PN-AAW-537

RURAL POVERTY RESEARCH PAPER SERIES

Number 1 **December 1986**

IMPACT OF DEVELOPMENT EFFORTS ON AGRICULTURAL WAGE LABOR

Bhola N. Pokarel
Ganesh P. Shivakoti

HMG-USAID-GTZ-IDRC-WINROCK PROJECT

STRENGTHENING INSTITUTIONAL CAPACITY IN THE

FOOD AND AGRICULTURAL SECTOR IN NEPAL

FOREWORD

This Rural Poverty Research Paper Series is funded through the project, "Strengthening Institutional Capacity in the Food and Agricultural Sector in Nepal," a cooperative effort by the Ministry of Agriculture (MOA) of His Majesty's Government of Nepal and the Winrock International Institute for Agricultural Development. This project has been made possible by substantial financial support from the U.S. Agency for International Development (USAID), the German Agency for Technical Cooperation (GTZ), the Canadian International Development Research Centre (IDRC), and the Ford Foundation.

One of the most important activities of this project is funding for problem-oriented research by young professional staff of agricultural agencies of the MOA and related institutions, as well as for concerned individuals in the private sector. This research is carried out with the active professional assistance of the Winrock staff.

The purpose of this Rural Poverty Research Paper Series is to make the results of the research activities related to rural poverty available to a larger audience, and to acquaint younger staff and students with advanced methods of research and statistical analysis. It is also hoped that publication of the Series will stimulate discussion among policymakers and thereby assist in the formulation of policies which are suitable to the development of Nepal's agriculture.

The views expressed in this Rural Poverty Research Paper Series are those of the authors, and do not necessarily reflect the views of their parent institution.

Michael B. Wallace
Series Editor

RURAL POVERTY RESEARCH PAPER SERIES

Number 1 December 1986

IMPACT OF DEVELOPMENT EFFORTS ON AGRICULTURAL WAGE LABOR

Bhola N. Pokharel
Ganesh P. Shivakoti

HMG-USAID-GTZ-IDRC-FORD-WINROCK PROJECT

STRENGTHENING INSTITUTIONAL CAPACITY IN THE

FOOD AND AGRICULTURAL SECTOR IN NEPAL

TABLE OF CONTENTS

	Page
INTRODUCTION	1
OBJECTIVES OF THE STUDY	2
METHODOLOGY	2
RESULTS AND DISCUSSION	3
Place of Origin	3
Family Size and Labor Supply	3
Education	4
Landholding	5
Ethnicity	6
Age	6
Employment	7
Agricultural Wage	8
Perception about Development Activities	10
Access to Materials Due to Development Activities	11
SUMMARY AND CONCLUSIONS	13
RECOMMENDATIONS	14
APPENDIX	15
REFERENCES	15

LIST OF TABLES

Table 1.	Reasons for Migration	3
Table 2.	Family Size and Wage Labor	3
Table 3.	Wage Laborers	4
Table 4.	Education	5
Table 5.	Landholdings of Wage Laborers	5
Table 6.	Sources of Land	5
Table 7.	Landholding by Caste	6
Table 8.	Ages of Wage Laborers	7
Table 9.	Employment by Month and Activity	7
Table 10.	Abundant and Slack Periods of Employment	8
Table 11.	Places of Work	8
Table 12.	Agricultural Wages	8
Table 13.	Cereal Price and Wage Indices	10
Table 14.	Advantages Derived from Institutions	10
Table 15.	Consequences of Institutional Location	11
Table 16.	Government Services	11
Table 17.	Dietary Changes	12
Table 18.	Changes in Clothing	12

IMPACT OF DEVELOPMENT EFFORTS ON AGRICULTURAL WAGE LABOR

Bhola N. Pokharel*
Ganesh P. Shivakoti*

INTRODUCTION

Despite the planned development efforts of three decades, the economic condition of the masses of Nepal is deteriorating. Only a few years ago, the percentage of the people below the poverty line was 40 percent. Now it is estimated to have increased to 60 percent. Nepal has jumped from the seventh to the third poorest country in a few years. The expected economic growth was nullified by high population growth. Faster economic growth seems to be only the solution to the deteriorating economic conditions of the masses.

