

FOREWORD

This Highlights report is the first of a series of publications generated from the National Census of Agriculture (NCA), 2001/02. It presents some of the major findings in the different aspects of agriculture in Nepal. The series of census reports that the Central Bureau of Statistics will publish are the following: 75 District census reports, District Summary, 5 Development Regions reports, 3 Ecological Belts report and National report.

The National Census of Agriculture, 2001/02 is the fifth decennial census of agriculture of Nepal, the first had been undertaken in 1961/62. Like the previous censuses, the NCA 2001/02 covered all districts of the kingdom. A complete enumeration of all holdings and the corresponding area was undertaken as the first phase of the NCA and this activity was integrated in the listing operation of the Population Census in 2001. To expand the scope of the census, a sample of some 5,100 enumeration areas were selected from which about 125,000 holdings were selected and enumerated for more detailed characteristics of the holding. A description of the sampling design is discussed in the Explanatory Text.

The census fieldwork was undertaken from January to June 2002. Data on crop cultivation and other holding characteristics, except livestock, refer to calendar year 2001. Livestock inventory was obtained at the time of enumeration. During the listing operation of the Population Census, some Village Development Committees (VDCs) in 12 districts were not covered due to some disturbances. However, the Population Division made some estimates on the population of these VDCs. Correspondingly, the number of holdings in these missed VDCs was estimated. During the census of agriculture operation, some sample enumeration areas were not covered in Mugu district. Since there was a complete census of the holdings in the area during the Population Census listing, the non-coverage of some sample enumeration areas did not affect the estimation process.

The training of the census field personnel was undertaken as a joint project with the Asian Development Bank (ADB) under TA 3451 NEP: Strengthening the National Statistical System. The ADB also provided technical support in the processing and analysis of the census results. We would like therefore to extend our thanks and gratitude to ADB for the technical support that facilitated the early completion of the census undertaking. We would like also to take this opportunity to express our sincere appreciation to the technical assistance provided by the ADB consultants, Mrs. Nelia R. Marquez and Mr. Elpidio Nogales on data processing and analysis of census results, including the preparation of this report. Working closely with them are our very own officials without whom this project would not have been efficiently implemented. I would like to thank specifically Deputy Director General Rabi Singh and Deputy Director Ramesh C. Das for their able leadership in carrying out all the different aspects of census work together with staff officers Shanker Lal Shrestha and Rajesh Dhital and all field officers, who in one way or the other, contributed to the success of this gigantic undertaking, thank you for doing your job well.

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T.S. BASTOLA
Director General
Central Bureau of Statistics

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EXPLANATORY TEXT

I. INTRODUCTION

The 2001/02 National Census of Agriculture of Nepal (2001/02 NCA) conducted by the Central Bureau of Statistics is the most recent census of agriculture in HMG, Nepal. The first census in this country was conducted in 1961/62. Since then the Census of Agriculture has been conducted decennially: 1971/72, 1981/82 and 1991/92.

The 2001/02 NCA was undertaken in two phases. The first phase involved the complete enumeration of all agricultural holdings in the country including the area of the holding and livestock number. The enumeration of all the holdings was an integral activity of the first phase of the Census of Population 2001, which undertook the listing operation from May 14-28, 2001. Some questions on agricultural activities were asked to identify the agricultural holding. The second phase of the 2001/02 NCA was the selection and enumeration of sample holdings to widen the scope of the census from January to June 2002. Data on agricultural crops gathered refer to calendar year 2001 while the livestock and poultry population refers at the time of enumeration, from January to June 2002.

A. Objectives of the National Census of Agriculture of Nepal, 2001/02.

The main objective of the census of agriculture of Nepal is to publish data at district level on the following:

1. Structure and characteristics of the holding such as size, agricultural land use, land tenure, land fragmentation, area planted to crops, number of livestock, and others;
2. To provide benchmark data for improving the reliability of estimates from current agricultural survey; and,
3. To provide basic data for national, ecological belts and development regions levels for national as well as sub-national policy, planning and decision making purposes.

B. Scope and Coverage of the 2001/02 NCA

The scope of the 2001/02 NCA is almost the same as that in 1991/92 National Sample Census of Agriculture which adopted most of the recommendations of the Food and Agriculture Organization (FAO) in the collection of data under the following main headings:

1. Identification. – Holding and holder identification.
2. Holder characteristics. – Age and sex of holder; legal status of the holding; use of produce from holding; whether received agricultural loan and the source.
3. Demographic and other characteristics. – Age and sex of household members. Characteristics of the farm population were gathered in the Census of Population 2001 but will be included in the NCA 2001/02 analysis of results.
4. Employment. – For agricultural labour: permanent workers by sex and employment of occasional workers. Economic activities of the members of the household of the holder were not taken in the agriculture census because these were already covered in the Census of Population 2001 but will be included in the analysis of results of the 2001/02 NCA.
5. Land and water. – For holding as a whole: number of parcels; area; type of land; irrigated land, source of irrigation; etc. For each parcel: area; type of land; type of soil, color of soil; irrigated; area rented from others; whether rented out land; land use (whether arable, land under temporary crops, temporary meadow, temporary fallow; land under permanent crops; permanent meadows and pasture; pond; woodland/forest; and land not elsewhere classified) land tenure; and part of holding made uncultivable due to flooding and/or soil erosion during the reference year.
6. Crops. – Temporary crops: name of crops grown and area harvested on each parcel. Permanent crops: name of crops grown for each parcel; number of trees of productive and non-productive ages in compact plantations; and number of scattered trees. Use of agricultural

inputs for major crops: type of seed; fertilizers, organic and inorganic: area and quantity of inorganic (chemical) fertilizer used; pesticides; use of irrigation and high yielding varieties of seeds; cropping patterns for each parcel, whether pure stand, mixed crop, or associated crop.

7. Livestock. – Animal numbers by type according to age and sex; poultry numbers: chicken classified by sex and for female, whether laying eggs or not.
8. Machinery and equipment. – Use of items of agricultural machinery and equipment; number of items; and source (owned by holder, common, landlord, or others).
9. Buildings and other structures. – Whether non-residential buildings used for agricultural purposes; tenure and type of these buildings.
10. Ancillary activities on the holding.- Existence of forest trees and fisheries on the holding; number of forest trees; type and area of fishing installation.

In terms of coverage, the agricultural census covered the whole of Nepal including urban areas. However, only agricultural holdings operated by households were included. Agricultural activities undertaken by government organizations, businesses like corporations and other juridical persons were not covered by the NCA.

The total area of the holding was reported in the district where the holder resides, regardless of the physical location of the parcels comprising the holding. Although in Nepal a holding is usually equivalent to the household and it is very rare where a household operates a holding where some parcels are located in other districts.

There are some VDCs (Village Development Committees) that were not covered by the listing operations or census enumeration during the Census of Population 2001 involving 12 districts. However, some estimates of the number of households and population were prepared by the Population Division based on the census listing or some independent sources of information, in the absence of the listing of households. The 12 districts are: Jhapa and Siraha districts both in Eastern Tarai; Surkhet and Salyan districts in Mid-Western Hill; Sindhupalchok and Dolakha districts in Central Mountain; Sinduli district in Central Hill; Dolpa, Jumla, Kalitkot, and Mugu districts all in MidWestern Mountain; and Bajura district in Far-Western Mountain.

II. CENSUS METHODOLOGY

A. Complete Enumeration of Holdings, Area and Livestock

The census methodology in undertaking the 2001/02 National Census of Agriculture of Nepal is a combination of complete enumeration and sampling.

As mentioned earlier, the Census of Agriculture was implemented in two phases. The first phase was the complete enumeration of all holdings, their area and the number of livestock and poultry raised by all households in the country as an integral activity in the listing operations of the Census of Population 2001. Two questions were asked concerning agricultural activities of households, namely: total area of the agriculture holding and total number of livestock/poultry kept by the households. All households listed in the Population Census 2001 that possessed the characteristics of the holding as defined in the agriculture census were identified as agricultural holdings. These holdings and their corresponding areas and number of livestock kept including their household population were compiled by ward for all the 75 districts of Nepal from which the sampling frame was constructed.

B. Sampling Design

A two-stage stratified sampling was employed in the selection of the samples for enumeration to obtain the characteristics of the holdings for the 2001/02 NCA. This design is similar to that of the 1991/92 sampling design, which is a self-weighting sample.

Construction of the sampling frame.

The listing of the wards in each district with the summarized data of the number of holdings and area was used to form enumeration areas (EA's). However, wards containing less than 30 holdings were combined to form one EA. The EAs in each district were stratified according to the number of holdings enumerated, arranged from the highest to the lowest.

Selection of samples

The first stage of sample selection involved the primary sampling units (PSUs), where sample enumeration areas (EAs) were selected with probability proportional to size (PPS). The measure of size is the number of holdings enumerated in the EAs during the Census of Population 2001 listing operations.

To measure the importance of each district, the total area under 8 major crops was determined (paddy, wheat, maize, millet, barley, sugarcane, oilseed and potato). Districts were stratified into four groups according to this criterion. Group I represented the 10 least important districts; Group II, the next 15 important districts and Group III, the next 25 important districts and Group IV, the 25 most important districts. The number of selected EAs per district in each group follows:

- Group I – 50 EAs per district (total of 450 EAs because one district, specifically Manang district was taken as a certainty sample district)
- Group II – 60 EAs per district (total of 900 EAs)
- Group III - 70 EAs per district (total of 1,750 EAs)
- Group IV– 80 EAs per district (total of 2000 EAs).

