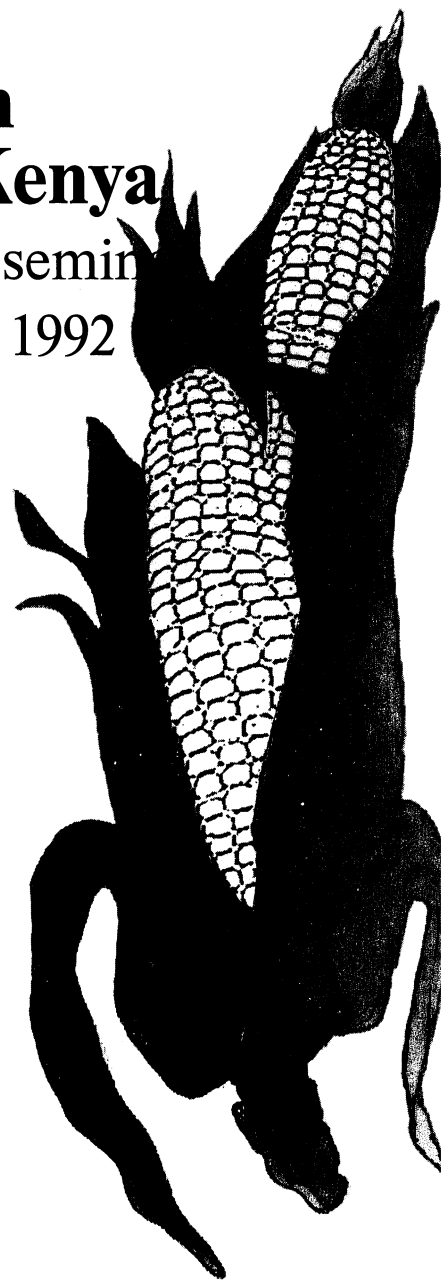
Food and Nutrition Studies Programme

Farm Labourers in Trans Nzoia District, Kenya

Proceedings of a dissemination semin
at Kitale, 23-24th November 1992



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(Editors)

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Contents

List of Maps, Figures and Tables

Maps

Figures

Tables

1. Introduction

This is the final report in a series of four regarding household resources and nutrition of farm labourers in Trans Nzoia District. In the first three reports the findings of three surveys, carried out in 1989, were presented and discussed.[1] The present report offers summaries of each of the studies (Chapters 2, 3 and 4, respectively). The final chapter gives an overview of the main findings as well as policy recommendations formulated during a dissemination seminar held in Kitale on the 23rd and 24th of November 1992.

1.1 Food and Nutrition Studies Programme

The food and nutritional situation of the Kenyan population gives reason for concern. From earlier research it appears that among the poorer strata of the population, energy intake reaches only 80% of the requirements (Shah & Frohberg 1980; Greer & Thorbecke 1984). The latest Rural Child Nutrition Survey revealed that 20% of the children between 6 and 60 months of age were stunted (CBS 1991b). The Kenyan Government has given priority to understanding the factors causing problems concerning food and nutrition, identifying vulnerable groups and developing measures to alleviate malnutrition, poverty and hunger in the country. The Food and Nutrition Planning Unit (FNPU) at the Ministry of Planning & National Development (MPND) has the task of integrating food and nutrition issues into overall development policies, plans and programmes.

In 1983, the Ministry of Planning and National Development in Nairobi and the African Studies Centre (ASC) in Leiden started the Food and Nutrition Studies Programme (FNSP). This programme, which is mainly funded by the Netherlands Govern-

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[1] *Labour conditions on large farms in Trans Nzoia District, Kenya* (by D. Foeken & L. Verstrate), *Household resources and nutrition of labourers on large farms in Trans Nzoia District, Kenya* (by D. Foeken & N. Tellegen), and *Income generation of farm labourers in Trans Nzoia District, Kenya: rural employment and social networks* (by N. Tellegen, L. Verstrate & D. Foeken).

ment, aims to analyse contemporary trends and future needs concerning food and nutrition in Kenya, with a special focus on the interface between socio-economics, agriculture and nutrition. Major objectives of the programme are to do research on food and nutritional issues among vulnerable groups in rural Kenya, provide the ministry with these data, and strengthen the research capabilities of the Kenyan counterpart institutes.

During Phase 1 of the programme (1983-1989), the main research subjects were: (-) nutrition in rural development; (-) regional and seasonal fluctuations in food supply and nutrition; and (-) agricultural policies and agricultural production. Studies have been undertaken in several parts of Kenya, such as Central Province, Western Province and Coast Province. More than 40 FNSP-reports have been published. The last of the 14 research projects initiated during Phase 1 concerns the Trans Nzoia study.

In 1989, Phase 2 (1989-1994) of the programme started, with increased emphasis on institution building and training of manpower. Research is mainly carried out by Kenyan researchers. Counterpart institutes involved in the Programme are the Department of Research and Extension (Egerton University) and the Applied Nutrition Programme (University of Nairobi).

1.2 TRANS NZOIA DISTRICT

Trans Nzoia District is situated in the Western Part of Kenya and is the smallest district of Rift Valley Province. With 394,000 inhabitants it accounted for 2% of the total population of Kenya in 1989 (CBS 1991a). The average annual population increase between 1979 and 1989 amounted to 4.2% (CBS 1991a), which was partly due to the influx of people from other districts trying to find work on a large farm.

During the colonial period, Trans Nzoia was part of the so-called 'White Highlands' and consisted of large farms only. Since Independence, in 1963, large farms have been bought by Kenyan citizens or groups and by the government. Most state-bought farms have been subdivided and sold, leased or given out to smallholders and landless households, while all group-owned farms are presently subdivided among the shareholders. Therefore, land ownership shows a rather 'dualistic' structure nowadays, with large to very large farms on the one hand and many smallholders (or even landless) on the other. Nearly all large farms belong to the mixed type, combining maize cultivation and dairy. In 1989 Trans Nzoia produced half of the maize bought by the maize marketing board[2] (CBS 1991a), giving the district its name of maize granary of Kenya.

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[2] The National Cereals and Produce Board (NCPB).

Apart from commercial maize, which is grown by both large and small farmers, seed maize is cultivated, but on large farms only. Other crops, such as wheat, sun flower, tea, coffee and oranges, are grown by few farmers only. In 1989 there were about 150,000 head of cattle in the District of which two-thirds were of high grade. In the same year milk produce sold to KCC[3] Ltd. in Kitale amounted to 41 million kg (MOLD 1991).

Large farms in Trans Nzoia District employ a limited number of permanent labourers, mainly for dairy purposes. For the production of maize and seed-maize many casual labourers are needed. Permanent labourers and casual labourers differ in various respects. Permanent labourers live on the large farm, earn a monthly salary, work throughout the year and often enjoy some further benefits like a house and a piece of farm land. Casual labourers are paid after each day's work, they often work only during peak periods like harvesting, planting and weeding, and do not enjoy the benefits of permanent labourers. Some casual labourers live on the farm, but most are smallholders or landless people, mainly living at the subdivided large farms or settlement schemes surrounding the large farms.

Since large farms can potentially provide an important contribution to national food security it is important to know what this type of production system implies for the living conditions of the working population. Although not many data on the nutritional status of the Trans Nzoia population were available, the District Development Plans for 1979-1983 and 1984-1988 mention cases of malnutrition especially among landless households on large farms and in forest areas. Other research identifies problems concerning food supply and nutrition among smallholders at settlement schemes and sub-divided farms and among labourers on large farms (MEPD 1980, MFP 1984).

1.3 THE TRANS NZOIA RESEARCH PROJECT

The general objective of the Trans Nzoia research project was to provide knowledge of the food supply and nutritional conditions of the households of labourers on large farms. Two more specific objectives were as follows:

- comparison of the living conditions of labourers working on large farms of different sizes;
- comparison of different categories of labourers regarding food supply and nutritional conditions.

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[3] Kenya Cooperative Creameries.

The first of these objectives was dealt with in the so-called *farm survey* (Foeken & Verstrate 1992), the second in the *household survey* (Foeken & Tellegen 1992). Besides these two surveys an *in-depth study* was carried out, focusing on two aspects of household resources, namely rural employment and social networks (Tellegen, Verstrate & Foeken 1992).

The *farm survey* included 46 large farms, ranging in size from 100 to almost 4000 acres. The main objective of this survey was to collect information on the labour conditions of the farm labourers, notably their wages and the provisions on the farms (such as housing, sanitary facilities, medical services, a piece of land, the opportunity to buy relatively cheap food on the farm, and presents of food). Field work took place in March-April 1989 (see Table 1).

Table 1
The FNSP-studies in Trans Nzoia District

Study	Period of data collection
1) Labour conditions on large farms	March-April 1989
2) Household resources and nutrition of farm labourers	June-July 1989
3) Rural employment and social networks	August 1989

The *household survey* was carried out in June-July 1989 and involved about 250 households of labourers on large farms as well as a control group of about 40 households not involved in farm labour. Data were collected on demography, agricultural production, income-generating activities, food consumption and the nutritional condition of the household members.

The objective of the *in-depth study* was to collect more detailed information on two aspects of household income generation, notably the importance of rural employment and social networks, in particular the relationships with family members in the area of origin. Furthermore, data were collected on seasonality of income earning activities and the sexual division of labour among households of farm labourers.

1.4 THE KITALE SEMINAR

A dissemination seminar on the FNSP-studies in Trans Nzoia District was held in Kitale, the district capital, on November 23-24th 1992. The objectives of the seminar were (1) to disseminate the findings of the three studies, (2) to discuss these findings, and (3) to formulate recommendations for policy and planning purposes. The seminar was arranged by the FNSP Field Coordinator, in collaboration with District Officers. The seminar programme is shown in Annex 1.

Key participants from the District, the Ministry of Planning and National Development, the ASC and the Kenyan counterpart institutes (see Annex 2) met on Sunday November the 22nd. They prepared comments on the main findings and discussion topics serving as guidelines for the group discussion which took place at the end of the first day and during the second day of the seminar (see seminar programme in Annex 1). These group discussions resulted in the formulation of recommendations which were discussed at the final plenary session.

About 30 persons participated in the seminar (see Annex 2). The seminar was officially opened by Mr. A.T.M. Genya, Deputy Permanent Secretary of the Ministry of Planning and National Development, and closed by Mr. P.N. Kinyua, Trans Nzoia District Officer I.