A developing country dependent on a rural agrarian economy, Nepal needs to create 75,000-100,000 new jobs every year for its increasing labor force (ADB, 1982). The agriculture sector cannot provide all these jobs because the traditional agricultural system already has a high rate of disguised unemployment, and the majority of the population is illiterate and do not have the particular skills needed in the other sectors of economy. Thus, any development strategy should consider creating jobs in the rural area which do not need specialized skills through the intensification and modernization of agriculture, as well as emphasizing education and training so other sectors of the economy also can get the supply of skilled labor.

The agriculture sector is receiving priority in the development plans. The Village Development Program, Land Reform, Integrated Rural Development Programs and, more recently, the Small Farmer Development Program have been features of development programs oriented towards the poor. Decentralization is the new slogan for implementation. For these activities, vast amounts of internal and external financial resources are being utilized. No studies are available assessing the impact of these programs on different strata of the population.

Agricultural wages are generally lower than the wages in other sectors of the economy. High population growth rate and illiteracy hinders them in competition for jobs. Unorganized agricultural labor has poor bargaining capacity. When the agricultural production technologies and the yield of the crops stagnate, the situation further deteriorates. His Majesty's Government (HMG) policies must focus on modernization of agriculture through introduction of improved seeds, fertilizers, and pesticides to increase agricultural production.

---

*Bhola N. Pokharel and Ganesh P. Shivakoti are faculty members of the Department of Agricultural Economics, Institute of Agriculture and Animal Science (IAAS), Rampur, Chitwan, Nepal.

OBJECTIVES OF THE STUDY

This study attempts to assess the condition of agricultural wage labor from a development perspective. Specifically, the objectives are:

a) To find the rate of growth in the wages earned by agricultural laborers where development activities are going on;

b) To assess the perception of agricultural labor towards the development program's orientation;

c) To study how competition in the job market is increasing and to identify their competitors; and

d) To find out the net access provided by the development programs to the agricultural wage laborers in materials and services.

METHODOLOGY

For the purpose of this study, the casual agricultural wage laborers who come to the Institute of Agriculture and Animal Science (IAAS) and National Maize Development Program (NMDP) Rampur were considered the sample population.

This particular group was selected because 1) most of the laborers who come to these institutions either are Sukumbashis (landless) in the vicinity or poor farmers who cannot live without off-farm work; 2) IAAS and NMDP employ a large number of casual laborers with public money to operate their large scale agricultural operations; 3) though the locality is rural, large building constructions, road construction and maintenance, casual maintenance and other activities have been carried out for many years, providing unskilled agricultural labor with additional manual jobs; 4) being located on prime agricultural land, there is a demand for agricultural labor in peak periods and agricultural wage laborers can get employment in private farms; and 5) this location is connected to the East-West highway by a 10 km. link road to Narayanghat which has enhanced the mobility of the job seekers.

This locality may not represent the real rural situation in the Tarai of Nepal but it is fairly representative for the places where major public investment has been used to enhance rural employment for unskilled agricultural wage labor.

The local people who work for these institutions on a permanent or payroll basis were excluded from the sample because they either were semi-skilled to skilled or were engaged in service-oriented jobs.

Before drawing the sample, a list of 200 worker households who come to the IAAS and the NMDP was made from records of the farm managers and fieldmen who supervise casual labor. A random sample of 40 individuals was drawn from this population and a pre-tested structured questionnaire was administered by a well-trained senior student of B.Sc. (Ag.). Secondary data about prevailing prices and wage rates were collected from the employing agencies and government and private business organizations in the Narayanghat and Bharatpur District offices of HMG.

RESULTS AND DISCUSSION

Place of Origin

Of the 40 respondents, 20 were male and 20 were female agricultural wage laborers. All respondents were migrants from the hills. The average years of residence in the area was 14.6 years. The reported reasons for migration to the present address are given in Table 1.

Table 1. Reasons for Migration

Reasons	Responses	(percent)
Poor Economics conditions in the hills	34	(85)
a) Food Insufficiency	14	(35)
b) Landlessness due to debt	6	(15)
c) Low productivity of land	5	(12.5)
d) No off-farm employment	5	(12.5)
e) Drudgery & hard life	4	(10)
Loss of land by flood and landslide	6	(15)
Total	40	(100)

It is clear from the table that the reason for the migration of all the respondent to Chitwan was poverty. Fifteen percent of the respondents migrated because of sudden landlessness through flood or landslide. The other 85 percent were living a life of great difficulty. The majority of the migration came from the Gorkha, Lamjung, Dhading, and Tanahu Districts. The other adjoining districts provided a very small amount of migrants to Chitwan in terms of agricultural wage labor.