The second stage of sample selection involved the selection of sample holdings systematically in each sample EA. Before the sample selection was done, a listing of holdings in each sample PSU was conducted to update the listing during the Population Census. The target number of holdings for enumeration in each sample EA was 25.

The Census of Agriculture sample was designed to be self-weighting within each district, i.e. all holdings within a district have the same chance of being included in the sample.

Approximately 5,100 enumeration areas were selected in the 74 districts and about 125,000 agricultural holdings were selected for enumeration. One district was completely covered in the second phase of the census of agriculture because of the few number of enumeration areas and holdings. This is the district of Manang.

The detailed stratification scheme done on the districts, the sampling procedures and the estimation of parameters for each district are found in the technical report, which is one of the series of reports prepared for the 2001/02 NCA.

III. CONCEPTS AND DEFINITION OF TERMS

The following concepts and definition of terms were adopted in the conduct of the 2001/02 NCA. In general, these concepts and definition of terms are in accordance with the recommendations of the Food and Agriculture Organization (FAO) in its "Programme for the World Census of Agriculture 2000."

Holding. For purposes of the census, an agricultural holding is defined as an economic unit of agricultural production under single management comprising all livestock and poultry kept and all land used wholly or partly for agricultural production purposes. A holding was considered to be an agricultural unit of production if it satisfies any of the following conditions:

- 1) having an area under crops of at least a quarter of ropani (or four annas) or one matomuri in Hill or Mountain districts (0.01272 hectares) or at least eight dhur (0.01355 hectares) in Tarai; or,
- 2) keeping at least two heads of cattle or buffaloes; or,
- 3) keeping at least five heads of sheep or goats; or,

- 4) keeping at least 20 heads of poultry; or,
- 5) keeping any combination of livestock and poultry equivalent to 2 animal units, 1 animal unit is equal to 1 big livestock, i.e. cattle or buffalo; 3 heads of sheep or goats; or 10 heads of poultry, e.g. 1 cattle and 10 chicken or 1 buffalo and 2 goats and 1 sheep.

Holder. The holder is the person in the holding who exercises management control over the operations of the holding. There is only one holder in each holding. The holder may or may not be the same person as the household head.

Household. A household is a group of persons who live in the same dwelling and have common arrangements for the provision of food and other essentials of daily living. A household may comprise one or more persons and may include unrelated persons (e.g. farm workers). More than one household may live in a single house.

Head of the household. The head of the household is the person in the household acknowledged as such by the other members. The head has primary authority and responsibility for household affairs. The head of the household may or may not be the same person as the holder.

Wet land. This land refers to lowland where water remains on the surface or on the upper soil layer, making the land suitable for main paddy cultivation.

Dry land. This land refers to any land other than wetland, i.e. land that is not suitable for paddy cultivation.

Land tenure. This refers to arrangements or rights under which the holder operates the land of a holding. A holding may be operated under one or more tenure forms. For purposes of the Census of Agriculture, there are three forms of land tenure, namely: (1) land owned by the holding; (2) land rented from others; and land under other tenure forms.

Land owned is the land operated by the holding for which the holder possesses title of ownership. It also includes land which the holder can reasonably expect to eventually possess title of ownership, e.g. inherited land, and land which has been operated for many years by the same holder without any other claims being made on the land (owner-like possession). Land owned but rented out to others is not included under owned since it is not part of the holding.

Land rented from others. This is land rented or leased by the holder from other persons. Land rented is divided into a number of categories according to the basis which the land was rented:

- rented for a fixed amount of money;
- rented for a fixed quantity of the produce;
- rented for a fixed share of the produce;
- rented in exchange for services provided, e.g. labour;
- rented as part of a mortgage arrangement; and,
- other rental arrangements, e.g. rent-free where no payment is given for the use of the land.

Other tenure forms. These refer to land operated under tenure conditions other than ownership or renting from others. Squatter land and land under dispute are included under this category.

Land use. This refers to the major classification of the use of the land on the holding. For purposes of the agricultural census, land operated by the holding is classified according to the following land use categories:

- 1) Agricultural land
 - Crop land
 - Arable land
 - Land under permanent crops
 - Land under permanent meadows and pastures
 - Ponds
- 2) Woodland or forest
- 3) All other land in the holding

Arable land. This land refers to all land generally under cultivation and is divided into: land under temporary crops; Land under temporary meadows; land under temporary fallow; and other arable land.

Land under temporary crops refers to land used during the reference year in raising crops whose growing cycle is less than one year.

Land under temporary meadows refers to land that has been cultivated with forage crops for mowing or pasture for less than five years.

Land under temporary fallow refers to land that was not cultivated for at least one year to let the land rest to restore its fertility. The land must not rest for 5 years, otherwise it will be classified under permanent meadows and pasture.

Other arable land includes land normally used for temporary crops but which the holding was unable to cultivate during the reference year because of flooding, landslides or other factors.

Land under permanent crops. This land refers to land cultivated with perennial crops that do not require replanting for several years after each harvest.

Land under permanent meadows and pastures. This land refers to land that has been used permanently for 5 years or more in growing forage crops.

Ponds. These refer to lands under permanent standing water. The ponds may be natural or man-made and may be used for raising fish, watering for livestock, irrigation or for any other purpose.

Woodland or forest. This land refers to woodlots or timber tracts, natural or planted, constituting part of the holding which have or will have value as wood, timber, other forest products or for soil erosion protection.

Other land in the holding. This covers two categories: 1) Unused and undeveloped potentially productive land refers to land that is not being cultivated and which would require some development before it could be brought into crop production; and, 2) Land in holding not elsewhere specified which includes land occupied by buildings, roads, ornamental gardens and other open spaces on the holding.

Irrigation refers to purposely providing with water other than rain for improving pastures or crop production. Natural flooding of land by rainfall or overflow of rivers is not considered as irrigation. Rainwater of uncontrolled flooding that is collected and later used on the holding is considered irrigation.

Drainage is the removal of excess water from the land surface and/or the upper soil layer to enable the land to be cultivated or to improve the productivity of the land.

Area under temporary crops refers to the area for temporary crops sown for harvest during the census year 2001.

Crops under pure stand refers to single crop cultivated alone in a field. A pure stand crop may be either temporary or permanent. Crops cultivated on the same piece of land in two seasons (double cropping) are pure stand crops.

Mixed crops are two or more different temporary or permanent crops grown simultaneously in the same field or plot (as opposed to "pure stand" crops). Temporary and permanent crops cultivated together are called "associated crops."

Associated crops are temporary and permanent crops cultivated simultaneously in the same field. The total area of each individual crop in associated crop land is equal to the area of the land.

Compact plantation of permanent crops refers to plants, trees and shrubs planted in a regular and systematic manner.

Permanent crops of non-productive age are permanent crops which are not bearing fruit or which are below the fruit bearing age.

Permanent crops of productive age are permanent crops that are already bearing fruit or are productive.

Scattered trees refer to trees planted in scattered or isolated manner throughout the holding. Only the number of trees is reported and not the area.

Fertilizers refer to anything added to the soil to increase the amount of plant nutrients to promote crop growth. For census purposes, there are two types of fertilizers- organic and inorganic

Organic fertilizers are organic substances such as farmyard manure, compost, etc.

Inorganic fertilizers are chemical or commercial fertilizers.

Pesticides/insecticides refer mainly to insecticides but also fungicides, fumigants, herbicides, rodenticides, and other similar substances.

Improved seeds refer to high yielding variety seeds used on the holding during the reference year.

Local seeds refer to native or ordinary varieties used on the holding during the reference year.

Livestock refers to domesticated animals and fowls kept by the holding on the day of enumeration. This includes livestock owned by the holding and livestock being leased in by the holding. Livestock, in its generic sense, includes poultry.

Agricultural implements. Use of specified items of agricultural equipment refers to the use of the equipment for agricultural purposes on the holding during the reference year, regardless of ownership of the equipment. Equipment not used for agricultural purposes is excluded.

Non-residential buildings refer to the use of non-residential buildings on the holding for agricultural purposes during the reference year. Non-residential buildings were classified by tenure and by use. A building used both for residential and non-residential purposes is considered residential and therefore excluded.

Forest trees on the holding refer to any trees present on the holding on the day of enumeration apart from fruit trees and any other trees considered permanent crops.

Fisheries. The information on whether the holding has fisheries on the holding refers to whether any fish were taken from ponds or paddy fields on the holding during the reference year.

Agricultural credit refers to whether, on the day of enumeration, the holding owed money or any loan which had been received for agricultural purposes, regardless of when the loan had been taken out.

Hired manager is a person who takes responsibility for the management of a holding on a holder's behalf.

Permanent agricultural workers are workers employed permanently by the holding during the reference year. By permanent is meant that the person worked on the holding for six months or more during the reference year. In mountain areas, a permanent worker was anyone considered permanent by the holder. Permanent workers exclude any members of the holder's household (even if the person is unrelated and being paid work on the holding).

Occasional agricultural workers are workers employed by the holding who are not considered to be permanent. Occasional workers include only those who work for payment in cash or in goods – work done in exchange for labour was not included.

