cattleshed, which is a circled wall of soilblocks without roof, resp. fencing around their compound.

	tukuls only	korko- rubet	cattle shed	fencing
Digelu	92	8	65	97
Sagure	89	10	64	90
Asella	89	11	17	94
Gonde	88	12	2	97
Iteya	95	5	8	100
Huruta	78	22	10	86
Proj.area	88	12	29	94

Table 22. Distance to services.

The distance from each farmer to different kinds of facilities were estimated by the extension agents.

Averages for whole extension areas would probably say less than averages for the subareas, because the later can be very much differing within one and the same extension area. Therefore, in the table over distances in km to different services the lowest and the highest subarea average in an extension area is presented.

	<u>All-</u>	<u>Dry-</u>	<u>Track</u>	<u>School</u>	<u>Clinic</u>
	<u>weather</u>	<u>road</u>			
Digelu	3-24	3-24	4- 6	5-11	13-30
Sagure	12-27	2- 7	1- 6	2- 9	12-33
Asella	9-19	3-12	1-10	9-15	9-20
Gonde	9-26	1- 3	-3-	6-13	6-16
Iteya	6-14	1- 3	0- 1	7- 9	7-10
Huruta	20-49	6-23	6-23	6- 9	7-27

	<u>Church</u>	<u>Mill</u>	<u>River in</u>	
			<u>dry seas.</u>	<u>rainy season</u>
Digelu	3-43	3-10	0,3-1,3	0,2-1,0
Sagure	3- 6	0,4- 4	0,6-3,2	0,6-1,2
Asella	4- 7	6- 7	0,9-1,2	0,7-0,9
Gonde	4- 8	3- 7	2,0-7,0	0,3-0,4
Iteya	5- 8	4- 6	3,0-7,0	0,5-1,8
Huruta	5- 7	4- 6	1,0-7,0	0,9-4,0

MARKETING.

Questions about marketing have been given both to the farmers, who had to tell the distance from their home to primary and secondary market and the frequency in going there, and to seven (in Digelu extension area only six) leading persons - golmasas, shimageles etc - in each extension area, who were asked about the marketing habits of the people in their respective areas.

The leading persons are not taken out with any sampling method. The extension agents have chosen the persons themselves, just those whom they came across. The figures in

the tables are not exactly answers as to how large proportion of the people have the different habits, because the leading persons have not been asked how many of their people do this or that, just what most of their people do.

Distance to market place.

The farmers were asked how far they live from the market they visit most often and from the secondary market. They were asked to answer both how far it is, in km, and how long time it takes them to walk there, in hours. The farmers have a rather poor conception of distance and an even more uncertain comprehension of time. This is shown by the discrepancy between distance and time in their answers. Some seem to need 27 min. for a km and others only 5 min. for the same distance. The most common mistake is to underestimate the time or overestimate the distance. Some farmers have answered that they live farther away than they obviously do. There is a possibility that some of them did not realize that they were asked how long time they have to walk to the market and answered how long time it takes them to ride by horse or mule.

The very uncertain results obtained are that the average farmer travels 15 km to the primary and 19 km to the secondary market and that this takes him $1\frac{3}{4}$ resp. 2 hours. Some farmers live as near as 1 km from a market place, but some have 20 or 30 km to travel to the primary and as much as 40 km to the secondary market, as they stated. Even if it is known that this is incorrect in many cases, it is obvious that a couple of hours walk in both directions is not unusual.

Table 23. Place of selling different products.

The leading persons were asked to which market place most of the people in their area go for selling cattle, grain and other products. The table shows the number of leading persons in each extension area who have answered that their people go to the markets mentioned. The sum for each extension area is sometimes higher than 7, as some leaders have mentioned more than one market place.