2. The farm survey

The large farms comprising the farm survey formed a 20% random sample of all large farms of 100 acres and more in the District in 1989. The Kenyan Central Bureau of Statistics defines a large farm as a farm of at least 50 acres. However, because the farms between 50 and 99 acres hardly employ any permanent labourers, need few casual labourers, and usually lack a casual labourers' administration (which was an important source of information in this study), the survey concentrated on farms of 100 acres and more.

2.1 LARGE FARMS

Farm size

Although a complete up-to-date list of all large farms in Trans Nzoia was not available in 1989, we nevertheless managed to compile such a list. All farms were put in one of four size categories (Table 2). This was done because we expected wages to be higher and provisions for labourers to be better on the larger farms. Of each size category, a random sample of 20% was taken. The total sample consisted of 46 farms of 100 acres and more.

Table 2
Farm survey: sample

size category	sample frame	sample
100-199 acres	60	13
200-499 acres	59	13
500-999 acres	57	11
1000+ acres	43	9
total	219	46

Source: Foeken & Verstrate 1992

Map 1 shows the geographical distribution of the farms over the District. The relatively empty spaces on the map are the Mount Elgon area (in the west), an area where the very large ADC-farms are concentrated (centre-north) and an area with many settlement schemes (north-east).

Farm ownership

During the preparation of the field work it became clear that the process of sub-division of former partnership, co-operative and company farms had almost reached completion. Hence all large farms, except for the ADC farms, are nowadays privately and individually-owned. There is an often-heard opinion that many large farms, especially the larger ones, are owned by people who are not farmers themselves and who are living in the big cities. These absentee owners are usually described in such terms as "weekend farmers", "suitcase farmers" or "telephone farmers".

Table 3
Large farms: place of residence of the owner, by farm size
(%)

(N=)	total (44*)	100-199 (13)	200-499 (13)	500-999 (11)	1000+ (7*)
- on the farm	68	85	77	55	43
- elsewhere	32	15	23	45	57
total	100	100	100	100	100

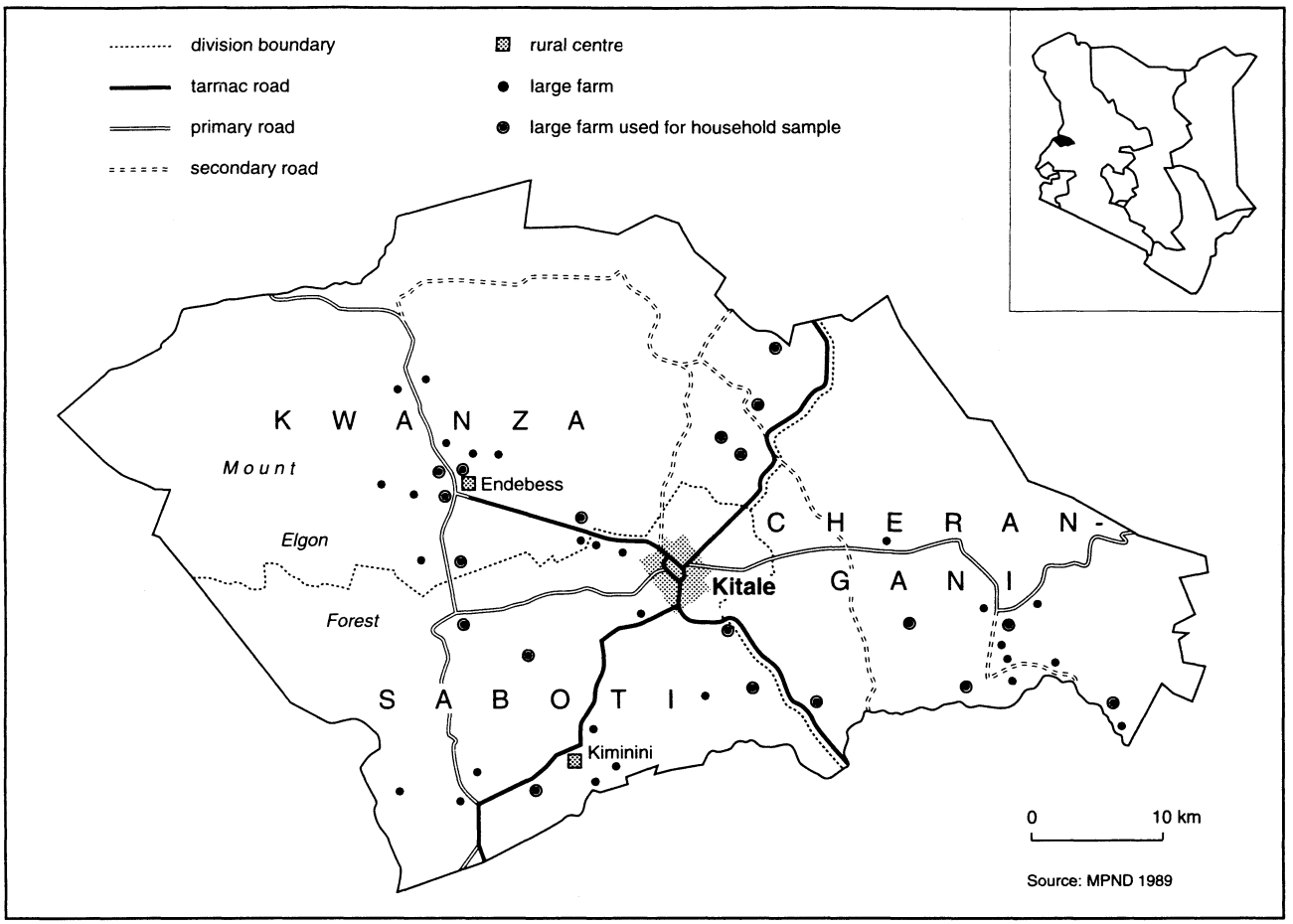
* The two ADC-farms are excluded in this table.
Source: Foeken & Verstrate 1992

In all, one-third of the farms had abesentee owners (Table 3). This proportion was higher, however, as farms were larger, being almost 60% of the farms of more than 1000 acres. Still, in the majority of the cases it was the owner who was living on the farm and for whom farming was the main occupation.

2.2 PERMANENT LABOURERS

Numbers

On average, 17 permanent labourers per farm were employed on the sampled farms. Assuming that the farm sample was fairly representative of all large farms of 100 acres



Map 1
Trans Nzoia District: farm sample and household sample

and more in the District, between 3,500 and 4,000 persons in Trans Nzoia were employed as permanent labourers at the time of the survey.

Types and salaries

The largest single group of permanent labourers were the dairy workers (Table 4). They were employed on nearly all farms. The second largest group were the farm workers, performing various sorts of general farm work. Drivers could also be found on most farms, while watchmen, overseers, office workers and mechanics were types of labourers that were generally restricted to the larger farms.

Table 4
Permanent labourers: numbers and salaries, by type of labourer

type of labourer	total number	nr. of farms employing	nr. of workers per farm	average salary (sh/month)	salary range (sh/month)
- dairy worker	271	42	6.5	350	200-510
- farm worker	243	27	9.0	332	200-600
- driver	120	40	3.0	505	240-900
- watchman	70	16	4.4	424	250-600
- overseer	41	24	1.7	742	200-1800
- office worker	30	10	3.0	865	265-2000
- mechanic	18	7	2.6	659	350-1400
- other	13	5	2.6	920	300-2100

Source: Foeken & Verstrate 1992

The salaries of the permanent labourers differed considerably, not only between the various types of labourers (which was to be expected) but also between farms (Table 4). For instance, on one farm a farm worker or dairy worker earned sh.200/- per month and on another one sh.500-600/-. If one realizes that in 1988/89 the minimum salary was legally fixed at sh.354/- per month, these figures show that on quite a number of farms salaries were not only very low indeed, but also well below the legal minimum wage.

In general, salaries were higher on larger farms. Only on the 'smaller' farms (in this survey the farms between 100 and 200 acres), were salaries as high as on the largest ones.

Provisions

On nearly all farms, the permanent labourers were provided with a house, a piece of land, water supply, a latrine and basic medical services. The size of the piece of land allotted to

the labourers was on average one acre. Table 5 shows that there was no clear relationship between the labourer's plot size and the size of the large farm.

The labourers were not totally free regarding the use of their plot. On eight of the twenty-one farms with seed maize the labourers were not allowed to grow maize on their plots in years when the fields of seed maize were too close. On the other thirteen farms no such restriction applied. It was generally not allowed to keep livestock.

Table 5
Permanent labourers: provisions, by farm size

(N=)	total (44**)	100-199 (12**)	200-499 (12**)	500-999 (11)	1000+* (9)
piece of land					
• % of farms	95	83	100	100	100
• average plot size (acres)***	1.0	0.6	1.1	1.3	0.9
sales of maize					
• % of farms	70	75	58	55	100
• average price (sh/debe)***	35	35	33	35	38
sales of milk					
• % of farms	32	8	25	45	56
• average price (sh/liter)***	3.0	3.0	2.3	3.2	3.3

* The averages for the two ADC-farms were 0.5 acres, 34 sh/debe and 3.1 sh/liter, respectively.
** Two farms without any permanent labourers have been excluded.
*** Only those farms where the labourers have a piece of land or where maize/milk is sold.
Source: Foeken & Verstrate 1992

On 70% of the farms, the labourers had the opportunity to buy maize from the farm's stock (Table 5). The average price they had to pay in 1989 was sh.35/- per *debe*, which was substantially lower than the normal market price at that time (sh.45/-). This type of provision was most widespread among the smallest and the largest farms, while the average price was about the same in all size classes. One-third of the farms also offered the possibility to buy milk at a relatively low price, i.e. on average three shilling per liter instead of the normal market price of five. Prices of the milk, however, did not vary with farm size.

On most farms, the permanent labourers received presents in the form of food (not to be confused with payments in kind, which was not the rule in Trans Nzoia). This usually concerned meat, mostly once a year, i.e. at Christmas. The amount given varied considerably, ranging from one to five kilograms per labourer. Other food items were given on relatively few farms.

Wages and provisions

Because of the wide range of salaries for the same kind of work on different farms, it seemed reasonable to expect that on farms where salaries were lower provisions would be better. This appeared to be the case, however, to a limited extent only: the average salary of labourers with a plot of less than one acre was somewhat higher than that of the labourers with one acre or more. It meant that a permanent labourer on one farm could be considerably better off than his colleague on another farm.