Farm population consists of all household members of all households listed during the Population Census as having agriculture land holding and/or raised livestock or poultry.

Economically active farm population refers to members of the household of agricultural holdings who are at least 10 years old who reported as having engaged in any economic activity during the reference year or seeking work at any time during the reference year.

Not economically active farm population refers to members of the household of the agricultural holding who are at least 10 years old who have no economic activity.

Activity status refers to what an individual was doing most of the time during the past twelve months whether working in agriculture/own farm, salary/wage work, working in own economic enterprise, doing extended economic activity, doing household chores, going to school or no work at all

Labour force participation rate of farm population is the ratio of the farm population 10 years old and over who were either employed or seeking work during the reference period to the total farm population. The ratio is multiplied by 100 to express it in percent.

Male labour force participation rate is the ratio of male population 10 years old and over who are either employed or seeking work to the total male population multiplied by 100.

Female labour force participation rate is the ratio of female population 10 years old and over who are either employed or seeking work to the total female population multiplied by 100.

SUMMARY OF FINDINGS

No. of holdings

Area in ha.

Number and area of holdings

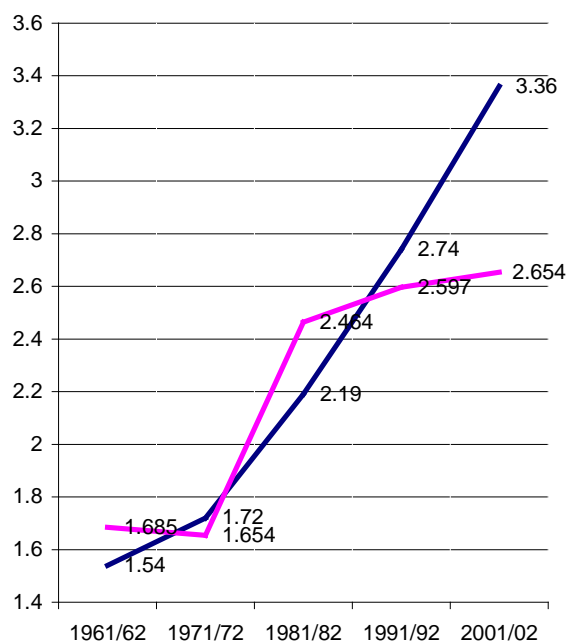
The 2001/02 National Census of Agriculture (NCA) of Nepal covered all holdings in the country with land at least 0.01 hectare and with no significant area of land but with at least two cattle or the equivalent number of other livestock.

The 2001/02 NCA has enumerated a total of 3.3641 million holdings compared with 2.7361 million holdings enumerated in 1991/92, an increase of about 23%. This increase, however, is slightly lower than the increase in the number of holdings between census years 1981/82 and 1991/92, which was 25%.

In a span of 40 years, from 1961/62 to 2001/02, the number of holdings increased by 1.824 million, or 184%, an annual average increase of 4.6%. TABLE 1 shows the growth of the number of agricultural holdings in the country from 1.54 million in 1961/62 to 1.721 million in 1971/72 to 2.194 million in 1981/82, to 2.736.1 million in 1991/92 and finally to 3.3641 million in 2001/02.

The increase in the total area of the holdings is much slower when compared with the increase in the number of holdings, from 1.685 million hectares in 1961/62 to 2.654 million hectares in 2001/02 or a total increase of 968 thousand hectares in a span of 40 years. Percentage-wise, the total increase was only 57%, equivalent to an average annual increase of only 1.425%. However, if we look at the increases between censuses, there was significant increase in the total area of holdings between 1971/72 and 1981/82 when there was an increase of about 49%, from 1.665 million hectares to 2.464 million hectares, an increase of 478.4 thousand hectares. Since then the increases were minimal. Between 1981/82 and 1991/92 the increase in the total area of the holdings was only 5.5% in a period of 10 years. The increase in the total area of holdings went down further to only 2.2% between 1991/92 and 2001/02.

CHART 1
NUMBER AND AREA OF HOLDINGS
CENSUS YEARS 1961/62 TO 2001/02



It is encouraging to note that holdings with no land registered a decrease by 16.8% over the number in 1991/92 from 32.1 thousand holdings to 26.7 thousand holdings.

Among ecological belts, Hill reported the highest number of holdings in 2001/02 at 1.586 million that comprised 47.2% of the total holdings in Nepal, followed by Tarai with 1.4795 million or about 44% of the total. However, Tarai ecological belt contributed the biggest area of holdings with 1.4 million hectares. This area was 52.6% of the total area of holdings in the country in 2001/02. Hill had a total area of 1.04 million hectares, about 39.1% of the total.

The Mountain ecological belt, being a mountainous territory, had the lowest number of holdings with 218.2 thousand and also the smallest area of holdings with only 218.7 thousand hectares, see TABLE 5.1.

CHART 2
AREA OF HOLDINGS
ECOLOGICAL BELTS

By development regions, Central Development Region (CDR) registered the biggest number of holdings with 1.037 million but Eastern Development Region (EDR) reported the largest area of holdings with 795.5 hectares compared with 750.2 hectares for CDR.

Of the 75 districts, Morang reported the highest number of holdings as well as the total area of holdings at 115.2 thousand and 116,530 hectares, respectively, followed closely by Jhapa with 104.7 thousand holdings and total holding area of 109,530 hectares. The least number of holdings was in the district of Manang with only about 1,500 with a total area of 1,130 hectares. The second lowest is Mustang with 2700 holdings. Both

Mountain

districts are in Western Mountain region while Morang and Jhapa are located in the Eastern region within the Tarai belt. (TABLES 4, 5, 5.1 and 5.2)

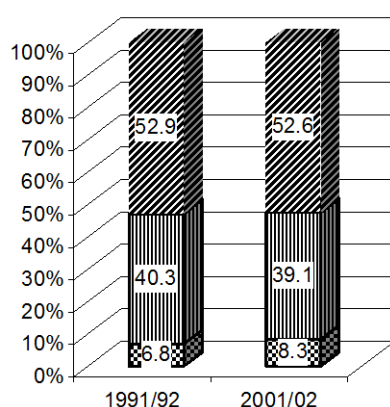
Holding Size

Because of the faster rate of increase in the total number of holdings than the total area of the holdings in Nepal, the average size of the holding decrease from 1.13 hectares in 1981/82 to 0.96 hectare in 1991/92 and further down to 0.80 hectare in 2001/02. At the national level, the average size of the holding started to decrease between 1981/82 and 1991/92 by 15% and between 1991/92 and 2001/02, by 17.16%, see TABLE 1.

By ecological belt, it is significant to note that only Mountain registered an increase of 8% in the average size of the holding while Tarai and Hill exhibited reduction in the size by 23.2% and 15%, respectively between 1991/92 and 2001/02. TABLE 5. However, holdings in the tarai ecological belt yielded the highest average size of 0.94 hectare per holding followed by Mountain belt with an average of 0.73 hectare per holding. Hill holdings reported the lowest average of 0.66 hectare, (TABLE 4). Holdings in both Mountain and Hill ecological belts registered an average below the national average.

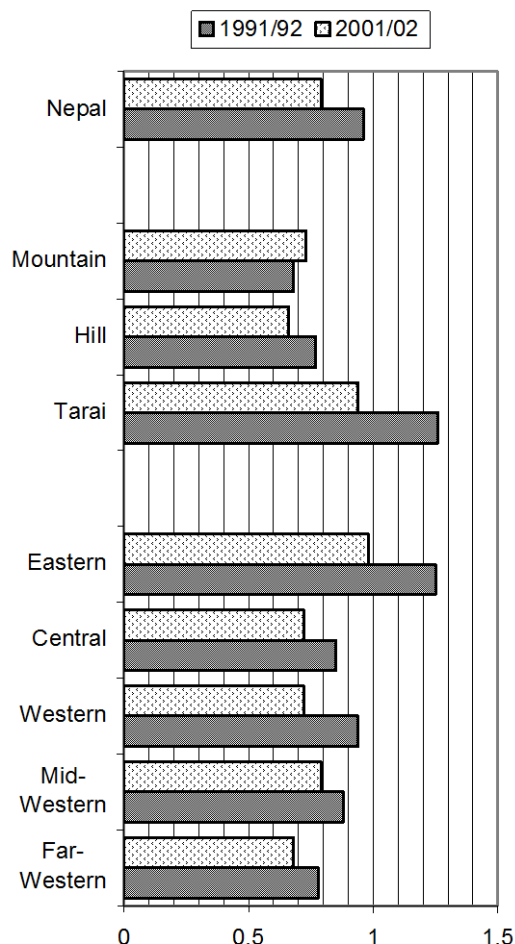
The average size of the holdings with land in TARAI yielded a little higher average of 0.957 hectare compared with the average of all holdings while the average size of the land holdings in Hill and Mountain remained almost the same as the average of all holdings (land and no land), see TABLE 5.1.

By development regions, the holdings with land in Eastern Development Region (EDR)



reported the highest average of almost a hectare (0.995) followed far

CHART 3
AVERAGE HOLDING SIZE
BY ECOLOGICAL BELT AND BY REGION
1991/92-2001/02



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behind by the holdings in Mid-Western Development Region (MWDR) with 0.793 hectare although this figure is almost the same as the national average, see TABLE 5.1.