Family Size and Labor Supply

Family size of the respondents varied from 1 to 14. Average family size was 6.1, which is little bit higher than the national average of 5.8 but less than the average household size in Chitwan of 6.3 (CBS, 1984). Average family size and labor supply are shown in Table 2.

Table 2. Family Size and Wage Labor

	Households	Average family size	Average number of working wage laborers
Landless	11	5.1	2.1
Tenants	5	5.6	2.4
Less than 0.5 ha.	16	6.4	2.1
0.51 - 1.0 ha.	5	7.6	1.6
More than 1 ha.	3	6.7	1.3
Total	40	6.1	2.0

The above table shows that the landless have the smallest families and the group with 0.5 to 1.0 ha. of land holding the largest families. As the size of the holding increases, the family size also increases, except for those who have more than one hectare of land. The supply of off-farm labor is highest with 2.4 members per family for the tenants followed by the landless. As the size of landholding increases, the average number of family members working as off-farm laborers decreases. An increase in family size with landholding reflects the ability to support large family, where as a decrease in supply of off-farm labor reflects the availability of more employment on farms.

One of the key questions is who earns the family income. The respondents were asked to specify the work of their family members. Among the 40 representative households there were 80 agricultural wage laborers. The distribution of different family members working as wage labor in different groups of wage labor is given in Table 3.

Table 3. Wage Laborers

	Total wage laborers	Household head male	Household head female	Son	Daughter	Daughter in law
Landless	23	7	10	4	1	1
Tenants	12	3	2	4	3	0
Less than 0.5 ha.	33	11	7	6	6	3
0.5 - 1.0 ha.	8	1	1	2	4	0
More than 1 ha.	4	3	1	0	0	0
Total	80	25	21	16	14	4

Who earns the family income depends both on the number of family members who are able to work outside and on the availability of jobs. In Nepal, the head of the household is considered the primary wage earner. Sons who are grown up take over this responsibility themselves when the parents become older. The mother or principle female member of the household is expected to take charge of the house and children. The daughter and daughters-in-law are expected to help the mother.

The high number of household females as principal wage earners is because their husbands have abandoned them or are dead. In the groups of tenants, for those having less than 0.5 ha. or more than one ha. of land, the household head male is the principle wage earner. Among those who have a landholding of between 0.5 to 1.0 ha., the majority of the wage earners are daughters. This has occurs because the daughters are given less opportunity for education than the sons.

Education:

Of 40 respondents, only ten respondents knew how to read and write, and none of these were female. In five families, there were no literate members. The level of the education of the respondents, their family members, and the female members of the family is given in Table 4.

Table 4. Education (years)

	Respondent	Total family	Female members
Landless	0.4	6.5	0.1
Tenants	0.0	7.2	1.0
Less than 0.5 ha.	0.9	5.1	1.1
0.51 - 1.0 ha.	1.0	18.6	4.2
More than 1.0 ha.	2.7	15.3	3.3
Total	0.9	8.2	1.4

Respondents in the sample have on average less than one year of education. The level of education increases with size of landholding. Total education years of all family members on average was more than eight years. This is because the children have the opportunity to go to school. The average years of education of the family members depends on the size of family, number of children, and ability of the respondent to afford educational expenses. The average numbers of years of education increases to 18.6 with the size of holding up to 0.5 to 1 ha. land and slightly decreases to 15.3 with landholding of more than one ha.

Landholding

Out of 40 responding households, 24 households owned some land. Five families did not own any land but have rented land. Eleven families were landless. Average size of landholding is given in Table 5. The average landholding of 0.3 ha. per family is far below the national average of 1.9 ha., and below the average landholding of 0.5 ha. of marginal farmers (NRB, 1980). This amount of land cannot support the family and forces them to look for other means of income generation. Sources of land acquisition for the 24 families are given in Table 6.