2.3 CASUAL LABOURERS

Information regarding the casual labourers on the large farms was obtained from two sources. In the questionnaire, the owners/managers were asked about the numbers of casuals during peak periods, places of recruitment, wage levels for specific tasks, and provisions. The second source consisted of the labourers' records that were kept on the large farms and in which detailed information concerning numbers, payments and place of recruitment could be obtained. Unfortunately, not all farm owners and managers kept accurate records of the casual labourers they employed. The bigger the farm the more accurate the records tended to be; it follows, then, that information from this source derives mainly from the larger farms.

Numbers

Nearly all farms in the sample were of the mixed type, i.e. with two main activities: maize cultivation and milk production. The demand for casual labourers is related to the maize cycle. Generally, casuals are especially needed during weeding, top-dressing and detussling of seed maize, and harvesting. Figure 1 shows the number of employed casual labourers per month during the year prior to the survey, i.e. from March 1988 up to February 1989.

Two labour peaks can be seen: one in June, July and August (the period of weeding, top-dressing and detussling) and one in November (the period of cutting and stocking). Most striking perhaps was that during the months which were known to be the leanest ones regarding casual labour, i.e. February and March, some 50 casuals per farm were still employed, with a total of over 700 labour days per farm. It should be remembered, however, that these figures are based on the really large farms only.

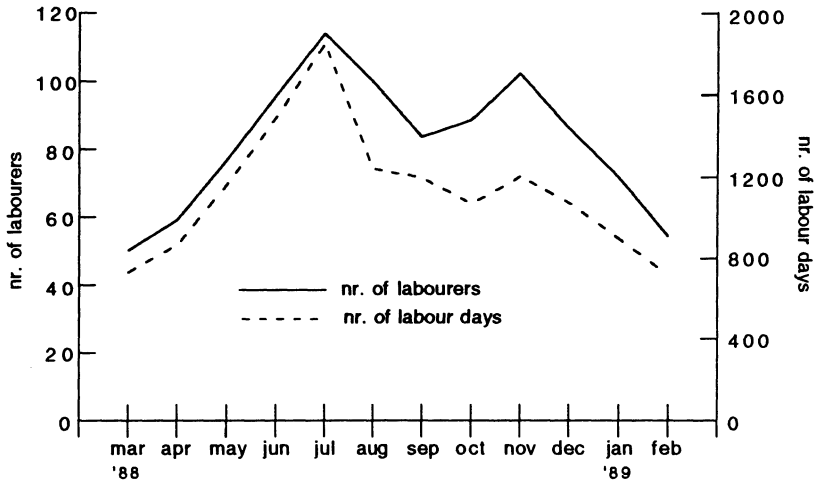


Figure 1
Average number of labourers and labour days per farm, by month
Source: Foeken & Verstrate 1992

On the basis of these figures it was possible to make a rough estimation of the total number of casual labourers employed in Trans Nzoia. On average, i.e. during a whole year, about 12,000 labourers per month were estimated to be employed on the (about 220) farms of 100 acres and more in Trans Nzoia. During the peak labour month, July, the number of labourers rose to over 17,000. During the leanest labour month, February, about 7,500 people still found employment on the large farms.

Continuity in labour supply

On the basis of the data of the labourers' records it was possible to calculate for each labourer the number of days (s)he worked during a whole year. Thus, labourers could be classified according to the number of days they worked on one and the same farm during the year prior to the survey (Table 6).

Three categories of casual labourers were distinguished: those who worked up to 60 days, those who worked between 61 and 180 days, and those who worked more than 180 days. Especially the latter category was interesting. More than one-fifth of the casual labourers were employed for more than 180 days on one farm during one year. Moreover, on *average*, these *casual* labourers worked almost 260 days on the same farm,

Table 6
Casual labourers: labour days, earnings and residency, by number of days worked (N=1685)

number of days worked	% of labourers	aver. nr. of days worked	average earnings (sh)	residency: % on the farm
1-60	48.3	23	318	60
61-180	30.2	109	1427	80
181+	21.5	259	3641	92
total	100	97	1374	73

i.e. almost 9 months, including weekends! Almost all these casuals, i.e. over 90%, not only worked but also *lived* on the large farms. Some of them were family members of the permanent labourers, others were squatters. But there was also a category of so-called *regular casuals*. These are casuals who were recruited as casual labourers, who were living *on* the large farms (like the permanent labourers), and who in fact worked on a permanent basis but were paid on a daily basis.

Wages

The average payment per labour day was calculated on the basis of the labourers' records. Between March 1988 and February 1989 it turned out to be sh.12/40. This was below the legal daily wage as set by the government, which amounted to almost sh.15/-. Moreover, daily payments differed considerably between the farms, the lowest average being sh.7/60 and the highest sh.16/10. There was no difference between smaller and larger farms in this respect.

Provisions

Like the permanent labourers, the casuals were offered some basic medical provisions (Table 7). On several farms — but much less than in the case of the permanent labourers — the casual labourers were able to buy maize and milk from the farm stores. The prices they had to pay were about the same as those for the permanent labourers. Moreover, on one-third of the farms the casual labourers received some present of food each year. Like permanent labourers, this mainly took the form of one to five kilograms of meat at Christmas. Provisions for casual labourers were not clearly related to farm size, although the sale of maize and milk was most frequent on the largest farms.

Table 7
Casual labourers: provisions, by farm size

(N=)	total (45**)	100-199 (13)	200-499 (13)	500-999 (10**)	1000+* (9)
sales of maize					
• % of farms	46	31	54	36	67
• average price (sh/debe)***	36	35	36	33	38
sales of milk					
• % of farms	17	-	23	9	44
• average price (sh/liter)***	3.1	-	2.8	3.0	3.4

* The averages for the two ADC-farms were 34 sh/debe and 3.1 sh/liter, respectively.
** One farm in the 500-999 acres category had no casual labourers.
*** Only those farms where maize/milk is sold.
Source: Foeken & Verstrate 1992

Categories of labourers

The casual labourers could be split into casuals living *outside* the large farms ('non-resident casuals') and casuals living *on* the large farms ('resident casuals'). This classification was useful for two reasons. First, the resident casuals had better access to casual work and usually enjoyed the same provisions as the permanent labourers. It appeared that resident casuals performed more working days than the non-resident casuals. Table 8 offers some insight into the differences between types of labourers

Table 8
Provisions for labourers, by labourers category

	permanent labourers (N=46)	resident casuals (N=7)	non-resident casuals (N=46)
• cheap maize from farm (% of farms)	70	86	46
• cheap milk from farm (% of farms)	32	29	17
• presents of food (% of farms)	84	86	33
• piece of land (% of farms)	95	86	-
• size of piece of land (acres)*	1.0	0.7**	-

* Only those farms where the labourers have a piece of land.
** Based on five cases, as one case is missing.
Source: Foeken & Verstrate 1992

as far as provisions are concerned. It is clear that in this respect the resident casuals were in the same position as the permanent labourers. The non-resident casuals enjoyed fewer benefits.

The second reason for distinguishing between resident and non-resident casuals was that the non-resident casuals did not face the restrictions regarding the use of their plots and regarding employment outside the farms. Regarding access to employment *outside* the large farms, both the permanent labourers and the resident casuals were in an unfavourable position. Farm owners did not allow their labourers to work outside the large farm, on pain of being removed. This put these households in a dependent position.

2.4 CONCLUSIONS

The main conclusion is that farm labourers were both financially and legally in a poor position. The average wages for both permanent and casual labourers were below the legal minimum wage and on some of the farms very low indeed.

Many casual labourers living on a large farm turned out to work on a permanent basis. However, it proved to be very difficult, if not impossible, to obtain the status of a permanent labourer: for the employer the 'regular casuals' were cheaper and easier to fire than permanent labourers.

Apart from the salaries paid, households living on the farm were also confronted with restrictions regarding land use and regarding other economic activities elsewhere. This meant that those households were seriously hampered in obtaining a reasonable income. For their livelihood they depended completely on the owner of the large farm they were living on.

3. The household survey

The purpose of the household survey was to trace and analyse the nutritional conditions in the households of those who can be regarded as the actual producers of the food surplus in Trans Nzoia District, i.e. the labourers on the large farms. Because different types of labourers were thought to be in different livelihood circumstances, labourers were first of all classified according to status, i.e. either permanent or casual. Next, the casual labourers were divided into a group living *on* the farms (resident casuals) and a group living *outside* the farms (non-resident casuals). Thus, three types of labourers are compared (Table 9). A group of households living outside the farms, in which nobody had performed any casual labour on a large farm during the year prior to the survey, was included for comparison purposes. This group was denoted as the *non*-labourers. It should be stressed, then, that the study does *not* focus on the socio-economic and nutritional conditions in the household of *the* farm labourer in Trans Nzoia; it focuses on a *comparison* between *three easily recognizable categories* of labourers and between labourers and non-labourers. Nevertheless, estimations based on the data of the farm survey reveal that as far as the categories of labourers are concerned, the ratio between the permanent labourers and the non-resident casuals is the same as the actual numbers in the district, while the resident casuals are somewhat over-represented.

Table 9
Household survey: study population, by study group

	permanent labourers	resident casuals	non-resident casuals	non-labourers	total
• number of households	47	51	165	35	298

Source: Foeken & Tellegen 1992

Besides the selection according to several labour categories, a second criterion was used to select households. As this study concerns nutrition, only households with at least one young child — i.e. between six months and five years of age — were included.

3.1 DEMOGRAPHY

Table 10 shows two important demographic characteristics of the study population: household size and the educational level of the adults. As to *household size*, we see that the households *outside* the farms were larger than the households *on* the large farms. A look at the *educational level* of both men and women shows two important things. First, there was a difference between the sexes, as men had more years of formal education than women. Second, there was a difference between the study groups: in the group of non-labourers both sexes clearly had a higher level of education than in the three groups of labourers' households.

Table 10
Some main demographic characteristics, by study group

(N=)	permanent labourers (47)	resident casuals (51)	non-resident casuals (165)	non-labourers (34)
• *household size*				
• average nr. of persons	7.4	7.4	8.8	8.9
• average nr. of consumer units	4.7	4.8	5.3	5.4
• *educational level (adults; in years)*				
- males	4.9	4.8	5.7	7.4
- females	2.4	2.4	3.7	5.6

Source: Foeken & Tellegen 1992

3.2 LIVING CONDITIONS

Table 11 offers a summary of some important aspects of the quality of life. It was rather surprising that almost half of the permanent labourers did not have a *latrine* at their disposal, a percentage that was even higher than for the resident casuals. Apparently, living in a labour camp did not automatically imply sanitary facilities. Moreover, 40% of

the permanent labourers who *did* have a latrine shared it with one or more other households. The percentage of households with a latrine was much higher among the households *outside* the large farms. However, also among these households, about 30% shared a latrine with one or two neighbours.