Far-Western Development Region (FWDR) holdings with land reported the lowest average of 0.68 hectare while Central Development Region (CDR) and Western Development Region (WDR) had almost the same average size per holding with 0.73 and 0.72 hectare, respectively.

Among districts, Kapilvastu reported the highest average size of 1.241 hectares per holding in 2001/02.

It may be significant to mention that all districts in Eastern Tarai, namely: Jhapa, Morang, Sunsari, Saptari and Siraha reported an average size a little above 1 hectare. Other districts reporting an average size of the holding of more than 1 hectare in 2001/02 are: Taplejung, Solukhumbu, Ilam, Terhathum, Okhaldunga, Bardiya, Sarlahi, Rautahat and Kalikot.

On the other hand, the districts reporting the lowest average size of the holding are: Bhaktapur, 0.233 hectare followed by Kathmandu (0.249) and Lalitpur (0.306). It is understandable that the three districts had registered the lowest average size because the agricultural lands are slowly being converted to other land uses due to urbanization. Other districts with low average holding size, which is below half a hectare are the following: Bajura (0.465), Bajhang (0.498), Achham (0.441), Mustang (0.468), Kaski (0.444), Parbat (0.497) and Dolpa (0.474), see TABLE 5.2.

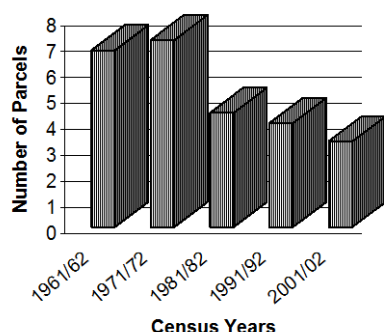
The disparity in the size of the holdings is reflected in TABLE 2. Almost 92% of the holdings shared only about 69% of the land devoted to agriculture. These are the

holdings with sizes of less than 2 hectares. In contrast, only 0.75% (less than 1%) of the total holders operated 7.31% of the total area, which is approximately 194 thousand hectares, an average holding size of 7.64 hectares. These are the holdings with at least 5 hectares in size. Most of the holders in Nepal agriculture are below subsistence level.

Fragmentation of land

Fragmentation of land has slowed down between 1991/92 and 2001/02. The total number of parcels in 1991/92 was 10.8 million and increased to 10.99 million in 2001/02, a minimal increase of 1.7% compared with the increase of 13.6% between 1981/81 and 1991/92. While the average number of parcels per holding has been decreasing from 4.4 in 1981/82 to 4 parcels in 1991/92 to 3.3 parcels in 2001/02, the average area of the parcel has not increased between the last two censuses. The area remained at 0.24 hectare or 240 square meters in 2001/02.

CHART 4
AVERAGE NUMBER OF PARCELS PER
HOLDING 1961/62 TO 2001/02



Selected characteristics of holdings

The intensity of the use of the land is observed to be much higher among holdings with sizes less than half a hectare. TABLE 3 shows that holdings with less than 0.5 hectare (small holdings) almost doubled (1.94) in the usage of the land compared with 1.73 times more among large-sized holdings (2 ha. and over).

It is further observed that as the holding's size increases, the household size also increases. It can be said then that bigger households tend to have bigger size of holding which may have been augmented by the higher percentage of households (19.3%) renting land compared with the small-sized holdings, where only 8.5% reported having rented land.

CHART 5
SMALL AND LARGE HOLDINGS

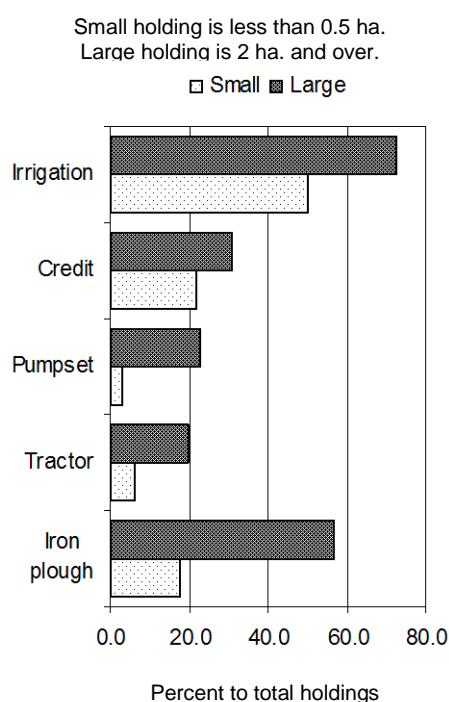


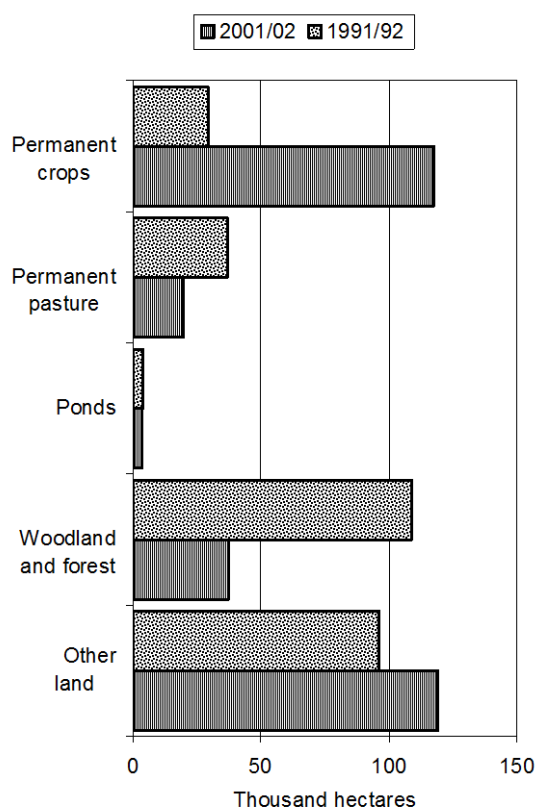
TABLE 3 further showed that the small holdings had less access to inputs of production where only almost half had irrigation facilities compared with the large holdings with more than two-thirds (72%) had irrigation facilities. The use of iron plough also showed that a little more than one-fourth (27.5%) had it compared with more than half among large holdings (57%). It is only in the use of agricultural credit where the difference is not great.

LAND USE

An agricultural holding may comprise of agricultural land and non-agricultural land. In 2001/02, the agricultural land consisted of 94.1% of the total area of the holdings, which is approximately 2.498 million hectares, while the rest of the land, 156.4 thousand hectares, are classified as non-agricultural land, see TABLE 6.

CHART 6
LAND USE PATTERNS EXCEPT ARABLE LAND

1991/92 AND 2001/02



In 1991/92, the proportion of agricultural land to the total area of the holdings was 92.9%, which comprised about 2.393 million hectares. This is 104.8 thousand hectares lower than that obtained in 2001/02. In short, there was an increase of 4.4% of agricultural land between 1991/92 and 2001/02. Most of this land increases, may have come from the non- agricultural portion of the holding.

There was a decrease of 71.6 thousand hectares of woodland and forest, from 108.8 thousand hectares in 1991/92 to 37.2 thousand hectares in 2001/02, a decrease of 66% of the total woodland and forestlands between 1991/92 and 2001/02.

Furthermore, there was a big increase in the area of land under permanent crops from 29.4 thousand hectares in 1991/92 to 117.5 thousand hectares in 2001/02, an increase of almost 300% in 10 years. The importance of the area devoted to permanent crops is reflected in Table 6 where its share to the total holding area registered at 4.43% in 2001/02 compared with only 1.13% in 1991/92.

The changing pattern of land use among agricultural operators may be indicative of the changing structure of the use of land in Nepal, from woodland and forest farming to permanent crop farming.

The area devoted to fishing has not improved during the past ten years. In fact it was observed to be decreasing in area from 3.9 thousand hectares in 1991/92 to 3.5 thousand hectares in 2001/02, see TABLE 6.

Land Tenure

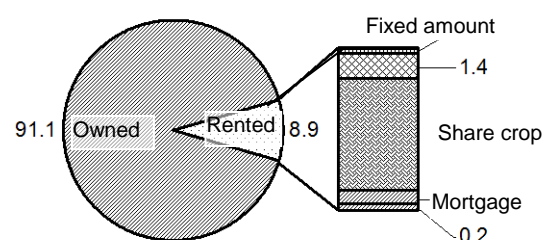
Most agricultural holders are owner-operators in 2001/02. Of the 3.337 million holdings with land, 2.9 million holders or about 87% are full owners of their agricultural holding involving a total area of 2.2 million hectares of land, TABLE 7.

Full owners as one tenure form numbering 2.94 million, comprised 98.5% of all holders while the rest are either renting from others (1.2%) and other forms of tenure (0.3%).

Other landholders with more than one form of tenure like part-owners and part-renters, consisted of 397.9 thousand in 2001/02 with a total holding area of 412.9 thousand hectares. Of this area, 204.5 thousand hectares were fully owned while 204.2 thousand hectares were rented from others. Other forms of tenure reported a total area of 4.2 thousand hectares.