Table 5. Landholdings of Wage Laborers

	Households	Average size of landholding (ha)
Landless	11	0.0
Tenants	5	0.4
Less than 0.5 ha.	16	0.3
0.51 - 1.0 ha.	5	0.7
More than 1.0 ha.	3	1.3
Total	40	0.3

Table 6. Soures of Land

Sources	Number of families	(%)
Transferred assets from parents	19	(79)
Distribution by government	3	(13)
Earning from work	1	(4)
Earnings plus transferred assets	1	(4)
Total	24	(100)

Table 6 indicates that most agricultural wage laborers who had access to the land were able to own land because of transferred assets from the parents. Three agricultural wage labor families received land through the government resettlement program. These three families have an average residence of 23 years compared to 14.6 years for the whole sample. Thus, the early migrants were the only lucky ones to receive government distributed land. Only one out of 24 families acquired land because of savings from work. The average landholding is so small that it can not provide subsistence to the family and in the majority of the cases it is only a house plot.

Twenty-nine respondents owned their houses, seven rented, and the remaining four were living in quarters provided by the IAAS/NMDP. The average value of the house for those who owned their house was Rs.4019, with a range of Rs.450 to Rs.15,000. Taking into account local prices, all of the houses must be thatched huts. Out of the 29 families who owned their houses, 11 financed the construction or purchase of the house by transfer of assets, while the other 18 financed it through the income generated from wage labor.

Ethnicity

Working as agricultural wage labor is not considered prestigious thus the jobs are taken by low caste people. If persons from higher caste work as agricultural wage labor it is a sign of poor economic condition. The ethnic composition of the sample is given in Table 7.

Table 7. Landholding by Caste

	Brahmin	Chhetri	Baisya	Sudra	Total
Landless	2	7	2	0	11
Tenants	3	1	0	1	5
Less than 0.5 ha.	5	5	3	3	16
0.51 - 1.0 ha.	1	2	1	1	5
More than 1.0 ha.	1	2	0	0	3
Total	12	17	6	5	40

The castes were grouped into Brahmin, Chhetri, Baisya, and Sudra. Baishyas include Gurung, Magar, Newar, and Lama. Sudras include Sunar and Biswokarma. Though low caste people are considered poor, Table 7 indicates none are landless. However no low caste people have more than 1.0 ha. of land. Chhetri is the dominant caste in agricultural wage labor followed by Brahmin, Baishya, and Sudra.

Age

The average age of all the respondents was 35 years, with a range of 16 to 69 years. The average age of the different groups of agricultural wage labor is given in Table 8. The average age of the landless and tenant groups are higher than the average age of all respondents. As size of landholding increases, the average age of the family member who works as an agricultural wage laborer decreases, except those who have more than 1.0 ha. of land. This suggests that even old members of poor families must earn their living.

Table 8. Ages of Wage Laborers

	Households	Average age in years
Landless	11	39.0
Tenants	5	40.8
Less than 0.5 ha.	16	33.9
0.51 - 1.0 ha.	5	26.6
More than 1.0 ha.	3	31.0
All	40	35

Employment

On average, two persons per family worked outside for income. Seven of 40 agricultural wage labor families have one member employed in a regular service job on a monthly basis. The regular service jobs include lower level jobs such as chowkidar and herdsman. The average employment of the family members is illustrated in Table 9.

The more than 20 days per month of employment shown in Table 9 is for an average of two members going to work outside, out of 60 available labor-days of work. On average, about 305 days of employment by the working members of the agricultural wage labor family comes from agricultural activities. Nonagricultural employment on average is 344.5 days, but only 20 percent of the agricultural wage labor families were able to get employment in nonagricultural activities. Srawan is the month of the highest level of employment. For those who have employment in nonagricultural activities, Aswin is the lowest employment time; this may be associated with the Dashain festivals.

Table 9. Employment by Month and Activity

	Bai	Jet	Asa	Sra	Bha	Asw	Kat	Man	Pou	Mag	Fal	Cha	Total
Agri	26.7	28.1	29.0	30.6	25.1	20.6	22.7	27.1	22.6	22.8	23.1	26.9	304.9
	(3.1)	(2.6)	(2.2)	(1.0)	(3.5)	(4.0)	(3.4)	(2.0)	(3.2)	(3.8)	(3.7)	(2.4)	(26.6)
Non-Agri	27.8*	28.6*	31.1	31.0	29.7	25.6	27.7	28.6	27.7	28.1	28.9	29.8#	344.5
	(6.7)	(6.3)	(1.2)	(1.0)	(1.0)	(4.0)	(2.9)	(0.8)	(1.5)	(1.6)	(1.2)	(1.4)	

Figures in parentheses give standard deviations.
Non-agricultural activity average employment calculated on the basis of seven entries.
* Calculated on basis of 6 entries. # Calculated on basis of 8 entries.