Table 11
Summary of living conditions, by study group
(averages)

(N=)	permanent labourers (47)	resident casuals (51)	non-resident casuals (165)	non-labourers (35)
• latrine (% households)	57	65	84	96
• improved drinking water (% households)	51	42	10	8
• living density (occupants/room)	4.1	4.5	4.1	3.1

Source: Foeken & Tellegen 1992

Clean *drinking water* is a major factor related to the health situation of the population. Trans Nzoia is a humid area, which means that for their water needs many households can rely on surface water, because rivers, ponds, wells and small reservoirs are seldom dry. The figures in Table 11 confirm this: almost three-quarters of the households relied on surface water. There appeared to be no differences between wet and dry seasons in this respect. Improved water sources, such as a tap, were mainly found *on* the large farms; although certainly not on all farms, as only half of the permanent labourers benefitted from this provision.

Another important aspect of the health situation concerns the *living density*, i.e. the average number of household members who share one room. The table shows that in the three groups of labourers' households, more than four persons had to share one room. In the households of the non-labourers, the situation was somewhat better.

3.3 SOURCES OF INCOME

Farming activities

From the data of the farm survey it appeared that the labourers living *on* the large farms had only small pieces of land for their own use. The household survey confirms this picture (Table 12). The permanent labourers had almost one acre at their disposal and the

Table 12
Land, by study group

(N=)	permanent labourers (44)	resident casuals (51)	non-resident casuals (165)	non-labourers (35)
• acreage	0.9	0.5	2.1	4.8
• % landless households	19.1	49.0	13.3	8.6
• % households with more than 3 acres	8.5	-	20.6	48.6

Source: Foeken & Tellegen 1992

resident casuals half an acre. Moreover, half the resident casuals had no land at all. The households living outside the large farms were in a much better situation. This applied in particular to the non-labourers, who had on average almost five acres.

As a result, farming activities of the households *on* the large farms were very modest indeed (Table 13). Besides some maize and beans, other crops were hardly cultivated. Hence, the value of the production of staple crops was very low, certainly in comparison with the households living *outside* the large farms. Only five per cent of the labourers living *on* the farms said they usually managed to produce enough food to feed their families throughout the year. The other 95% stated that they had to buy most of their food.

Table 13
Indicators of farm production, by study group

(N=)	permanent labourers (47)	resident casuals (51)	non-resident casuals (165)	non-labourers (35)
• *production value of staple crops (KSh)*				
- per household	1735	833	3484	7990
- per consumer unit	348	162	667	1497
• *livestock*				
- % households with livestock	6.4	3.7	47.9	57.1
- livestock equivalents per hhold	0.2	0.2	1.3	2.9

Source: Foeken & Tellegen 1992

Although livestock was not allowed on the large farms, a few households did have some animals (Table 13). This was not kept *on* the farms, however, but elsewhere. Livestock is found mostly in the households of the non-labourers.

Household resources

The relative unimportance of agricultural production for the livelihood of the households living *on* the large farms can also be seen in the composition of the total income of these households (Table 14). The main share of their income was derived from the labour on the farms they lived on. The remainder consisted of the households' own food production. Income from non-agricultural employment was negligible, which was in line with the notion that farm owners/managers did not allow their labourers to work elsewhere. At the other extreme were the non-labourers, who derived their income mainly from farming and from non-agricultural employment.

Table 14
Composition of household income, by study group
(%)

(N=)	permanent labourers (47)	resident casuals (51)	non-resident casuals (165)	non-labourers (35)
• farming income	20.6	13.1	40.0	63.4
• agricultural wage labour	78.7	80.4	41.5	0.5
• non-agricultural employment	0.7	6.5	18.5	35.8
total	100	100	100	100

Source: Foeken & Tellegen 1992

Table 15 shows the average household income of the four study groups. Whether household income was measured per household or per consumer unit, the resident casuals were by far the poorest group and the non-labourers the wealthiest group. In order to interpret the absolute income levels of the four study groups, the figures are compared with the average monthly consumption expenditure of *all* rural households in Kenya in July 1989 (i.e. at the time of the survey). The expenditure levels could be calculated from the Rural Budget Household Survey 1981/82 and have been corrected for household size. Two figures are presented, one for the expenditure on food (which includes the value of home-produced food) and one for the expenditure on *all* items, i.e. including clothing, household goods, education, transport, etc. Although the expenditure

Table 15
Household income, by study group
(KSh)

(N=)	permanent labourers (47)	resident casuals (51)	non-resident casuals (165)	non-labourers (35)
household income				
• total income per household	9625	6950	12131	21714
• total income per consumer unit	2104	1518	2318	4217
• total income per month	802	579	1011	1714
monthly expenditures, based on Rural Household Budget Survey 1981/2 and corrected for household size:				
• on food	678	678	840	840
• on all items	1028	1028	1328	1328

Sources: Foeken & Tellegen 1992 (household income) and CBS 1986, 1988 and 1990 (monthly expenditures).

figures are estimations, they nevertheless enable us to assess the prosperity level of the four study groups.

The figures show that the average monthly income of the resident casuals did not even reach the average level of *food* expenditures in rural Kenya, let alone the expenditures on *all* items. The average income of the permanent labourers and the non-resident casuals did exceed the average level of expenditures on food, but was lower than the expenditure level on all items. It was only in the group of non-labourers that income clearly exceeded the average expenditure level. It may be concluded that the resident casuals in particular constitute a very poor group.

3.4 FOOD CONSUMPTION

Food habits

Maize meal was by far the most important foodstuff, followed by vegetables (such as cabbage and green leaves) and beans. The households in the four study groups did not differ much in this respect. Milk, either as a sole drink or in tea, was consumed in many households and in reasonable amounts. Among the permanent labourers the consumption of milk was comparatively high, which may be related to the fact that on quite a number of farms milk was easily available and usually at a comparatively low price. Other foods were consumed either in very small amounts (such as sweet potatoes, irish potatoes and

beef) or practically not at all, such as cassava, fruits, eggs and fish. On the whole, the diet of the people in the sampled households was very one-sided (mainly consisting of maize, legumes and vegetables) and predominantly vegetarian.

Energy and protein intake

The levels of energy and protein intake are shown in Table 16. Compared with a calculated energy requirement of 2960 kcal per consumer unit per day , the average energy intake in the three groups of labourers' households was 600-700 kcal *below* that level. Accordingly, in 25-30% of these households, energy intake at any one day was less than 60% of the requirements (i.e. less than 1776 kcal per consumer unit). Rather surprisingly, this was also the case in the non-labourers' group.

A safe level of protein intake was estimated at 50 grams per consumer unit per day. The table reveals that in all study groups the average protein intake was higher than that. Nevertheless, protein intake was clearly higher in the groups *outside* the large farms.

As mentioned before, most food had to be bought. In the households living *on* the large farms only 16% of the energy intake and 25% of the protein intake was derived from own production. For the households *outside* the farms these percentages were higher. But even in the households with by far the highest production value of staple crops — the non-labourers — more than half of the energy intake was derived from purchased food.

Table 16
Energy and protein intake, by study group

(N=)	permanent labourers (47)	resident casuals (51)	non-resident casuals (163)	non-labourers (35)
energy intake				
• average (kcal/day/consumer unit)	2324	2261	2252	2581
• % households with energy intake below 60% of requirements*	23	29	28	26
protein intake				
• average (gr/day/consumer unit)	60	57	66	70
• % households with protein intake below 60% of requirements**	9	14	5	3

* Energy requirements are put at 2960 kcal/day per consumer unit.
** A safe level of protein intake is estimated at 50 grams per consumer unit per day.
Source: Foeken & Tellegen 1992

3.5 NUTRITIONAL STATUS

Anthropometric measurements were taken of all children between the ages of 6 months and ten years, as well as of their mothers. The study population of both mothers and children is shown in Table 17.

Table 17
Study population: mothers and children

	permanent labourers	resident casuals	non-resident casuals	non-labourers
mothers	52	56	186	38
children				
• boys	77	80	306	60
• girls	71	77	275	58
total	148	157	581	118

Source: Foeken & Tellegen 1992

The mothers

To start with the mothers, Table 18 shows their nutritional condition as measured in July/August 1989. There are important differences between the women in the four study groups. The women in the non-labourers' group were heavier than in the three categories of labourers' households. And because they were only slightly taller than the other three groups, their average weight-for-height was also better (over 100%). The women in the

Table 18
Mothers: anthropometry, by study group
(averages)

	permanent labourers	resident casuals	non-resident casuals	non-labourers
(N=)	(52)	(55)	(185)	(38)
• weight (kg)	54.9	53.2	55.6	58.7
• height (cm)	160.5	160.9	161.1	162.8
• weight-for-height (%)	96.9	93.5	97.5	101.1

Source: Foeken & Tellegen 1992

households of the resident casuals clearly had the poorest nutritional condition at the time of the survey, with an average weight-for-height of 93.5%.

The children

About one thousand children were examined during the survey. The average height-for-age and weight-for-height of the children in each of the four study groups are presented in Figure 2. For three of the four study groups — the resident casuals, the non-resident casuals and the non-labourers — *height-for-age* figures were more or less in line with income figures: the average height-for-age was lowest among the children in the group with the lowest average income (the resident casuals), highest in the group with the highest average income (the non-labourers), with the group of casuals-outside-the-farm in both respects in-between. The fourth group, i.e. the permanent labourers, however, deviated from this pattern: the average income in this group was second lowest, while average height-for-age of the children was highest. A breakdown according to age groups shows that the cause of this was to be found in the height of these children at very young age. As these children grew older, however, height-for-age steadily declined. In contrast, the children in the group of non-labourers showed the reverse trend (i.e., increasing height-for-age as they grew older), while the height-for-age level of the children in the two groups of casual labourers remained fairly constant and at a low level. Assuming

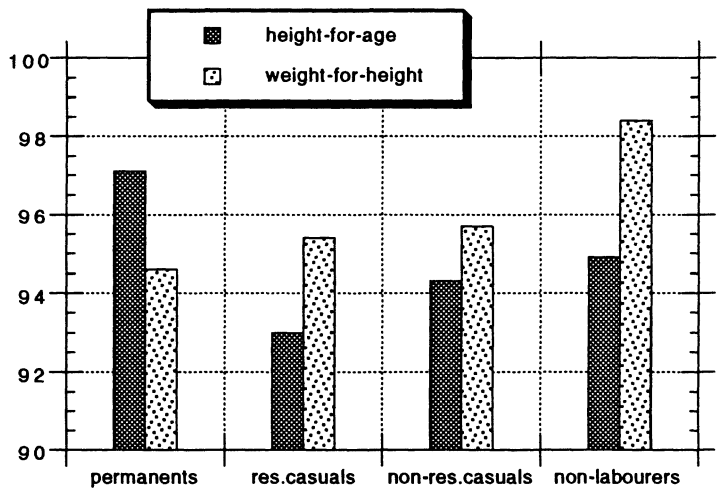


Figure 2
Children: height-for-age and weight-for-height, by study group
(children 6-59 months; source: Foeken & Tellegen 1992)

that height-for-age reflects the environmental circumstances in which a child grows up, these circumstances were apparently not favourable for the children of the permanent labourers on the large farms.