	Digelu	Tijo	Sagure	Asella	Gonde	Welenkomi = Kidame Gebeya	Iteya	Dera	Huruta	Art. Gebeya (Change)	Amida
<u>Selling cattle</u>											
Digelu			6								
Sagure			7								
Asella			3	5							
Gonde				1		7					
Iteya						6	1	1			
Huruta								1	5	2	4
Proj.area	0	0	16	6	0	13	1	2	5	2	4
<u>Selling grain</u>											
Digelu	2	3	6	1							
Sagure		1	6	2							
Asella			2	7							
Gonde				1	7	5					
Iteya							7				
Huruta									7		
Proj.area	2	4	14	11	7	5	7	0	7	0	0
<u>Selling other products</u>											
Digelu	2	4	4								
Sagure		1	6								
Asella			2	6							
Gonde					5	3					
Iteya							7				
Huruta									3	4	
Proj.area	2	5	12	6	5	3	7	0	3	4	0
Proj.area all products	4	9	42	23	12	21	15	2	15	6	4

It is clearly seen that Sagure is the most important market place for all kinds of products, while Asella is much visited for grain selling and Kidame Gebeya for cattle selling and the other market places are visited by people from a more limited area.

Table 24. Relative importance of various buyers of cattle and grain.

The leaders were asked to whom of professional traders, local traders or private persons the people usually sell cattle and grain, primarily and secondarily. In the table primary alternatives are given a relative importance which is double that one of secondary alternatives.

	Cattle			Grain		
	Prof. traders	Local traders	Private persons	Prof. traders	Local traders	Private persons
Digelu	6	0,5	2,5	1	5,5	2,5
Sagure	6	1,5	1,5	7	1	2,5
Asella	4	2,5	3,5	6	3,5	0,5
Gonde	0	6,5	4	0	7	3,5
Iteya	0,5	7	3	3	7	0,5
Huruta	4,5	4	2	2,5	6	0,5
Proj.area	21,0	22,0	16,5	19,5	30,0	10,0

Table 25. Frequency in visiting markets.

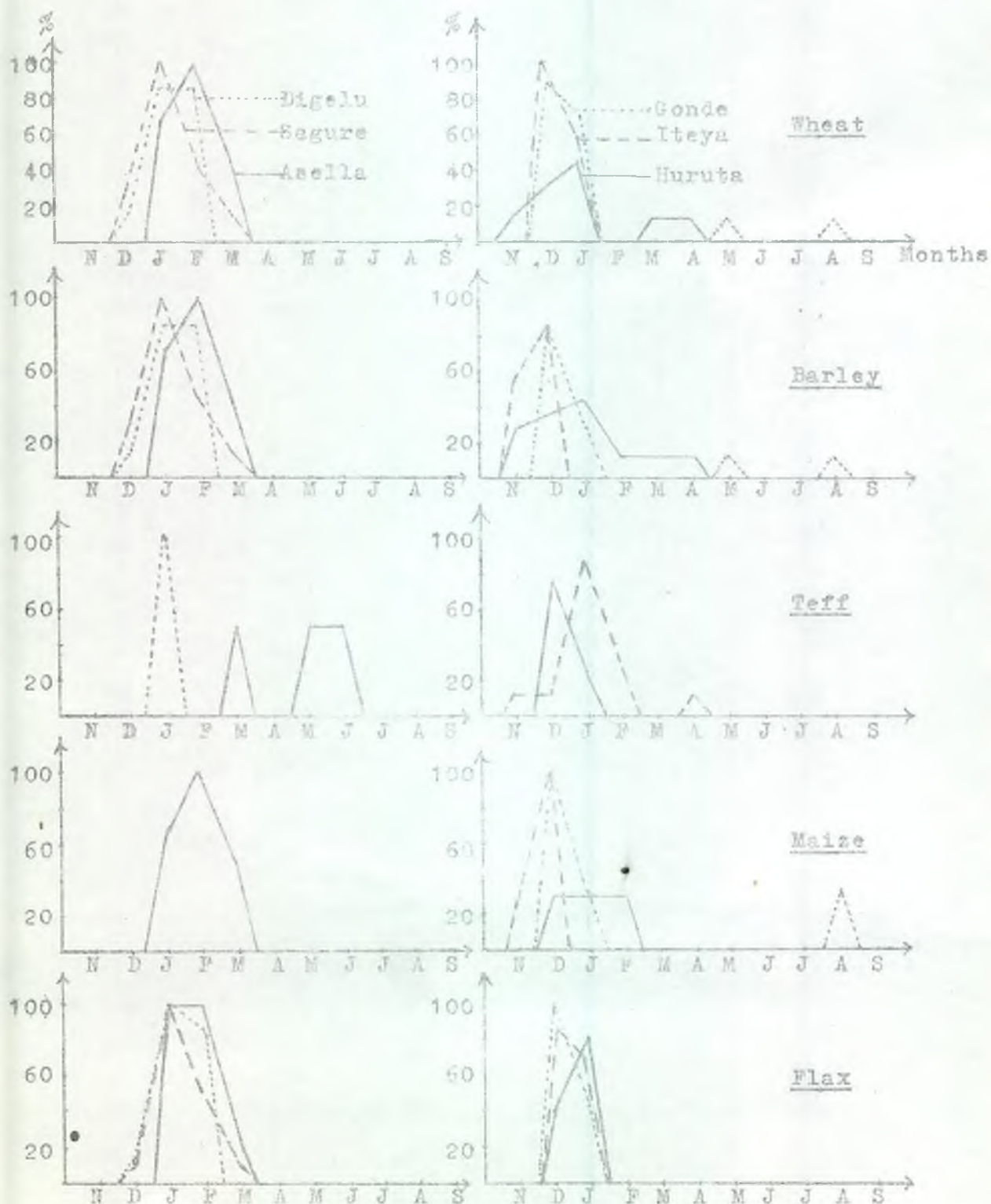
The farmers were asked how often they visit primary and secondary markets. The table shows how many times per month the head of the household and the wife are going to market, on an average in an area.