Respondents were asked to identify four months each when they have abundant agricultural employment, abundant non-agricultural employment opportunity, and slack periods of employment opportunity (see Table 10). Srawan is the transplanting season for paddy which is harvested and threshed in Sangshir, thus there are abundant agricultural jobs in these two months. Places of work for wage laborers are in Table 11.

Table 10. Abundant and Slack Periods of Employment

Abundant Agri Employment	Srawan	Mangshir	Asadh	Jesth
Abundant Nonagri Employment	Baisakh	Jesth	Asadh	Paush
Slack periods of Employment	Asoj	Kartik	Paush	Magh

Table 11. Places of Work

Sources	Agricultural	Nonagricultural
IAAS	15	4
NMDP	25	5
Village & town	0	6
Public	0	1
Total	40	16

More than one employer was identified by nine respondents who got non-agricultural employment.

The responding agricultural wage laborers were asked to identify where they get more than 50 percent of employment. Twenty-five respondents were working at the NMDP and 15 at the IAAS. This does not mean that they are working for private farms in the vicinity. In the peak season, they work on private farms for higher wages, while in the rest of the year they come to these institutions. Some of the respondents work the whole year for the IAAS and NMDP because 1) they are expecting to get permanent agricultural labor positions with better pay and other fringe benefits; 2) if they leave the government farms, they fear that they will not be taken back later; 3) some are incompetent and lazy; and 4) some think that it is more prestigious to work for institutions than for private farms.

Agricultural Wages

Respondents were asked to quote the prevalent agricultural wages they receive. Wages were classified into the wages received from different sources and by sex of laborers and are summarized in Table 12.

Table 12. Agricultural Wages

	Male	Female
IAAS rate	10	10
NMDP rate	7.5	7
Village rate *	12	12

* In Srawan when paddy is transplanted higher rates are paid.

It is clear that the institutions are giving lower wages than private sources. This does not indicate whether the length of the working day is the same or not. The private sector may require working

longer hours. They also provide some food in addition to the wages. The institutional rates do not fluctuate with season while in the villages, the wage rate rises to Rs.18/labor-day in Srawan.

Due to the lower wages rates given by the institutions, the labor supply at peak periods is insufficient and the institutions cannot complete agricultural operations in time. The district office of the public construction department fixes the range of wages for different types of laborers each year. The institutions can employ laborers within the specified range. Wages prescribed for female workers are lower than for male workers and thus NMDP gives lower wages to its female laborers.

Respondents were asked to indicate the job availability situation. Eighteen (45 percent) thought that there is competition in the job market. All these 18 respondents felt the competition had increased over the years. When asked to identify their competitors, 13 said there is competition among fellow villagers and five respondents considered Indian laborers as their main competitors. Indian laborers are preferred by the employer because: 1) they work on contract basis so the need for supervision is less and hence the contractual rate is cheaper; 2) they have better skills than Nepalese wage laborers, can complete the job on time, and the quality of work is better; and 3) heavy manual works such as earth-moving and bund-making for rice fields is more tedious and not preferred by Nepalese laborers (personal conversations).

Ninety-five percent of the wage laborers feel the increase in the wage rate is not keeping pace with prices of consumer goods. One reason for this may be increased competition in the job market.

This view of decreasing real wages may not be accurate. Secondary data for prices of cereal grains were collected to calculate indices for wage rates and cereal prices. Cereal prices include the average prices of medium quality paddy, maize, and wheat per quintal from 1978/79 to 1984/1985. The data were obtained from the Agricultural Statistics subcentre of the Department of Food and Agricultural Marketing Services (DFAMS) for the Narayanghat market. Wage rates for labor are from the account sections of IAAS and NMDP for 1978/79 to 1984/85. The price of each cereal was added to calculate average cereal price. The cereal price index and wage index are given in Table 13. The district consumer price index was not calculated because of the unavailability of time series data on prices of other non-cereal food items, clothes, kerosene, fire wood, and other daily necessity goods. Therefore, interpretations should be considered carefully.

Table 13. Cereal Price and Wage Indexes

Year	Cereal price index	Wage index
1978-79	100	100
1979-80	118	100
1980-81	121	116
1981-82	138	125
1982-83	172	154
1983-84	154	172
1984-85	142	194

Note: Cereal prices and wage rates for the above period are presented in appendix table. Cereals include medium paddy, maize and wheat.