The differences in average weight-for-height of the children in the three labourers' categories were quite small. Moreover, weight-for-height of these children was substantially lower than that of the children of the non-labourers. This picture reflects the average levels of energy intake (see Table 16). Once more, however, the group of permanent labourers formed an exception: the children's weight-for-height in this group was lower than one might expect from the energy intake figures. This should probably be related to the height-for-age results of the very young children (6-23 months): not only were they tall, but also thin.

The percentages of stunted or wasted children were in line with these observations (Table 19). Stunting (here defined as a height-for-age below 90% of the reference) was fairly common in the casual labourers' households living either on or outside the large farms: more than one-fifth of the children in these households appeared to be chronically malnourished. The situation in the households of the permanent labourers and the non-labourers was much better.

About ten per cent of the children in the labourers' households was wasted (here defined as a weight-for-height below 85% of the reference). In the households of the non-labourers very few wasted children were found.

Table 19
Children: malnutrition, by study group
(% children of 6-59 months)

		permanent labourers	resident casuals	non-resident casuals	non-labourers
• stunted	<HA(90)	10.8	29.0	25.3	17.1
• wasted	<WH(85)	13.1	11.8	8.6	1.3

Source: Foeken & Tellegen 1992

3.6 VULNERABLE GROUPS

In the respective District Development Plans, two groups are always mentioned as being very vulnerable in terms of nutrition, notably squatters and landless households. In the

present survey, about half the category of resident casuals were squatters' households, the other half can be denoted as 'regular casuals'. Squatters are people occupying a piece of land on the farm without legal title to that land.[4] They usually live on the fringes of the large farm. 'Regular casuals' are recruited by the owners/managers as casual labourers, but work more or less permanently. They live on the farm, usually in the same labour camp as the permanent labourers. Finally, a group of landless households could be identified among the non-resident casuals. Table 20 presents some major characteristics of the three sub-groups.

Table 20
Vulnerable groups

	'squatters'	'regular casuals'	'landless'
households	(N=23)	(N=28)	(N=20)
• average plot size (acres)	0.7	0.4	0
• total household income (KSh/consumer unit)	1180	1796	1360
• income from rural casual labour as % of household income	70	87	58
• energy intake (kcal/day/consumer unit)	2076	2412	2234
mothers	(N=25)	(N=30)	(N=23)
• average weight-for-height	96.5	91.1	98.5
children	(N=34)	(N=41)	(N=36)
• percentage wasted (WH<85)	20.6	4.9	22.2
• percentage stunted (HA<90)	23.5	34.1	33.3

Source: Foeken & Tellegen 1992

The main similarities between the three sub-groups concern the low income level of the households and the poor nutritional condition of the children. The former is related to the landlessness or near-landlessness of these households and to the high dependency on rural casual labour as a source of income. The poor nutritional status of the children is reflected in the high percentage of stunted children, in particular among the regular casuals and the landless households.

[4] Mbithi & Barnes (1975) define squatters as "potential farmers and unemployed persons [who] occupy land for which they have no legal title for the purposes of establishing residence and/or cultivation".

3.7 CONCLUSIONS

As far as the households' living conditions were concerned, it appeared to make quite a difference whether a family lived *on* or *outside* a large farm. Families living *on* a large farm — the permanent labourers and the 'regular casuals' — did not always have a latrine. It was surprising that only about half the permanent labourers did have a latrine; the more so as almost all farm owners/managers had stated (during the farm survey) that they provided their labourers with this facility. Of the households living outside the farms — the non-resident casuals and the non-labourers — nearly all had a latrine. As far as access to improved drinking water was concerned, the households living *on* the farms were clearly better off.

Regarding the composition of household income, a difference between households living *on* and households living *outside* the farms could again be discerned. Those living *on* the farms had a very small plot or no land for their own use, so income in terms of the value of the household's own food production was very modest indeed. Moreover, members of the households of the permanent labourers and the resident casuals were usually not allowed to engage in labour outside the farm they lived on, which restricted their possibilities to earn an income from non-agricultural employment. All this resulted in a relatively low household income, in particular among the resident casuals. The households living outside the large farms, and especially the non-labourers, were better off in this respect.

Despite these income differences, the average energy intake in the three groups of labourers' households did not variate very much. In the group of non-labourers, however, energy intake was somewhat higher, i.e. about 300 kcal per consumer unit per day. The average level of energy intake in the labourers' households was about 700 kcal below the required level.

Compared with the results of the Third Rural Child Nutrition Survey 1982 reflecting the general nutritional condition of the children in rural Trans Nzoia, the nutritional condition of the labourers' children seven years later was worse. Of all labourers' children between 6 and 60 months, 23% were stunted and 10% wasted. In general, the children in the households of the resident casuals appeared to be worst off. Compared with the labourers' children, the children of the non-labourers were in a better condition. The differences between the study groups partly reflected differences in household income (height-for-age) and differences in energy intake (weight-for-height).

As far as the nutritional condition of the mothers was concerned, substantial differences between the study groups could be discerned. The women in the households

of the non-labourers appeared to be in better condition, while the women in the households of the resident casuals showed the lowest weight-for-height.

The squatters and the landless households in Trans Nzoia District are usually denoted as the two very vulnerable groups in terms of nutrition. The survey has shown that there is a third vulnerable group, notably the regular casuals on the large farms.

4. The in-depth study

The main objective of the in-depth study was to gain more insight into the importance of rural employment and the importance of social networks for the livelihood of households of farm labourers. Moreover, attention was paid to the sexual division of labour as well as to the seasonal fluctuations of income-generating activities and of the exploitation of the social networks.

As in the main survey, three categories of labourers were distinguished: permanent labourers, resident casual labourers and non-resident casual labourers. Again, a fourth group consisting of non-labourers was added.

The study population of the in-depth study consisted of a sub-sample of 20% of the respondents from the main survey. These 60 households were considered to be representative for the sample population as a whole. Of these 60 households, one refused to be interviewed again, and three turned out to be rather extreme in terms of household income and the farm land they had access to. Therefore they were left out of the analysis. The final study population is shown in Table 21.

The table shows that the sizes of the study groups are quite small. However, differences between households within the different groups turned out to be minor and differences between the four study groups consistent.

Table 21
In-depth survey: study population, by study group

	permanent labourers	resident casuals	non-resident casuals	non-labourers	total
• number of households	9	10	30	7	56

Source: Tellegen, Verstrate & Foeken 1992

Rural employment was defined as all income-generating activities other than those related to the household's own farm production. This means that selling part of the maize harvest was not regarded as rural employment, but selling roasted maize cobs was. Since most employment in Trans Nzoia is concentrated on the large farms, rural employment takes two main forms, i.e. agricultural wage labour (either permanent or casual) and non-agricultural employment. The latter type is divided into regular employment and self-employment (Figure 3).

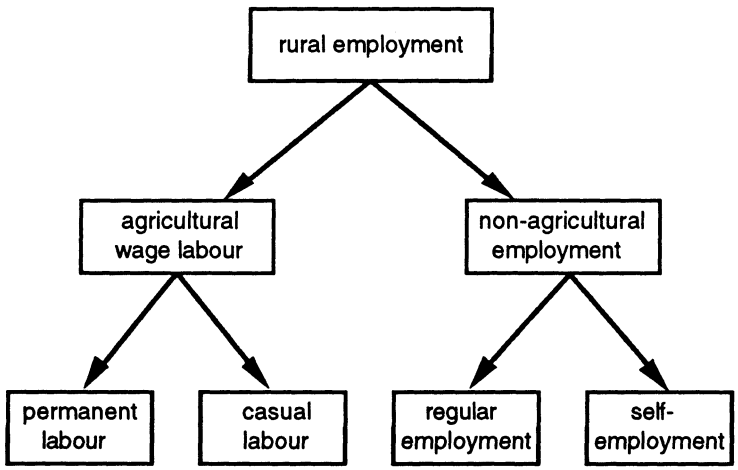


Figure 3
Components of rural employment
(Source: Tellegen, Verstrate & Foeken 1992)

Agricultural wage labour

Permanent agricultural wage labour was almost exclusively undertaken by labourers living on the large farms. At the moment of the survey it was very hard, if not impossible, to obtain a permanent job. Casual agricultural wage labour was an accessible source of income for almost every adult in the district because of the many large farms and the fact that schooling was not required for this type of work. However, casual agricultural wage labour had some disadvantages: wages were low and the activity did not provide households with an income throughout the year. Labour peaks occurred during harvesting time around November and December and during planting, weeding, top-dressing and detussling which, in 1989, took place around April, May and June.

Because agricultural wage labour was not a stable source of income and wages were low, households in the sample had to find other sources of income in order to satisfy basic needs.

Non-agricultural employment

As mentioned above, non-agricultural employment is divided into regular employment and self-employment. Regular employment consists of wage labour outside agriculture while self-employment covers a whole range of activities, from the selling of roasted maize during two months a year to the running of a *matatu* on a full-time basis. Table 22 shows the number of people engaged in these two types of employment.[5]

People with a regular job were engaged in cooking, driving, bakery work and house-keeping. They earned on average sh.4,785 a year, which was more than people engaged in self-employment, casual labour or permanent labour.

Examples of self-employment were the selling of vegetables, repairing cars, running a posho mill or ploughing with oxen. The majority of the self-employed were not engaged in the activity concerned throughout the year, but for a couple of months only. Self-employed people earned on average sh.3,650. Although this was less than the income from regular jobs, it was twice as high as the average income from casual labour.