	Primary market		Secondary market	
	Hoh	Wife	Hoh	Wife
Digelu	3,3	3,7	1,6	0,9
Sagure	2,7	3,1	2,0	2,5
Asella	2,6	3,4	1,9	2,3
Gonde	2,6	3,0	2,1	2,9
Iteya	2,8	3,2	1,3	1,7
Huruta	4,6	4,4	1,3	1,0
Proj.area	3,1	3,5	1,8	1,9

The wives seem to go to market a little more frequently than the husbands. This is natural, as cattle, which the husbands sell, are sold more seldom, while smaller products, such as oil, onion etc, which the wives buy and sell, are sold and bought more often. In some families only one member ever goes to market, in some only one member goes to the secondary market, and in some families nobody goes to more than one market.

Table 26. Time of selling different crops.

The diagrams show in which months the leading persons have stated that their people sell different crops. The % is the percentage of leaders who have mentioned the different months out of those who have stated that their people sell the crop at all.



1

Head of household:..... Place:..... No.:.....

Tribal group:..... Religion:..... Date:..... Interviewer:.....

1. Members of household	Relation to Head	Sex	Age		Years of Res.		Education		Economic data		
			Y	M	Pres. place	In Chilalo	R&W	Years in sch.	L-owner	Tenant	Other occupation
Name											
1	Head										
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

2. Are you a member in any of the following groups: (x)

mahaber senbete ider ekub
 jige dalbo shango axion

3. Name of the leading persons in your area:

.....

.....

.....