The increase in the prices of cereals grains is not continuous. From 1979/79 to 1982/83, prices increased every year. In 1983/84 and 1984/85, they declined. The highest cereal price index of 1982/83 may be due to a bad crop year. The wage index increased slower than cereal prices initially, but later increased much faster. The comparison of the wage and cereal price indices indicates that wage earners have benefitted. On the other hand, the prices of industrial goods which are used by the agricultural labor might have disproportionately increased or decreased over the entire period which may disprove this statement.

Perception about Development Activities

The responding agricultural wage laborers were asked for their views about institutional programs for the betterment of their lives. The advantages of the IAAS and NMDP, in terms of services provided to them by these institutions, are given in Table 14.

Table 14. Advantages Derived from Institutions

	Number of respondents
Provide employment	40
Animal health services	9
Provide grass cutting facilities	9
Provide maize and other seeds	8
Education facilities of children	1

Agricultural wage laborers mainly consider the institutions as an employment agency which provides them with regular income. Only one respondent reported that there is a children's educational facility. The low literacy rate among the laborers and their families and the provision of only higher education (beyond S.L.C.) by the IAAS may have been the reason few do not get the chance to study at the IAAS.

The responses to questions about the probable consequences of not locating the IAAS and NMDP at Rampur are given in Table 15.

Table 15: Consequences of Institutional Location

	Landless	Tenants	<0.5 ha.	<1.0 ha.	>1.0 ha.	Total
Not stayed	11	3	3	0	0	17
No regular job	0	1	5	2	0	8
No grass to animals	0	0	0	1	0	1
Don't know	0	1	8	2	3	14
Total	11	5	16	5	3	40

For a large percentage of the agricultural wage laborers who earn their living through wages, the deciding factor for their stay in the area is the employment opportunity. More than 42 percent of the respondents believed that this employment opportunity attracted and encouraged them to settle in the vicinity. Thus it can be concluded that public investment in Rampur has had a positive impact on their lives.

Taking into consideration the size of landholding, it can be concluded that the location of the IAAS and NMDP in the rural area has provided a livelihood to the poorest of the agricultural wage labor. As the size of landholding increased, the respondents did not know the consequences. This implies that for those who have land, these institutions do not provide their livelihood.

Responses given by different groups of agricultural wage laborers regarding the benefits of government activities are given in Table 16. Though all 40 respondents were receiving employment, only 14 said the government is providing employment opportunity. The majority of the landless, all of the tenants, and the majority of those who have less than 1.0 ha. of land said the government is doing nothing for them. All of those who have more than one ha. of land thought that government is doing something for them. This suggests that in the lower strata of society there is either ignorance about government activities or they feel neglected by the government.

Table 16. Government Services

	Landless	Tenant	<0.5 ha	0.5-1.0 ha	>1.0 ha	Total
Provide employment	5	0	6	1	2	14
Maintain law and order	0	0	1	0	0	1
Land distribution	0	0	0	0	1	1
Nothing	6	5	9	4	0	24
Total	11	5	16	5	3	40

Access to Materials Due to Development Activities

Because of their employment in the public institutions, the agricultural wage laborers may have changed their consumption patterns. This change is termed the access to materials due to development activities. The agricultural wage laborers are the low incom group

within the society. Their expenditure on food items is relatively high. Theoretically, as the income increases, the expenses on food items decrease, which is given by Engel's curve. On the other hand, consumption of some inferior goods decreases. In this context, the analysis is based on cereal consumption, type and amount of clothing, and access to entertainment (movies).

The main dietary constituent of the respondents was rice 52.5 percent, wheat 22.5 percent, and maize 2.5 percent. Thirty percent of the respondents reported that their main constituent of the diet in terms of cereals has changed. The responses of the 12 agricultural wage labor families who changed the main cereal constituent of their daily diet are given in Table 17.

Table 17 indicates that of 12 respondents who changed their diet, only four indicated that their cereal consumption has gone down in quality. Since the data on total food consumption were not available, we cannot conclude that the quality of all food consumption has increased.