Ownership of holdings as one form of tenure had increased by 29.5% between 1991/92 and 2001/02 although it was observed that there was a corresponding decline in the number of holdings that rented land from others. The decrease is almost 25%, from 47 thousand holdings in 1991/92 to 35.5 thousand holdings in 2001/02. Other forms of tenure with one tenure form also decreased from 17.3 thousand to only 7.9 thousand, a decrease of 54.3%.

The number of holdings with more than one form of tenure slightly decreased from 400.6 thousand to 397.9 thousand, a decrease of less than 1%. Furthermore, the area



reported also decreased by 7.15%, from 444.7 thousand in 1991/92 to 412.9 thousand in 2001/02. The biggest decrease in area was noted among holdings with several forms of tenure while those that rented land from others who are part-owners increased in area by 10.3%, see TABLE 7.

Share of produce and fixed quantity of produce were the most popular conditions of rent practiced in renting land with 46.5% and 30.3%, respectively, in 1991/92 while share of produce dominated the condition of rent in 2001/02 with 69% reporting such renting arrangement. The second highest was "fixed quantity of produce" with 15.3% reporting. Mortgage as condition of rent remained at 8.2% in both census years.

The average area involved in the renting of land is quite small. The biggest average area being rented was 0.63 hectare reported by tenants who paid the rent through the share of produce. This average area, however, slightly decreased to

0.62 in 2001/02. Other conditions of rent that decreased in the average area between 1991/92 and 2001/02 are: (1) fixed amount of money from 0.45 hectare to 0.40 hectare; (2) exchange for service from 0.23 to 0.22 hectare; (3) Other, from 0.30 hectare to 0.22 hectare, TABLE 8.

The average area of land rented which increased between 1991/92 and 2001/02 under two conditions of rent are: (1) fixed quantity of produce from 0.44 hectare to 0.54 hectare; and (2) mortgage from 0.23 to 0.27 hectare.

CHART 7
LAND TENURE, 2001/02
AREA OF LAND IN PERCENT

IRRIGATION

A total of 1.998 million holdings out of 3.3374 million holdings reported having access to irrigation facilities. This number represents almost 60% of the total holdings with land and an increase of 45% over the ratio of holdings with irrigation facilities in 1991/92, see TABLE 9.

Among the ecological belts, Tarai holdings registered a phenomenal increase in irrigation facilities by 69.3% between 1991/92 and 2001/02 compared with only 15% in Mountain and 32% in Hill.

The increases in Tarai were due to the increased number of tube wells that more than doubled in number in 2001/02 as well as permanent and seasonal canals as sources of irrigation water. The increase in the number of holdings availing of permanent canal in Hill was not able to increase comparatively the number of holdings with irrigation facilities.

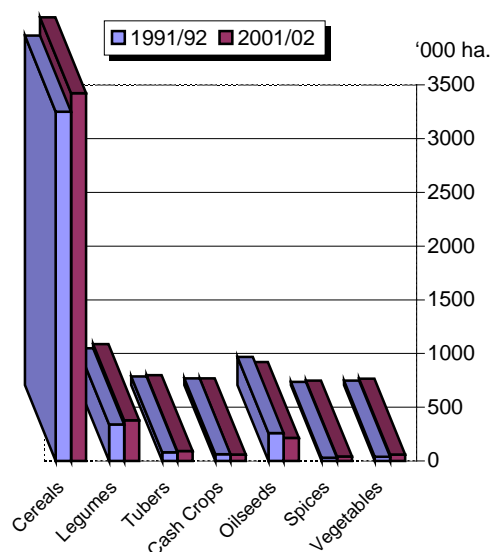
Furthermore, the area irrigated in Tarai was reportedly the highest among the three ecological zones, with 57% of the 11.4 million hectares of land irrigated in 2001/02 compared with 29% only in Hill and 28% in Mountain. Despite the lowest land area under irrigation reported by holdings in the Mountain belt, compared with the two other belts, it reported the biggest increase in irrigated area between the two census years from 41.8 thousand hectares to 62.1 thousand hectares or about 49%. This increase even surpassed that of Tarai with an increase of 34.6% only for the same period.

TEMPORARY CROPS

In general, there has been an increase in the number of holdings growing temporary crops from 2.2 million in 1981/82 to 2.7 million in 1991/92 and 3.3 million in 2001/02. The area sown to temporary crops also increased from 3.315 million hectares in 1981/82 to 4.1 million hectares in 1991/92 to 4.3 million hectares in 2001/02. However, the increase between 1991/92 and 2001/02 was only 4.6% compared with the increase of 22.6% between 1981/82 and 1991/92, see TABLE 10.

Chart 8 below shows the comparative area sown to the different major temporary crops in Nepal for two successive censuses of 1991/92 and 2001/02.

CHART 8
CROP AREAS IN HA. 1991/92-2001/02
MAJOR TEMPORARY CROPS



Of the 4251.7 hectares sown to temporary crops in 2001/02 3,423.0 hectares, representing 80% of the total cropped area, were grown with cereals.

Except for legumes, tubers and vegetables where the increases in 2001/02 were comparatively higher than the past two censuses (1981/82 and 1991/92), the increase in the area for growing other temporary crops had decelerated. In fact, the area devoted to the growing of some oilseeds had decreased by almost 18% between 1991/92 and 2001/02. The cultivation of cash crops had also been decreasing in area from 86 thousand hectares in 1981/82, to 62.9 thousand hectares in 1991/92 and slightly went down to 60.6 thousand hectares in 2001/02. But what was remarkable is the increasing area sown to spices by about 39% between 1991/92 and 2001/02, from 29.3 thousand hectares to 40.7 thousand hectares. There was also a big increase in the area planted to vegetables by 52%, from 39.5 thousand hectares in 1991/92 to 60.0 thousand hectares in 2001/02.

In Nepal, the cropping intensity of land sown to temporary crops had been increasing from 1.47 in 1981/82 to 1.78 in 1991/92 to 1.83 in 2001/02, see TABLE 11.

The increasing intensity of land use may be indicative of shortage of land to plant temporary crops.

CHART 9
INTENSITY OF LAND USE OF AREA UNDER TEMPORARY CROPS, 1981/82 – 2001/02
ECOLOGICAL BELTS

On the other hand, it can also mean that the farmer had utilized the use of his land more productively to increase his income especially when there were accessible irrigation facilities.

By ecological belt, the highest intensity of land use if we based on the physical area of land under temporary crops, is in the Hill area with 1.86 in 2001/02. This was true also in 1991/92 with 1.8 compared with 1.77 in Tarai and 1.65 in Mountain belt regions.

However, if we consider arable land as the basis for measuring cropping intensity, Hill and Tarai have the same level at 1.82 in 2001/02. In short, the landholders in Hill and Tarai used their land 82% more than the physical area of their arable land. in 2001/02.

Cropping intensity in the Mountain belt did not increase as much between 1991/92 and 2001/02. This may be due to the weather conditions obtaining in the mountainous areas where temporary crops cannot be raised all-year round, especially during winter. Unlike in Hill and Tarai ecological zones, cereals, vegetables, legumes and other temporary crops can be grown in any season especially in areas where there are irrigation facilities.

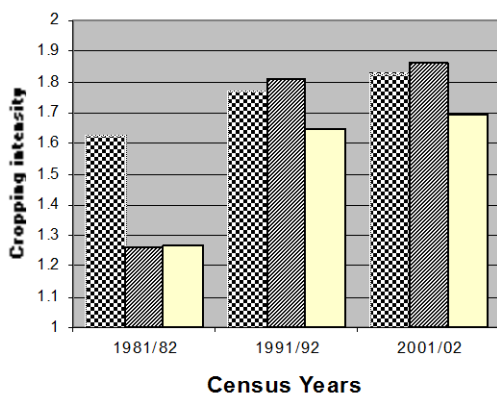
GROWING OF CEREALS

Paddy is still the most popular temporary crop being grown by farmers where 2.466 million holdings reported of having grown this cereal crop. This number represented 92.9% of the total holdings engaged in agriculture in Nepal in 2001/02. In 1991/92, paddy growers numbered 2,037.5 thousand out of a total holdings of 2,703.9 thousand, or 75.4% of the total. There was, therefore, an increase in the number of holdings growing paddy. This is understandable since rice is a major staple food in this country.

While there was an increase in the number of holdings raising paddy the increase in the area sown was minimal at 4.28% only over the last census. This increase in area has slowed down when compared with the increase between 1981/82 and 1991/92, which was 6.25%.

On the other hand, the increase in the area planted to wheat and buckwheat is an indication that these two cereal crops are becoming important to Nepal's agriculture. The area of wheat has increased from 633 thousand hectares to 794 thousand hectares

■ Tarai ■ Hill ■ Mountain



between 1991/92 and 2001/02, an increase of 25.3% while buckwheat increased from 16 thousand hectares to 21 thousand hectares equivalent to about 28% increase for the same period.

CHART 10
AREA SOWN TO CEREAL CROPS
IN HECTARES

For other cereals, however, it was observed that the area planted to millet and barley had decreased. For millet, the decrease in area was sizeable from 302 thousand hectares to 250 thousand hectares, a decrease of about 17%. For Barley, the decrease in area sown between the two censuses was about 15%, from 46 thousand hectares in 1991/92 to 39 thousand hectares in 2001/02.