Questionnaire for Landowners

Interviewer:

Date:

No. _____

Name of landowner

4. a) Area of land owned: 5. No. of tenants in this area: under Ekol Arash
 b) Kind of tenure (gebar, semon, etc.) under Siso Arash
 c) Residence of landowner: under Irbo Arash
 d) When was land acquired: under Contract
 e) Are you the only and undisputed owner of the land:
 f) Area of this land cultivated by owner: 6. Written or verbal agreements for tenants:
 g) Who pays the land tax to the woreda treasury:

	W	V
under Ekol Arash	<input type="checkbox"/>	<input type="checkbox"/>
under Siso Arash	<input type="checkbox"/>	<input type="checkbox"/>
under Irbo Arash	<input type="checkbox"/>	<input type="checkbox"/>
under Contract	<input type="checkbox"/>	<input type="checkbox"/>

7. a) Land owned in other places (area:

 b) Name of locality
 c) How much under own cultivation:
 d) Area taken under rent; for cultivation
 for grazing

Questionnaire for Tenants/Share-croppers

Interviewer:

Date:

No.

Name of tenant/share-croppers:

9. a. Residence of tenant:

General notes:

b. Name of landowner:

.....

c. Kind of tenancy: Eko! Arash

.....

Silo Arash

.....

Irbo Arash

.....

Contract

.....

d. Written or verbal agreement: W V

.....

e. When was agreement made:

.....

f. How long will it run:

.....

g. Area of land rented:

.....

h. No. of fragments:

.....

i. How much is paid in rent:

.....

k. Does the tenant pay land tax himself, if yes: Why?

.....

10. a. Does tenant own land himself:

.....

b. Where:

.....

c. Area of land owned:

.....

d. Who is cultivating this land:

.....

Questionnaire on Crops and Forest

No.

Name of landowner/tenant:

13. Crops grown:

	area
wheat
barley
maize
teff
flax
sorghum
peas
beans
lentils
rape
vegetables
onion
.....
.....
.....

16. Have you noticed any insects or worms on the crops. Which:
1 2 3

17. a) Do you use fertilizer (manure):
b) On which crops:

18. a) Do you burn the soil (ghee system):
b) What do you plant afterwards:

19. a) Number of stores(count, observe): small medium big
b) Do you have problems with pest in the stores: insects
rodents

20. From where do you get seeds: own from neighbours
market from landowner

21. Do you mainly use manure or wood as fuel: wood manure

22. a) Have you planted any eucalyptus on your land: many few
how many approximately

b) Have you planted any eucalyptus around your compound: many
few

14. List the three most important weeds: (local names)
1 2
3

15. Have you noticed any diseases: (local names)
1 2
3

(questionnaire on Animal Husbandry

No.

Name of landowner/tenant:

26. Diseases:		Kind of disease		Last time (year)	No. of cases	No. of deaths	Notes
English	Aharinya	Gallinya					
1. Rinderpest	Desta, Medin	Warandossi, Arri	.....	.....	.....	.....	.....
2. C.E.P.F.	Sambu	Sombo, Goloba	.....	.....	.....	.....	.....
3. Anthrax	Aba-san'a	Aba-sanga, Garagalchia	.....	.....	.....	.....	.....
4. Black leg	Aba-gorba	Aba-gorba, Furie	.....	.....	.....	.....	.....
5. F.M.D.	Afe-maz	Afe-maz	.....	.....	.....	.....	.....
6. Liverfluke	Dedeo, X, Ikult, Crubet-beshita	Dedeo, Birra, Distoma	.....	.....	.....	.....	.....
7. Hersemange	Ekek	Chito	.....	.....	.....	.....	.....
8. Foot-rot of sheep	Shekote	Shekote	.....	.....	.....	.....	.....
9. ....	.....	.....	.....	.....	.....	.....	.....
10. ....	.....	.....	.....	.....	.....	.....	.....

27. Vaccinations:		Last time (year)	No. of cattle vaccinated	No. of cattle not vaccinated	28. Treatment of disease mentioned above; by whom and how: (refer to numbers given above)
Kind of vac.					
Rinderpest
C. E. P. F.
Anthrax
Black leg
.....

Interviewer:

Questionnaire on Animal Husbandry

Date:

No.