Table 22
Non-agricultural employment, by type of employment
(number of persons)

	regular wage employment	self-employment
- community, social and personal services	8	5
- trade	-	13
- food processing	3	4
- transport	5	-
- small-scale manufacturing	1	2
- factory work	-	-
- forestry	2	-
total	19	19*

Note: The category of non-labourers is excluded.
* Because some persons perform more than one activity the number of persons is smaller than the number of activities.
Source: Tellegen, Verstrate & Foeken 1992

[5] This table as well as the following tables and figures with aggregated figures of the study population only concern the three groups of labourers' households. As mentioned in Section 3 (page 16), the labourers' study population is fairly representative for the labourers' population in the district.

Only three of the 19 persons with a regular job and five of the self-employed were living on a large farm, due to the fact that many farm owners/managers did not allow their labourers to work elsewhere.

Constraints

Table 23 provides data on the constraints faced by households of farm labourers in undertaking rural employment. The seasonal character of the activity turned out to be the major constraint as far as casual labour on a large farm was concerned. On the other hand, 16% mentioned to have no problem in finding this type of job. Most of these respondents were living on one of the large farms, however, and for them it was much easier to obtain a casual job, compared with those residing elsewhere. "Lack of jobs" was mentioned most often in relation to permanent labour on a large farm. This might also be induced by the fact that during the survey several permanent labourers were turned into casuals labourers by the farm owners or managers, which made it easier to evict them and pay them less for the same type of work. "Lack of capital" turned out to be the major constraint concerning non-agricultural employment, which was partly caused by the low income levels of many respondents. Finally, for people living on the farms, the restriction regarding working elsewhere was also an important obstacle, particularly in relation to non-agricultural employment.

Table 23
Constraints mentioned in relation to rural employment, by type of activity
(N=49)

	casual agricultural labour	permanent agricultural labour	non-agricultural employment
- seasonal character	34	-	-
- lack of jobs	4	14	1
- no time	1	-	1
- distance	1	1	1
- have to know employer	1	6	1
- lack of capital	-	-	29
- not allowed by farm owner	-	1	10
- lack of skills	-	-	3
- other reasons	-	8	-
- difficult, but no reason mentioned	-	9	-
- no problem	8	8	3
- no answer	-	2	-
Total	49	49	49

Note: Farm labourers' households only.
Source: Tellegen, Verstrate & Foeken 1992

4.2 Seasonal aspects of income-generating activities

All households in the survey were asked whether they had experienced "difficult months" regarding their food supply (Figure 4). The most difficult period of the year occurred from June to September. Food from the last harvest was finished and households had to buy all or nearly all the food they needed. However, it is also the time of year that the maize price in the district tends to be relatively high.

Casual labour on one or more large farms in Trans Nzoia constitutes the main source of income for the labourers' households in the district. Hence, not only the availability of food but also the income from rural employment shows seasonal fluctuations. Figure 5 offers an overview of the cash income earned per month, sub-divided into three components, i.e. the sales of home-produced agricultural products, agricultural wage labour (both permanent and casual) and non-agricultural employment (regular employment and self-employment).

Almost all income components showed some seasonal fluctuations. One exception was the income from non-agricultural employment in the group of non-labourers. This was due to their involvement in regular wage labour and self-employment on a full-time basis.

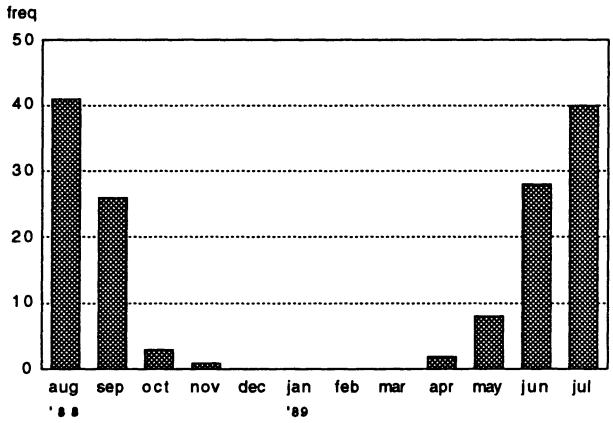


Figure 4
'Difficult months', as mentioned by the respondents
(farm labourers only; source: Tellegen, Verstrate & Foeken 1992)

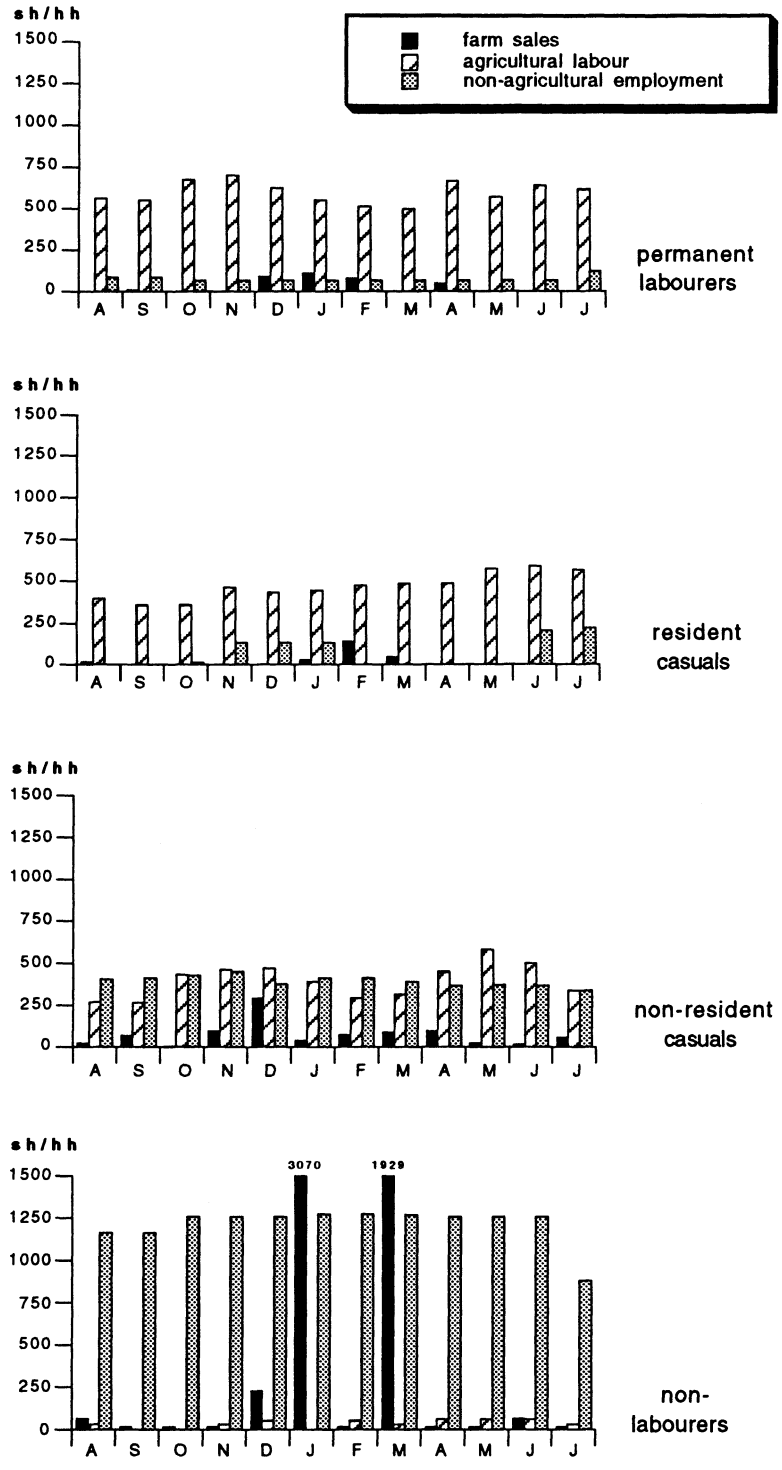


Figure 5

Monthly incomes from farm sales, agricultural wage labour and non-agricultural employment, by study group (sh/hh)

(labourers' households only; source: Tellegen, Verstrate & Foeken 1992)

4.3 Sexual division of labour

Table 24 shows the numbers of men and women engaged in rural employment as well as the average earnings per worker. Taking all types of activities together, the numbers of men and women were almost equal: 71 and 74, respectively. There were important differences, however, regarding the participation of men and women in the different types of activities. Women were not involved in permanent agricultural labour and very few of them were engaged in regular employment outside the agricultural sector. Women seeking employment were restricted to either casual labour on a large farm or to one of the many types of self-employment. Moreover, in both types of activity, the number of women exceeded the number of men. No less than 92% of the women engaged in rural employment performed casual labour on a large farm, compared with 76% of the men.

Table 24
Rural employment: average earnings per worker, by type of activity and by sex* (sh)

	MEN		WOMEN	
	average earnings	N	average earnings	N
from all types of rural employment	3,519	71	2,287	74
from agricultural wage labour				
- permanent labour	4,131	11	- -	
- casual labour	1,845	54	1,716	68
from non-agricultural employment				
- regular employment	5,905	14	1,650	5
- self-employment	5,305	8	2,181	11

Note: Farm labourers' households only.
* In each column, the number of persons in the top row is smaller than the sum of the number of persons engaged in the different types of rural employment. This is due to the fact that in some cases one person was engaged in more than one type of activity. This applied to both men and women.
Source: Tellegen, Verstrate & Foeken 1992

There were not only differences regarding the *number* of men and women engaged in the various categories of rural employment, the same applied to the average earnings. The five women with regular employment earned about 70% less than the men engaged in this type of employment. As regards self-employment, women earned about 40% less. Apparently, women dominated the less-rewarding activities such as, for example, selling (roasted) maize and vegetables; sources of income, moreover, that can only be exploited

during a relatively short period of the year. Men dominated the more permanent (and higher paid) types of self-employment. Examples were a *matatu* owner, a carpenter, a butcher and someone who ploughed with oxen for other farmers. These jobs required relatively high capital inputs, but such investments turned out to be quite remunerative.

Table 24 shows that the only type of work in which men and women were more or less equal in terms of earnings was casual labour on large farms. As already mentioned, for women casual labour on large farms was by far the most important means of obtaining a cash income with which food and other necessary items could be bought. The number of women undertaking rural casual labour — which included such 'maize activities' as weeding, top-dressing, detussling, stocking and shelling — was primarily determined by the seasonal demand for farm labour.