Because of the importance of paddy growing in Nepalese agriculture, the number and area of holdings growing paddy by region and by district are shown in TABLE 11.1.

Of the 1.544 million hectares planted to paddy, 1.117 million hectares or 72% were reported in Tarai, 353 thousand hectares in Hill and only 74 thousand hectares or 4.8% of the total, in the Mountain.

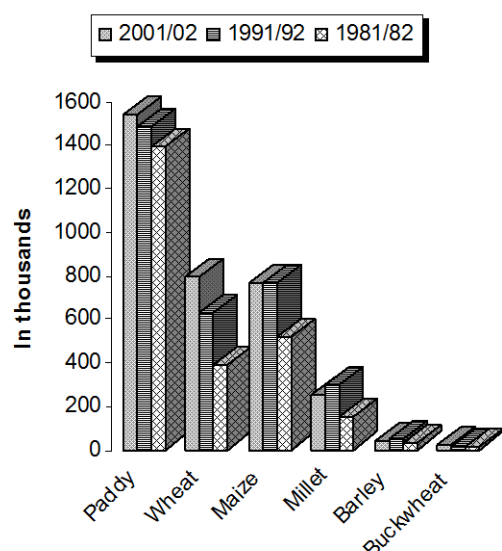
In fact, 80% of the total area of the holding in Tarai was devoted to the growing of paddy. Only a very small area is left in the growing of other crops considering that 86% of all arable land in Tarai had been devoted to paddy.

While more than 1 million holdings reported as having grown paddy in Hill the average paddy area per holding is only about one third of a hectare (0.348). The same pattern was observed in Mountain where the average area sown to paddy was a little higher than in Hill (0.36 ha.).

At the regional level, Central Tarai and Eastern Tarai regions cornered almost one-half of the total area sown to paddy (49%), which is even more than the total area planted to paddy in Hill and Mountain districts put altogether. This is how important these two regions are in attaining self-sufficiency in rice in Nepal.

Permanent crops

In the land use category, the area of land under permanent crops had increased from 29



thousand hectares in 1991/92 to 118 thousand hectares in 2001/02 (TABLE 6), an increase of 307% in a span of 10 years, or a yearly increase of almost 31%.

Of the total land area classified as land under permanent crops, only about 33 thousand hectares were reported to be in compact plantation of fruit trees while the rest were planted with tea (6.1 thousand hectares), thatch (68 thousand hectares, fodder trees (7.3 thousand hectares), and bamboo trees (6.3 thousand hectares). Some of these are forest products but apparently they are taken care of by the farmers as part of the holding.

Among the fruit trees in compact plantation, mango numbered more than 2 million trees that are productive and more than 400 thousand that are not yet of bearing age. These were planted in about 18 thousand hectares of land, an increase of more than 3 thousand hectares between 1991/92 and 2001/02.

The second important fruit trees in number are the banana plantations consisting of almost 2 million bearing, and another million non-bearing trees. Banana plantation increased in area between the two censuses by more than 1000 hectares. Both mango and banana trees also abound in backyards as indicated by the number of scattered trees which runs into millions, i.e. 1.6 million scattered mango trees and 3.3 million scattered banana trees.

Other permanent trees which are becoming popular as a plantation are: oranges, sweet orange and Junar as a group. There has been a big increase in the number of bearing trees for these fruit trees, from 375 thousand only in 1991/92 to 1.665 million in 2001/02, an increase of more than 340%. The area planted to these 3 citrus varieties also increased from 2.44 thousand hectares to 3.94 thousand hectares for the same period. Scattered citrus trees also abound, from 850 thousand in 1991/92 to 1.3 million in 2001/02. Other fruit trees that are part of the daily diet of the Nepali and observed to have increased in number significantly are: apple, pineapple, plum, pear, guava, jackfruit, and papaya. (TABLE 15).

CROPPING PRACTICES

Pure stand cropping both for temporary and permanent crops is commonly practiced in Nepal agriculture. In 1991/92 a total of 2.67 million holdings out of 2.704 million holdings reported a single crop being planted in each parcel per cropping season. This represented almost 99% of the holdings practicing pure stand cropping. Mixed cropping was practiced by 640 thousand holdings, representing 23.7%. In other words, not all the parcels of the holding are planted on a pure stand but usually mixed with other temporary crops especially vegetable gardening where several crops may be inter-planted or mixed in one planting season. Associated cropping was reported by only 2.6 thousand holdings in 1991/92. This is a mode of planting where a temporary crop is planted in-between permanent crops. When two temporary crops are planted in one parcel, this is usually called mixed cropping.

In 2001/02, the cropping practices were the same as in 1991/92. Holdings practicing pure stand cropping numbered 3.25 million out of 3.306 million holdings, which were

about 98.4%, a little lower than in 1991/92. On the other hand, those practicing mixed cropping proportionally decreased over 1991/92 from 23.7% to 20.2% in 2001/02. Holdings that planted associated crops also declined both in number and percentage-wise, from 2.6 thousand holdings in 1991/92 to only 2.1 thousand holdings in 2001/02. (TABLE 12)

It may be mentioned that while pure cropping stand is the normal practice, the farmers in Nepal practice double or triple cropping. This is evidenced by the increasing cropping intensity where a parcel is used as many times for planting crops as the growing cycle of the plant and the cropping season allow.

IMPROVED FARM PRACTICES AND FACILITIES

In general, Nepal agriculture is still far from being mechanized. The proportion of holdings using tractors and threshers was less than 10% of the total holdings in the country, and most of these are in Tarai where 18% of the holdings reported as having availed of tractors in their farming operations while about 15% holdings used threshers. The use of iron plough was not even very popular in Mountain and Hill but about 55% of the holdings in Tarai reported as having used it. This is understandable considering that in Mountain and Hill, most of the parcels of land are terraced and may not have a need for such equipment.

Power tillers are not also popular since only less than 1 per cent of the holdings in the three ecological belts reported of having used in their farming operations.

With respect to inputs utilized in the growing of selected crops, the use of improved seeds have not improved much between 1991/902 and 2001/02 for paddy, wheat and sugarcane. It is in the growing of potato where an improvement in the proportion of holdings using improved seeds was noted, from 18% of the total holdings in 1991/92 to 27% in 2001/02. This improvement was observed in all the three ecological zones. For maize, there is a little increase in the use of improved seeds from 11.9% of the total holdings reporting in 1991/92 to 15.4% in 2001/02.

The use of pesticides was widely practiced by almost one-fourth of the holdings growing paddy at the national level but the proportion is much higher in Tarai where 34% used pesticides on paddy compared with 16.7% in Mountain and Hill.

Of the selected crops, three-fourths of the sugarcane growers applied chemical fertilizers at the national level but in Tarai where most of the sugarcane growers are found, about 88% reported of using chemical fertilizers.

What stood out in the farming practices of the holdings was the popular use of chemical or inorganic fertilizer in the growing of wheat compared with the growing of paddy. At the national level, more than half of the holdings used chemical fertilizers in growing wheat in 1991/92 compared with 49% of the holdings in 2001/02. In 2001/02, the number of holdings that used inorganic fertilizer in growing wheat had increased to 64% of the total holdings while only 20.5% used it on paddy. This pattern had been practiced in Tarai where there was a reduction in the proportion of holdings using inorganic

fertilizer on paddy from 66% in 1991/92 to only 29% in 2001/02. But there was a big increase in the proportion of holding using inorganic fertilizer in growing wheat in Tarai, from 79% in 1991/02 to 93% in 2001/02.

There had been increasing proportion also in the use of inorganic fertilizers in the growing of maize and potato between the two censuses, see TABLE 14.

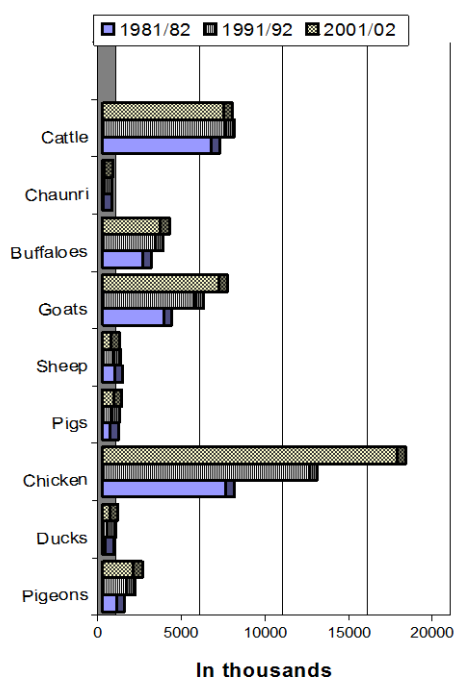
LIVESTOCK

There were 3.02 million holdings or 89.7% of the total holdings in Nepal that raised livestock in 2001/02. The proportion of holdings raising livestock had decreased when compared with 91.3% of the total holdings that raised livestock in 1991/92.

Livestock in its generic sense, includes all farm animals and poultry.

CHART 11 LIVESTOCK POPULATION 1981/82-2001/02

Despite the decreasing proportions of holdings raising livestock, there was an overall increase in the livestock population by 24.3% between 1991/92 and 2001/02, from 31.3 million to 38.8 million. The biggest increase was noted in the poultry population with a 41.6% increase, from 14 million to 19.9 million. However, these increases observed between 1981/82 and 1991/92, see TABLE 16.