Forty percent of the respondents reported that clothing patterns have changed in terms of quality and amount. Coarse cotton cloths which are used by the low income groups are generally cheap and of poor quality. Synthetic fabrics are considered to be of better quality and are more costly. The changes in clothing patterns are given in Table 18. This indicates that the changes in the clothing patterns have taken place in such a way that synthetic fabrics are utilized in place of cotton. In a few cases, the change has been an increase in number of pairs as well as the type of cloth.

Table 17. Dietary Changes

Previous item	Present item	Quality up/down	Responses
Maize	Wheat	Up	4
Maize	Rice	Up	2
Rice	Wheat	Down	2
Rice	Maize	Down	2
Millet	Rice	Up	1
Millet	Wheat	Up	1

Table 18. Changes in Clothing

Previous clothing		Present clothing		Quality change	Responses
Type	Number	Type	Number		
Cotton	2	Polyester	2	Better	5
Cotton	2	Cotton	3	Better	3
Cotton	2	Polyester	3	Better	2
Cotton	2	Nylon	2	Better	1
Cotton	2	Tericotton	3	Better	1
Cotton	3	Polyester	2	Undecided	1
Cotton	4	Polyester	2	Undecided	1

The cash wages received by the respondents increased their spending capacity for entertainment. The construction of the Rampur Bharatpur road and regular auto-rickshaw service has brought Narayanghat nearer to Rampur where there are movie theaters. Only 14 of 40 respondents had gone to a movie. Only five out of 14 movie-goers reported that their frequency of going to the movies has increased over the years.

SUMMARY AND CONCLUSIONS

The main findings of the study are summarized below.

1. All the agricultural wage laborers employed had migrated from the hills. The reason for migration of 85 percent of the migrants was poor economic conditions in hills, while the remaining 15 percent migrated because of loss of land by flood and landslide.

2. The average size of the family for the respondents was 6.1 members per family. The average family size was 5.1 for the landless, 7.6 persons for those who own 0.5 - 1.0 ha. of land, but decreased for those who have more than 1.0 ha. of land. The average number of persons working as agricultural wage laborers ranged from 1.4 for those who have more than 1.0 ha. of land to 2.4 for tenants and increased with size of holding. The main members of the agricultural wage earners were household males, sons, daughters, and lastly, daughter-in-laws. Among the landless, the household females were the main agricultural wage earners.

3. Average years of education for respondents was 0.9 years, for all family members 8.2 years, and for female family members 1.3 years. Education increased with the size of landholding.

4. Sixty percent of the respondents own land, 12.5 percent had rented land. Twenty-seven and half percent of the agricultural wage laborers were landless. The average size of holding was 0.3 ha. The average size of rented land was 0.4 ha.

5. Seventy-nine percent of the landholding agricultural wage laborers financed the purchase of the land by the transfer of assets from parents. Thirteen percent received land from the government sponsored settlement program, while only one landholder financed land through earnings from work and transferred assets.

6. Twenty-nine respondents owned a house. Average value of the house was Rs.4019. Eighteen out of 29 home owners financed the construction or the purchase of the house from work earnings.

7. The average agricultural employment per family per year was 305 days. For those who had nonagricultural employment, Srawan was the month where there were abundant employment opportunities. Slack periods in terms of job availability in agricultural employment were the months of Aswin, Kartik, Paush, and Magh.

8. The major agricultural and nonagricultural places of employment of the sample agricultural wage labor were IAAS and NMDP. Nonagricultural employment opportunities were available in village and towns.

9. Wages rates varied between Rs.7 and Rs.18 per labor-day. Institutions providing regular employment to agricultural wage labor had stable but lower wage rates than private farms.

10. Forty-five percent of the respondents felt job competition has increased over the years. Thirty-two and a half percent believed the villagers their competitors and 12.5 percent considered Indian laborers as their competitors.

11. The average wage rates were increasing faster than the price of cereal grains. The overall price index for Chitwan could not be calculated because of unavailability of data.

12. IAAS and the NMDP are considered by all the respondents as employers. These institutions provide other services, including education to family members. Educating their children is less important than providing a place to cut grass or seed supplies. This is a result of low literacy in agricultural wage labor families.

13. The location of the IAAS and NMDP at Rampur has attracted and retained more than 40 percent of agricultural wage laborers. This is particularly true for the landless agricultural wage laborers.

14. Forty percent of the respondents felt that the government does nothing for the bettering of their lives. The other respondents believe that the government employs, maintains law and order, and distributes land. The majority of those who have more than 1 ha. of land believe government activities to be beneficial.