Name of landowner/tenant:

29. Animal census:

30

Grazing conditions:

Animal	No.	a) in general	b) seasonal movements
Oxen
Cows, lactating
Cows, dry
Other cattle
Sheep
Goats
Horses
Mules
Poultry

31. Supplementary feeding:

Kind	to which	when used	Kind	to which	in period
.....	abish	.....	.....
.....	tobacco	.....	.....
.....
.....
.....

Chilalo Agricultural Development Unit

Observation list

Observer:

Date:

Name of landowner/tenant:.....

No.:

1. How far from the farm is the nearest (in kms):

- a) all-weather road
- b) dry-weather road
- c) track
- d) school
- e) clinic
- f) church
- g) river (during dry season)
- h) river (during rainy season)
- i) grain mill

2. Is the farm situated in an area with:

- a) scattered homesteads
- b) group of farms

Is the farm close to:

- a) a village
- b) a market place

3. Does the farmer have:

- a) tukuls only
- b) korkorrobet
- c) cattle shed
- d) grain stores
- e) fencing for cattle

4. Is there any eroded part on the land. yes no little severe

Chilalo Agricultural Development Unit

GENERAL SURVEY, VARIOUS INFORMATION

Date

Area Interviewer

Interviewed persons (if applicable)
.....
.....

1. Names of leading persons

- a) balabatt
- b) golmasas
- c) shimageles

2. Marketing

- a) Which markets do people usually go to for selling
cattle
grain
other products
- b) To whom do people usually sell cattle (e.g. professional cattle
traders, local traders, other private persons)
Primarily
Secondly
- c) To whom do people usually sell grain (e.g. professional grain
traders, local traders, private persons)
Primarily
Secondly
- d) At what time of the year do people usually sell their
wheat maize
barley flax
teff
- e) Is there any local market place in the area (market place of your
own)

3. Animal production

- a) Are the farmers producing milk most of them many few
- b) Are some farmers selling milk. To whom
At what price

LIST OF CADU PUBLICATIONS

A. Project Preparation Period

1. Report No. I on the establishment of a Regional development project in Ethiopia, October 1966.
Part I General Background.
Part II Project Outline.
Part III Appendices.
(A reprint of the Summary is also available).
2. Report No. II on the establishment of a regional development programme in Ethiopia, May 1967. (The building programme appears under separate cover.)
3. Trials and demonstration plots at Kulumsa in 1966, July 1966
4. Reconnoitering survey of the water resources in Chilalo awraja, March 1967.
5. Creation of a forestry administration in Arussi province, March 1967.
6. Crop sampling in the Chilalo Awraja 1966, May 1967.
7. Results of trials and observation plots at Kulumsa 1966/67, May 1967.
8. Sagure, a market village, June 1967.
9. Forest nursery and planting techniques, June 1967.
10. Trials and demonstration plots at Kulumsa and Swedish Mission Asella in 1967, July 1967.
11. Grain Marketing experiments 1967, August 1967.

B. Implementation Period

1. Government Agreement and Plan of operation.
2. Some reflections on water erosion in Chilalo Awraja, October 1967.
3. The Taungya afforestation method, November 1967.
4. Grow better Bahr-Zaaf in Ethiopia, January 1968.
5. CADU Semi-annual report 1967/68, January 1968.
6. Census in Sagure-Yeloma 1967, February 1968.
7. The changing rural society in Arussiland.
Some findings from a field study 1966-67, March 1968.
8. CADU (pamphlet in English and Amharic)
9. CADU plan of work and budget 1968/69 (with preliminary estimates for 1969/70).
10. Cultivation practices and the weed, pest and disease situation in some parts of the Chilalo awraja, March 1968.
11. Introductory Agro-Botanical Investigations in Grazed areas in the Chilalo Awraja, Ethiopia.
12. Results of trials and observations on field and forage crops at the Kulumsa Farm and in Asella, 1967/68, June 1968
13. Crop sampling in the Chilalo Awraja, Arussi Province 1967, June 1968
14. General Agricultural Survey of the Project Area by Extension and Education Department, July 1968