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Among the farm animals, Chaunri population registered the biggest increment of 62.8% between the two censuses, followed by pigs with 27.6% and goats, 25.7%. Except for Chaunri, the increases in the population of pigs and goats are much lower than the increases observed between 1981/82 and 1991/92. In other words, the increases in most of the farm animals and fowls were decelerating.

The sheep population has been decreasing during the past 20 years, from 677 thousand in 1981/82 to 602.8 thousand in 1991/92 and further down to 471.2 thousand in 2001/02. Despite the decreasing proportions of holdings raising livestock, there was an overall increase in the livestock population by 24.3% between 1991/92 and 2001/02, from 31.3 million to 38.8 million. The biggest increase was noted in the poultry population with a 41.6% increase, from 14 million to 19.9 million. However, these increases are very much below the increases observed between 1981/82 and 1991/92, see TABLE 16.

TABLE 17 shows the age-sex distribution of the three large livestock: cattle, chaunri and buffaloes. It also showed the milking animals belonging to these three livestock.

Dairy farming in Nepal is on a small scale involving only 631.3 thousand holdings raising milking cattle, 5,400 holdings raising milking chaunri and 680.4 thousand holdings with milking buffaloes in 1991/92. The number of holdings with milking cows increased to 759.7 thousand in 2001/02, an increase of 20%, with a total population of 918.8 thousand milking cows. The average per reporting holding was 1.2 cows. The average in 1991/92 was 1.3 cows per holding.

There was a big increase in the number of holdings that reported having milking buffaloes between 1991/92 and 2001/02 from 680 thousand to 923 thousand, an increase of about 36% but the increase in the number of milking buffaloes was lower (32%). The number of milking buffaloes per reporting holding was 1.2 in 1991/92 but decreased to 1.1 milking buffaloes per reporting holding in 2001/02.

TABLES 17a, 17b and 17c show the breed by age and sex of selected livestock and poultry. For cattle, only 1% of the population are of improved breed while buffalo population registered a higher proportion of 1.8% improved breed. It may be significant to observe that proportionally, female cattle (1.8%) registered a higher proportion of improved breed compared with the male cattle with only 0.5%. It is also noted that the younger cattle have higher proportion of improved breed than the older ones. This trend holds true also for the buffalo population although the proportion is much higher at 1.8% of the total as improved breed.

Furthermore, the proportion of improved breed among milking animals for both cattle and buffaloes is much higher at 2.8% for milking cows and 2.4% for milking buffaloes.

In general, the proportion of improved breeds among the cattle and buffalo populations is considered very low by international standards.

For the pig population, the proportion is a little bit higher at 3.49% of the total belong to improved breed. There is not much difference in the proportion of improved breeds according to age, see TABLE 17b.

For chicken, the proportion of improved breed among the chicken population is very much higher. On the average, 1 out of 5 of the chicken population is an improved breed. By type of chicken, hens registered the highest proportion with improved breed at 29% followed by cocks, with about 25%. Chicks have the lowest proportion of improved breed at 12% only, see TABLE 17c.

AGRICULTURAL BUILDINGS

There were three types of non-residential buildings mostly found on the holding both in 1991/92 and 2001/02. These are buildings used for keeping livestock (farm animals), poultry house and buildings for storing agricultural produce, TABLE 19.

In 2001/02, about 61% of the large holdings (2 hectares and over) reported having non-residential building used in keeping livestock while only 33.8% among the small holdings (less than 0.5 hectare) have non-residential building for keeping livestock. For keeping poultry and for storing agricultural produce, only about 10% was reported by large holdings while only 3% among small holdings, TABLE 19.

FORESTRY AND FISHERIES

Forestry and fisheries activities are carried out on the holding together with agricultural activities. In 2001/02, a total of 988.7 thousand holdings out of 2.65 million holdings reported as having forest trees on their holding. This number is about 37% of the total, which is slightly lower than the proportion of holdings that had forest trees in 1991/92, which were about 40%. Forest trees for the purpose of the census include bamboo trees and other woody vegetation used for fuel, forage, protection and other purposes.

For the first time in the census of agriculture in Nepal, the area of compact plantation on forest trees as part of the holding was included. In 2001/02, there were 165.9 thousand

holdings that reported with compact plantation on forest trees involving 27 thousand hectares. Most of these holdings belong to those with at least 0.5 hectare but less than 2 hectares in size but 41% of the area were found among the larger holdings of 2 hectares and above, see TABLE 18.

A total of 38.7 million forest trees were grown on the holding of which 20.5 million or 53% were in compact plantation. Among the size of holdings, 22.9 million forest trees were found in the medium-sized holdings (0.5 to < 2 hectares) which comprised 59.1% of the total forest trees.

It is interesting to note, however, that proportionally, there were more holdings with forest trees among the small holdings than the large holdings in 2001/02, which was not the case in 1991/92. In 1991/92 the proportion of holdings with forest trees increased as the area increased, i.e. the small holdings reported only a proportion of 28% and the medium size holdings reported a proportion with forest trees of 46.5% while the large holdings reported 58% of the holdings growing forest trees. In 2001/02, the opposite was observed. The small holdings had reported a proportion of 87% with forest trees, the medium size holding, 57% and the large holdings, 14%.

For fisheries, there were only 22.2 thousand holdings with fishing activities on their holding involving an area of 5.7 thousand hectares. This area is more than doubled when compared with that of 1991/92, which was only 2.38 thousand hectares.

AGRICULTURAL CREDIT

The proportion of holdings availing of agricultural credit to finance their farming operation has not increased much during the last ten years. In 1991/92, about 23% of the holdings availed of agricultural loans. In 2001/02, about 24% availed of agricultural loans, an increase of one percentage point in a span of 10 years.

Proportionally, more of the large holdings borrowed than the smaller holdings. This observation was true to the two censuses. Most of the sources of credit came from non-institutional or informal type of source like private lenders, relatives, and so on. However, if we examine the sources of credit by size of holding, the bulk of the small holdings borrowed from informal sources (71.6%) while only 32.4% of the larger holdings obtained loan from the informal source. More than two-thirds of the large holdings obtained their credit from institutional sources, TABLE 20.

CHARACTERISTICS OF HOLDERS

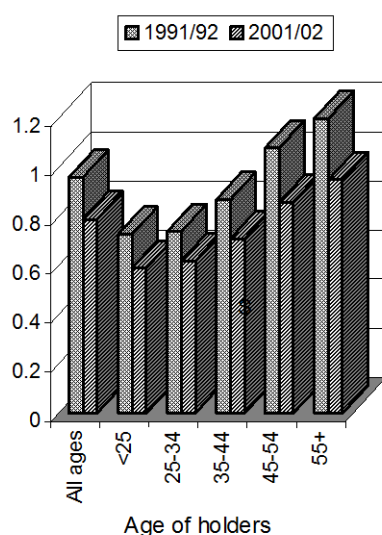
The holder is the person in the holding who exercises management control over the operations of the holding. Of the 3.4 million holdings in Nepal in 2001/02, 91.9% or 3,093 thousand holdings were operated by males and 8.1% or 271.5 thousand are females. The participation of the female as a holder in 2001/02 has improved percentage-wise (17.4%) when compared with previous census years. In 1981/82 the proportion of female holders was 6.8% and in 1991/92^{Ha.} proportion increased slightly to 6.9%.

Average size of holder's holding

The average size of the holding managed by the females, however, seemed to have decreased comparatively with the previous census. In 1991/92, the female's average size of the holding was 67.3% of that of the male's average holding size. In 2001/02, the percentage decreased to 65.4%. In other words, the overall decrease in the average size of the holding nationwide was not proportional to the decrease in the size of the holding managed by females.

Age of holder

CHART 12
AGE OF HOLDER BY SIZE OF HOLDING



There seems to be a positive correlation between the age of the holder and the average size of the holding he/she manages. TABLE 21 shows that: as the age group of the holders becomes older, the average size of the holding correspondingly increases. For instance, holders below 25 years old reported an average holding size of 0.59 hectare. For those who are 25-34 years old, the average size was 0.62 hectare; 35-44 years old, 0.71 hectares and so on.

The modal age group among holders was 35-44 years old in 2001/02. This was also the modal age group in 1991/92. However, in 1981/82, the modal age group was 25-34. It is observed that the ages of the holders were getting older in the most recent census conducted where 78.1% were aged at least 35 years old compared with 74.6% ten years ago.

Holders as head of household

About 97.5% of the holders were head of the households, 0.23% were hired managers and the rest, members of the household.

Characteristics of the Holdings

Legal status

The census of 2001/02 showed that the holdings operated by a single family consisted of 97.2% of the total; about 2.8% jointly operated with other families and the rest, were managed with other kind of arrangements.

As the size of the holding increased, the proportion of single family operating the holding decreased and the joint family status correspondingly increased although the highest proportion reached only up to 7.7% of the total holdings, see TABLE 22.

The legal status of the holding with land and with no land did not seem to be different from each other where the single family status prevailed at 97.2% for holdings with land and 96.4% for holdings without land. Correspondingly the joint family status was 2.8% for holdings with land and 3.3% for holdings without land.