15. Access to materials due to development activities was estimated through changes in consumption of cereals, changes in pattern of clothing, and ability to go to movies. The quality of cereal consumed has increased for 20 percent of the respondents. Only 40 percent reported that their clothing pattern had changed and generally the change was from cotton cloth to synthetic fabrics and an increase in the number of pairs per year. Only 35 percent of the responding agricultural wage labor go to movies and only 12.5 percent said that the frequency of going to movies had increased.

RECOMMENDATIONS

Based on these conclusions, we make the following recommendations:

1. Agricultural wage laborers have not received due consideration in the planning and execution of the development programs. Whatever benefit they have received is through the trickle down process. Future programs should be oriented directly for them, especially in creating employment and skill development.

2. Agricultural wages vary widely. The range of the wages fixed by the district office of public construction department are taken as guidelines by institutions to giving wages to agricultural labor. When the wages are given agricultural jobs are considered light and lower wages are given. This practice should be reviewed and new wage rates should be fixed for both peak and slack seasons.

APPENDIX

Appendix A.1. Cereal prices (Rs. per quintal)

	Rice*	Maize*	Wheat*	Average
1978/79	303	162	190	218
1979/80	343	205	215	254
1980/81	368	190	239	266
1981/82	430	229	250	303
1982/83	562	258	329	383
1983/84	505	240	305	348
1984/85	501	213	246	320

Source: Agricultural Statistics sub-branch office, Bharatpur.
* Average of 12 months prices.

Appendix A.2. Wage rates at Institute of Agricultural and Animal Science (IAAS) National Maize Development Programme (NMDP), Rampur and public construction works branch Bharatpur (Rs per day) (PCB)

	IAAS	NMDP	PCB	Average
1978/79	5.0	4.5	7.0	5.5
1979/80	5.0	4.5	7.5	5.5
1980/81	5.0	5.0	10.0	6.5
1981/82	6.0	5.5	10.0	6.9
1982/83	8.0	6.5	12.0	8.5
1983/84	8.0	7.0	15.0	8.7
1984/85	10.0	7.5	16.0	10.3

Source: Official documents of IAAS, NMDP and PCB.

REFERENCES

Central Bureau of Statistics (CBS). Statistical Pocket Book, Nepal 1984. Kathmandu, Nepal, 1984.

HMG District Office, Public Construction Works branch. "Official Record 1978-1985." Bharatpur, Chitwan, Nepal.

HMG, Department of Food and Agricultural Marketing Services, Agricultural Statistics sub-branch. "Official Record, 1978-1985." Bharatpur, Chitwan, Nepal.

Institute of Agriculture and Animal Science, Account Section. "Official Documents 1978-1985." Rampur, Chitwan, Nepal.

National Maize Development Program, Account Section. "Official Documents 1978-1985." Rampur, Chitwan, Nepal.

Nepal Rastra Bank. "Agricultural Credit Review Survey, Nepal." 1980.

Personal communications with related persons, 1985.

Papers in this Series:

1. Bhola N. Pokharel and Ganesh P. Shivakoti, "Impact of Development Efforts and Agricultural Wage Labor," December 1986.

2. Jagadish Timisina and Murari Suvedi, "Contribution of Cropping Systems Program Research and Extension to the Rural Poor: A Case Study of Ratnanagar Cropping Systems Site," December 1986.

3. Murari Suvedi, "Poorest of the Poor: A Comparative Study of Rural Poverty in Two Villages," December 1986.

4. Bishnu Bandari, Narayan Kunwar, and Badri B.S. Dongol, "Rural Poverty and the Poor in Nepal," December 1986.

Winrock International Institute for Agricultural Development was established in 1985 through the merging of the Agricultural Development Council (A/D/C), the International Agricultural Development Service (IADS), and the Winrock International Livestock Research and Training Center. Winrock International's mission is to improve agriculture for the benefit of people--to help increase the productivity, improve the nutrition, and advance the well-being of men, women, and children throughout the world. Winrock International's main areas of emphasis are human resources, renewable resources, food policy, animal agriculture and farming systems, and agricultural research and extension.

Winrock International Institute
for Agricultural Development

Route 3, Petit Jean Mtn.
Morrilton, AR 72110-9537
U.S.A.

P.O. Box 1312
Kathmandu
Nepal