4.4 Social networks

The other main area of attention of the in-depth study was the importance of social networks for the livelihood of households of farm labourers. Most of the heads of households of farm labourers and their spouses were born outside Trans Nzoia (Table 25). Almost half the heads of households came to Trans Nzoia more than 15 years ago, while only seven (21%) of them came during the 1980s. Because of the large number of household heads and their spouses born elsewhere, we expected many households to have relationships with family members residing in the district of origin. For more than 40% of the households this appeared to be Bungoma. Some households were expected to have access to a piece of farm land in their area of origin, while others might be supported

Table 25
District of origin of heads of households and their spouse(s)
(frequencies)

	head	spouse
- Trans Nzoia	15	18
- Bungoma	20	17
- Kakamega	6	7
- Turkana	4	4
- Other*	4	8
Total	49	54

Note: Farm labourers' households only.
* Uashin Gishu, West Pokot, Siaya, Elgeyo Marakwet, Busia, Uganda.
Source: Tellegen, Verstrate & Foeken 1992

by their family members residing elsewhere during difficult periods of the year. Apart from relations with the area of origin, relations with relatives residing in Trans Nzoia and with non-residential household members were also taken into account. By assigning a monetary value to all sorts of exchanges like food and non-edible goods, it was possible to gain insight into the economic importance of social networks.

Contrary to our expectations, in all groups, from the relatively poor households residing on the farms to the relatively wealthy households of the non-labourers, the average value of gifts exceeded the average value of receipts (Table 26). In absolute terms, this applied in particular to the non-labourers. In relative terms, however, the permanent labourers gave most: during the twelve months prior to the survey, the value of their gifts amounted to about 15% of their household income.

Table 26
Receipts and gifts, by study group
(KSh)

(N=)	permanent labourers (9)	resident casuals (10)	non-resident casuals (30)	non-labourers (7)
- receipts	920	481	479	234
- gifts	1375	875	1048	2744
- balance*	-455	-394	-569	-2510

* Receipts minus gifts.
Source: Tellegen, Verstrate & Foeken 1992

The averages in Table 26 conceal that there were 15 households of farm labourers with a positive balance, i.e. receiving a higher value than they were giving away. However, in only two of these cases did this add a substantial value to household income (about 20%). In the other 13 cases amounts received were rather small. Therefore, the conclusion is justified that for nearly all households in the sample, social networks did not constitute a source of income.

So far, exchanges have been analyzed at an aggregated level, i.e. taking the different types of relationships together. However, further analysis showed that the extent to which households give and/or receive is highly influenced by the type of relationship. Table 27 shows that gifts are directed particularly to the parents of both husband and wife as well as to the brothers and sisters of the husband. Hence, exchanges

Table 27
Average value of receipts and gifts, by type of relationship (KSh)
(N=49)

type of relationship	receipts	gifts	balance*
- parents of husband	76	352	-276
- parents of wife (wives)	115	235	-120
- brothers/sisters husband	98	273	-175
- brothers/sisters wife (wives)	81	110	-29
- non-residential household members + children	165	36	+130
- others**	25	67	-42
Total	560	1073	-513

Note: Farm labourers' households only. * Receipts minus gifts.
** Cousins, a niece, a stepmother, 2nd/3rd wives living elsewhere, and neighbours.
Source: Tellegen, Verstrate & Foeken 1992

with these kinship relations showed the largest negative balances. The only positive balance was found with the relations with non-residential household members and children residing elsewhere.

The geographical distribution of the households' exchanges more or less reflects the foregoing. The balance between gifts and receipts with the district of origin is more negative than with other districts. This is because relationships with the district of origin concern in particular the head's parents. In all seven cases with a positive balance with the district of origin, they had died.

Seasonal aspects of social networks

Figure 6 shows the monthly fluctuations of the number of gifts and receipts. It is clear that the negative balance between receiving and giving occurred throughout the year. Sub-analysis showed that the divergence between gifts and receipts was mainly caused by the exchanges in cash. Exchanges of staple foods were about equal.

Regarding the number of exchanges there was a clear peak during June-July and a minor one in December (Figure 6). This applied to both gifts and receipts and to all types of exchanges (i.e. staples, other food, and cash). It may be concluded that the social networks of the labourers' households in Trans Nzoia did not serve as a mechanism to overcome seasonal food shortages. Nevertheless, there appeared to be links with relatives or other people that *were* actually season-bound. This concerned for instance such non-material exchanges as the performance of labour during peak periods (in return for food).

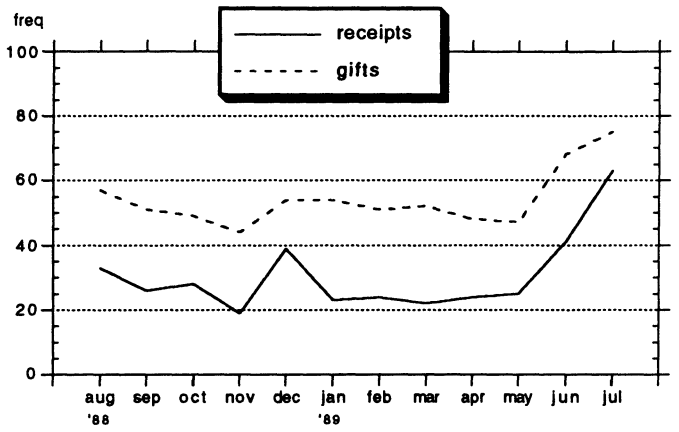


Figure 6
Number of receipts and gifts per month
(Source: Tellegen, Verstrate & Foeken 1992)

4.5 Conclusions

The in-depth study confirmed that non-agricultural employment was a much more profitable source of income than agricultural wage labour. However, for many labourers' households non-agricultural employment was a less accessible source of income, due to lack of education (for regular jobs) and lack of capital (for self-employment). Moreover, another major constraint for households living on the large farms was the fact that many large farm owners/managers did not allow their labourers to work elsewhere.

In general women were engaged in less rewarding economic activities than men, due to the fact that the women's access to rural employment was largely restricted to casual labour on the large farms and some marginal types of self-employment. Men dominate the regular types of employment. In so far as women succeeded in getting access to regular wage labour, the jobs were mainly low-paid.

For the majority of the households, social networks turned out not to serve as a source of income; on the contrary, they were a source of spending. Compared with average household income, the amounts given were substantial. Relationships with parents of both husband and wife and with the husband's brothers and sisters appeared to be the most costly. Exchanges with a positive balance between receipts and gifts took place with non-residential household members and with children residing elsewhere.

Both gifts and receipts showed the same monthly fluctuations, indicating that social networks did not serve as a mechanism to solve seasonal food shortages.

5. The FNSP-studies in Trans Nzoia District: main findings and recommendations

One of the main reasons for the studies in Trans Nzoia was the lack of information on the food and nutritional situation of agricultural wage labourers and their households. The impression was that the primary producers of maize, i.e. the country's commercial staple food, found themselves in a difficult situation in terms of household resources, food supply and nutrition. The FNSP-studies provide more detailed information on these topics. The first part of this chapter presents the main research findings of the three combined studies. In the second part, recommendations formulated during the course of the seminar are listed.

5.1 MAIN FINDINGS

Large farms

farm ownership

- The stereotypical view regarding absentee-ownership of the large farms is not entirely based on fact: two-thirds of the owners appeared to be working and living on their farms. However, as farms are larger, absentee-ownership is more common.

labourers living on the farms

- Of the two distinguished groups of labourers living on the large farms, the permanent labourers and the resident casuals, the second group can be subdivided into 'squatters' and so-called 'regular casuals'. The latter sub-group consists of labourers recruited by the farm owners as casual labourers, usually living in the same labour camp as the permanent labourers, and performing casual labour on a permanent basis but being paid on a daily basis.

wages

• Labour is used in an exploitative manner. On average, wages paid to permanent and casual labourers in 1989 were below the legal minimum.

wages

• Wages differ considerably between farms. Wages paid to dairy workers (the largest group of permanent labourers) ranged from sh.200 to sh.510 per month. Wages for casual labourers ranged from sh.7/60 to sh.16/10 per day.

legal status of the labourers

• The legal position of farm labourers is poor. This is particularly the case for the 'regular casuals'. They are not given the status of permanent labourer, because as casuals they are cheaper to hire and easier to fire. For the same reasons, on some farms the permanent labourers had been made into 'regular casuals', thus losing their monthly salary and being paid on a daily basis.

provisions

• Most farm owners provide their permanent labourers and their 'regular casuals' with a house and a piece of land for their own use. The permanent labourers had access to on average one acre, the 'regular casuals' to 0.4 acres (the squatters had on average 0.7 acres). As far as the permanent labourers are concerned, there is a weak correlation between wage level and the size of their plot, in the sense that plots are somewhat larger as wages are lower.

provisions

• On about three-quarters of the farms the permanent labourers and the resident casuals are able to buy cheap maize from the farm's stock. Cheap milk can be purchased on one-third of the farms. The non-resident casuals can enjoy this benefit on 46% and 17% of the farms, respectively. Prices of both maize and milk are substantially lower than average market prices. Prices do not vary with farm size.

restrictions

• Most large farm owners/managers impose restrictions upon labourers living on the farm. On 40% of the farms where seed maize was cultivated, the resident labourers were not allowed to grow their own commercial maize when the fields of seed maize were nearby. Furthermore, farm labourers are not allowed to keep livestock (except poultry) on the large farm. Finally, and most seriously, the resident labourers

(except the squatters) are usually forbidden to undertake economic activities outside the farm they live on.

Living conditions

hygiene

• The presence of a latrine is important for reasons of hygiene and health. Although nearly all farm owners/managers stated that they provided their resident labourers with a latrine, the household survey showed that only 57% of the permanent labourers and 65% of the resident casuals did actually have access to this type of provision. Moreover, about 40% of those having a latrine shared it with one or more other households on the farm. The situation of the households living outside the farms was better in this respect.

drinking water

• Improved drinking water is mainly found *on* the large farms: about half the permanent labourers and 40% of the resident casuals had access to this provision. Of the households living outside the large farms, only 10% had improved drinking water.

living density

• Among the labourers' households, living densities are fairly high: on average more than four persons had to share one room. With three persons sharing one room, the situation among the non-labourers is better.

Income and resources

food production

• Due to the little land the resident labourers have at their disposal, they produce very little food. This applies in particular to the resident casuals, of whom half (i.e. the 'regular casuals') have no land at all.

agricultural wage labour

• For the labourers' households on the large farms, agricultural wage labour is the main source of income: about 80% of the total household income is derived from this source. This is due to the land shortage these households face and to restrictions regarding the keeping of cattle and access to income-earning activities outside the farms.

non-agricultural employment

• For those who have access to non-agricultural employment, this appears to be a relatively profitable source of income. People in regular employment in particular earn salaries which are much higher than the incomes from agricultural wage labour and self-employment. However, regular jobs are not easily accessible to farm labourers since their educational level is rather low and most regular jobs require at least some schooling. Major constraints on self-employment are lack of capital and, for households living on the large farms, the restrictions imposed by the farm owners/managers.

gender

• Although the number of women and men in rural employment are about the same, in general women earn less than men. This is because women only have access to lower-paid types of activity, such as casual labour on the large farms, domestic labour and selling roasted maize. Peaks in labour demand on the large farms are mainly filled by women. Men work on a more regular basis.

household income

• With an estimated income of sh.6,950 per year, the resident casuals are the poorest group. This group consists partly of the so-called 'regular casuals' and partly of squatters, the latter sub-group being by far the poorest category. The household income of the group of permanent labourers is about 40% higher than that of the resident casuals, but still lower than that of the casual labourers living outside the farms. In other words, households living *on* the farms are comparatively poor. Nevertheless, there is also a very poor sub-category among the non-resident casuals, notably the landless households. Finally, with an income of almost sh.22,000 per year in 1988/89, the non-labourers' households are by far the wealthiest.

seasonality

• Because of their high dependence on casual labour on the large farms, the household incomes of the labourers show some seasonal variability. Moreover, in those households with a piece of land, seasonal labour on a large farm is likely to compete with the household's own maize cultivation.

social networks

• Despite their low incomes, the households living *on* the large farms spent about 14% on gifts to relatives, in particular to family members

living in the district of origin. On average, the value of the gifts exceeded the value of the receipts. Nevertheless, there were 15 households with a positive exchange balance, although this meant a reasonable addition to household income in only two cases. In general, however, the households' social networks appeared not to function as a source of income.

social networks

The amount of the gifts and the receipts is related to the type of relationship, the parents of the husband receiving most (despite dowry payments to the parents of the wife/wives). The only positive balance — i.e. receipts exceeding gifts — was found in the exchanges with non-residential household members and children.

social networks

• Receipts and gifts showed similar seasonal fluctuations, indicating that exchanges of money and/or food do not serve as a coping mechanism to solve or prevent seasonal stress. However, there were examples of non-material exchanges — such as the performance of labour — which appeared to be season-bound.

Food consumption and nutritional status

energy intake

• There appeared to be hardly any difference in energy intake between the three groups of labourers. They all have a rather low intake, reaching about three-quarters of requirements (calculated at 2960 kcal per consumer unit per day). Another indication of the low level of energy intake in all study groups (including the non-labourers!) is that in about one-quarter of the households average energy intake appeared to be less than 60% of requirements on the day it was measured.

energy intake

• Energy intake is mainly derived from purchased food. This applies in particular to the labourers living on the farms (85%), but even in the non-labourers' households more than half the food consumed is bought.

protein intake

• In all study groups, the level of protein intake was above what was considered a safe level (calculated at 50 grams per consumer unit per day). Protein intake is highest in the non-labourers' households.

nutritional status

• Malnutrition among the children between six months and five years is widespread among the labourers on large farms. In the three categories of labourers' households 23% of the children appeared to be stunted (height-for-age below 90% of the reference) and 10% wasted (weight-for-height below 85% of the reference). The highest percentages of stunted children are found among the 'regular casuals' (34%) and the 'landless' (33%). Wasting is common among, again, the landless (22%) and the squatters (21%).

nutritional status

• As far as the nutritional condition of the children's mothers is concerned, there appeared to be important differences between the four study groups. With an average weight-for-height of 93.5%, the condition of the mothers in the group of resident casuals was relatively poor (mainly due to the even lower weight-for-height of the mothers among the regular casuals: 91.1%). The mothers' nutritional condition among the non-labourers was relatively good (101.1%).

5.2 RECOMMENDATIONS

wages

• Large farm owners should be forced to pay at least the legal minimum wages in order to improve the poor economic situation of farm labourers.

legal status of the labourers

• The legal position of permanent labourers and resident casuals should be improved. Regular casuals should be given the status of permanent labourers, so that they may enjoy the same benefits. Steps should also be taken to prevent permanent labourers being turned into 'regular casuals'.

restrictions

• Restrictions on farm labourers living on the large farms should be relaxed. Households of labourers must be able to undertake income-generating activities elsewhere, in order to improve their economic situation. Furthermore, they should always be able to grow maize and other food crops.

hygiene

• The Health Act should be implemented, thereby forcing large farmers to provide their labourers with latrines and clean drinking water.

food production

• Measures should be taken to increase food production. Soils are generally fertile in Trans Nzoia District and it must be possible to raise productivity on both small and large farms.

food production

• Diversification of food crops is important. Maize and sometimes beans are the major crops, causing seasonal food shortages and a monotonous diet. Therefore, it is necessary to stimulate the cultivation of crops with different growing seasons like millet, cassava and sorghum in order to change eating habits and ease food shortages.

food production

• No further subdivision of the small plots of farm labourers should take place. Alternatives to generate income should offer young people the possibility to obtain food without growing it themselves.

education

• Improvement of educational facilities is important in connection with access to employment outside agriculture. The educational level of the population is low, which hampers their access to non-agricultural wage labour. Therefore, large farm owners should provide schools for their labourers and District officers should stimulate the improvement of schooling facilities in general in the District.

gender

• Efforts should be made to ensure that women receive the same wages as men for the same type of work. Furthermore, efforts should be made to make profitable sources of income more accessible for women.

self-employment

• Possibilities to generate income from self-employment should be expanded by offering credit facilities, extension and training to households of farm labourers, and by improving the infrastructure in the District.

nutrition

• Nutrition education should be offered to households of farm labourers in order to inform them of the nutritional value of the various food items, thereby improving the nutritional condition of the members of these households.

research

• During the seminar, the need was expressed for further research on the following subjects:

- the effect of price liberalisation on the food security of households of farm labourers, especially those buying almost all the food they need;
- the consequences of further subdivision of large farms for food security at national, regional and household level;
- the use of land by large farmers, to establish whether large farmers realize optimal production, given the climatic and natural circumstances in Trans Nzoia;
- the effect of absentee ownership on the productivity of large farms;
- the profitability of large farms, in order to find out whether the farm owners can afford to offer their labourers better payments.

Annex 1
Seminar Programme

Sunday, November 22
Preparations by key participants

Monday, November 23
(Chairman: Mr. J.M. Kinyua)

08:30	Registration/Coffee
09:00	Opening speeches
	a) Mr. A.M.T. Genya, Deputy Permanent Secretary, MPND
	b) Mr. M. Koper, 2nd Secretary, Royal Netherlands Embassy
09:30	Introduction Food and Nutrition Studies Programme (Prof. J. Hoorweg)
10:00	Introduction Report 1*:
	a) presentation of findings (Dr. D. Foeken)
	b) comments on findings (Mr. J. O. Owuor)
	c) presentation of discussion topics (Mr. J. Opiyo)
11:00	Discussion Report 1
12:30	Lunch
14:00	Introduction Reports 2** and 3***:
	a) presentation of findings Report 2 (Dr. D. Foeken)
	b) presentation of findings Report 3 (Drs. N. Tellegen)
	c) comments on findings (Ms. H. Kigutha)
	d) presentation of discussion topics (Ms. H. Munyendo)
15:00	Discussion Reports 2 and 3
16:00	Tea break
16:30	Group meetings: further discussions
18:30	End of session

Tuesday, November 24
(Chairman: Mr. J.M. Wabengi)

09:00	Group meetings: formulation of recommendations
10:30	Coffee break
11:00	Plenary session: presentation of recommendations
	a) Group A (Mr. T.D. Magori)
	b) Group B (Mr. L. Aritho)
12:30	Closing speech: Mr. P.N. Kinyua, District Officer I
13:00	Lunch
16:00	FNSP Reception

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* *Labour conditions on large farms in Trans Nzoia District, Kenya*
** *Household resources and nutrition of farm labourers in Trans Nzoia District, Kenya*
*** *Income generation of farm labourers in Trans Nzoia District, Kenya: rural employment and social networks*

Annex 2

List of participants

Mr. A.M.T. Genya	Deputy Permanent Secretary	MPND
Mr. P.N. Kinyua	District Officer I	Trans Nzoia
Mr. L.M. Aritho	Researcher	EU/FNSP
Mr. F.E. Chege	Ag. Deputy Director of Planning	MRST
Mr. W.K. Chirchir*	Nutrition Officer	Trans Nzoia
Mr. J. Ettyang	District Fisheries Officer	Trans Nzoia
Dr. D. Foeken*	Researcher	ASC/FNSP
Mr. A.E. Gutu*	District Development Officer	Trans Nzoia
Prof. J. Hoorweg*	Research Coordinator	ASC/FNSP
Ms. E.C. Irongi*	Economist	MPND
Mr. J.N. Kesa	Head FNPU	MPND
Ms. H. Kigutha*	Researcher	EU/FNSP
Mr. J.M. Kinyua	District Water Engineer	Trans Nzoia
Mr. M. Koper	2nd Secretary	Netherlands Embassy
Mr. I. Koskey	Field Supervisor	CBS
Ms. M.A. Kuyoh*	Demographer	ANP
Prof. J.A. Lugogo	Deputy Vice Chancellor	EU
Mr. T.D. Magori	Researcher	EU/FNSP
Ms. H. Munyendo*	Home Economist	Trans Nzoia
Mr. Z.C. Mwangi*	Assistant District Development Officer	Trans Nzoia
Mr. L. Ochara	District Labour Officer	Trans Nzoia
Mr. W. Okello*	Economist/Statistician	MPND
Mr. J.O. Opiyo*	Land Adjudication & Settlement Officer	Trans Nzoia
Mr. J.E. Owuor	District Statistical Officer	Trans Nzoia
Mr. J.O. Owuor*	Statistician	CBS
Prof. P. Shalo	Director Research & Extension	EU
Drs. N. Tellegen*	Researcher	ASC/FNSP
Drs. A. Tola	Field Coordinator	FNSP
Mr. J.M. Wabengi	District Environmental Officer	Trans Nzoia

* Key participants

Abbreviations

ANP	Applied Nutrition Programme, University of Nairobi, Kabete
ASC	African Studies Centre, Leiden, The Netherlands
CBS	Central Bureau of Statistics, Nairobi
EU	Egerton University, Njoro
FNPU	Food and Nutrition Planning Unit, MPND, Nairobi
FNSP	Food and Nutrition Studies Programme
MPND	Ministry of Planning and National Development, Nairobi
MRST	Ministry of Research, Science and Technology, Nairobi

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