Use of produce

More than three-fourths of the holdings used their produce for their own consumption in 2001/02 while a little more than one-fifth both sold and used their produce. Only 0.2% of the holdings sold all their produce. These holdings that sold all their produce were mostly holdings without land, TABLE 22.

Food sufficiency/insufficiency

In terms of sufficiency of agricultural and/or livestock produce to feed the household, TABLE 23 showed that almost 40% of the holdings reported that they are self-sufficient in food from their produce. However, for holding without land, only 6.5% of the total holding without land reported self-sufficiency in food.

Self-sufficiency in food is directly related to the size of the holding. As the size of the holding increases, self-sufficiency in food for the household correspondingly increases. For instance, holding with 5 hectares and over reported the highest proportion of households with sufficient produce to feed the household which registered at 89.3% of the total households under this group./ Holdings with less than .1 hectare reported the lowest proportion of self-sufficiency of only 4.6% of the total holdings with this size.

Among households with insufficient food supply, most of them reported 4 to 6 months as the duration of insufficiency but what is bothersome is the fact that more than one-third (34.5%) had insufficiency of food from their produce for at least 7 months to one year. In fact, for those without land, almost four-fifths ((79%) had insufficiency for 10 to 12 months.

The manner of coping insufficiency of food among households had been augmented with income earned within the district (69%) and income coming from outside Nepal (13%). About 12% resorted to borrowing while 8.6% earned their income within Nepal outside of the district of their residence.

Soil type

The soil type is dominated by loam where more than 2 million holdings or 60% of the total holdings reported as having this type of soil, followed by sand with 1.5 million holdings or 44% of the total holdings reporting. The third ranking soil type reported by 1.3 million holdings or 39.4% is clay soil. Silt soil was reported by only 16% of the total holdings and clay loam, only 13%. It may be mentioned that a holding may report as many types of soil as there are in the holding, thus the total percentage of holdings exceeded more than 100%, if all types of soil were added. In terms of size of holding, there is no difference in the ranking of the soil types found, i.e. rank 1 is loam, rank 2 is sand and rank 3 is clay soil.

The area devoted to the different soil types followed also the same ranking as reported by the holdings but the percentage of importance is different, e.g. for loam 33.3% or 885 thousand hectares of the total area of holdings comprised it while 22.2% or 589 thousand hectares was reported for sandy soil and 20% or 532 thousand hectares, for clay soil, see TABLE 24.

Soil Color

Brown soil was the most common color reported by the holdings with about 63% of the holdings reporting, followed by black soil with 56% reporting. Red soil was reported by about one-fourth of the total holdings. Percentage-wise of the area involved, brown color occupied about 35% of the total area of the holdings followed closely by black soil with 31% while red soil comprised only 11% of the total area of holdings. By size of holdings, there was not much difference in the color of the soil.

Occurrence of natural calamities

An important information gathered during the 2001/02 census of agriculture is the number of holdings affected by natural calamities resulting in the non-cultivation of certain part of their holding.

During agricultural year 2001/02, a total of 156,883 land holdings suffered losses due to the occurrence of calamities that led to the non-cultivation of some 30,845.2 hectares of agricultural land. The number of holdings affected by either flooding or soil erosion was about 4.7% of the total holdings in the country and about 1.16% of the total area of holdings in Nepal, see TABLE 25.

More than 10 per cent of the holdings with at least 2 hectares were victims of these disasters although the area affected was proportionally lower (a little more than 1%) than the holdings under 0.1 hectare (3.01%). As the size of the holding becomes bigger, the area made uncultivable due to flood or erosion becomes also bigger such that holdings with at least 10 hectares reported an average affected area of about 1.7

hectares and holdings with 5 hectares to less than 10 hectares reported an average of half a hectare (0.534) as the affected area but 15.4% of the total holdings under this holding size group suffered.

Farm population

The farm population is composed of all household members listed during the Population Census as having agriculture land holding and/or raised livestock or poultry. In 2001, the total farm population was 19,032,499 of whom 9,385,811 were males comprising about 49.3%. The sex ratio was 97 males per 100 females. There were more males in the ages 0 to 14 and 45 and above with the sex ratio of more than 100.

On the other hand, females dominated the ages 15 to 44 years old with a very low sex ratio (86.5) in the age group 25-34. This is the prime age group and the males in this age group may have left the farm thus the dominance of the female population, see TABLE 26.

The average size of the farm households in 2001 was 5.7 persons. Tarai exhibited the highest average size of 6 compared with only 5.3 and 5.4 for the Mountain and Hill, respectively.

About 46.6% of the total population were found in Tarai, 45.2% in Hill and only 8.25% in Mountain, see TABLE 27.

The most populated development region is Central region with 31.4% of the total farm population followed by Eastern region with 22.5%.

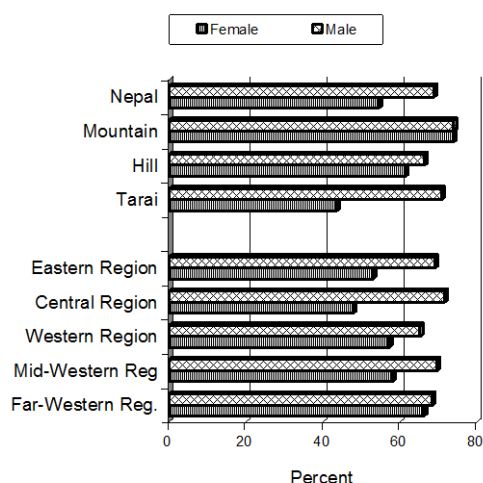
Among the eco-development regions, Central Tarai was the most populated consisting of 16.1% of the total farm population. This is approximately 3.1 million people, which is more in number than the entire farm population of Mid-Western region or Far-Western region. In fact, the population of Eastern Tarai of 2.34 million was even higher than the population of Far-Western region of 2.06 million people.

Tarai belt reported the highest average household size of 6 ranging from 5.1 in Eastern Tarai to 6.9 in Far-Western Tarai. On the other hand, Mountain belt registered the lowest average household size of 5.3, ranging from 4.8 in Western Mountain to 5.7 in Far-Western Mountain.

Among the development regions, Far-Western region reported the highest average household size of 6.2. Eastern region reported the lowest with 5.3 persons per household, see TABLE 27.

The labour force participation rate of the farm population registered at 61.5% for both males and females in 2001. Labour force participation rate is the proportion of economically active farm population 10 years old and over to the total farm population, 10 years old and over. The participation rate of the males was 68.9%, which was much higher than the participation rate of the females.

LABOUR FORCE PARTICIPATION RATE FARM POPULATION, 2001



Mountain farm population registered the highest participation rate of 74% where the male and the female participation rates were almost the same. In Tarai, the female participation rate was comparatively low at 43.6% compared with the 70.8% participation rate of the males.

Among the development regions, Central region reported the highest participation rate for males at 71.6% but it also reported the lowest participation rate of females at 47.9%, see TABLE 28.

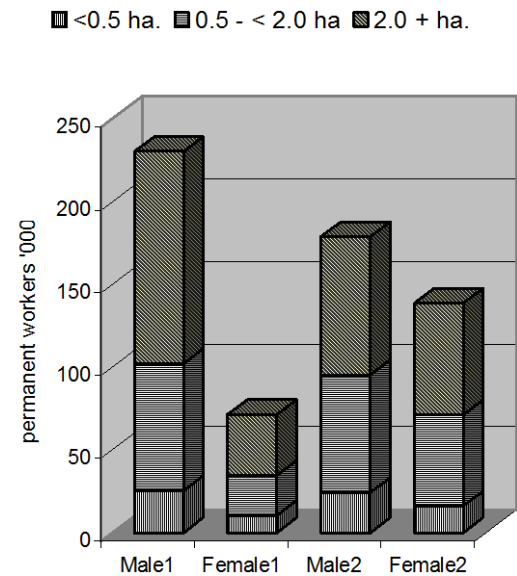
FARM LABOUR

Of the 3.364 million holdings, 66.2% did not hire any agricultural worker on their holding in 2001/02. In 1991/92, the percentage was less, which was 64.4%.

In 1991/92, 145 thousand holdings or approximately 5.3% of the total holdings had employed permanent workers of which 3.9 percentage points augmented their permanent employees by hiring occasional workers while 30.3% of the holdings or 830.2 thousand employed occasional workers only. In 2001/02 only 2.7% of the total, or about 92 thousand holdings employed permanent employees with 2 percentage points of this hired occasional workers. However, the proportion of holdings that had employed occasional workers increased to 31.1% or 1.046 million holdings in 2001/02.

The number of permanent workers hired in 1991/92 was 301.7 thousand and the number had increased to 317.8 thousand in 2001/02, an increase of 5.3%. Most of the increases in the number of permanent employees were reported in the small and medium size holdings. However, in the large holdings, a reduction of permanent employees was observed from 164.7 thousand in 1991/92 to 151.1 thousand in 2001/02.

It is remarkable to observe that there was a big increase in the number of females who



were hired as permanent workers in the holdings. The biggest increase was noted in the large holdings from a proportion of only 22.2% in 1991/92 to 44.7% in 2001/02, see TABLE 29.

CHART 14
PERMANENT WORKERS BY SEX
1991/92-2001/02

TABLES

TABLE 1. AREA AND FRAGMENTATION OF HOLDINGS, NEPAL, 1961/62-2001/02

Category	Census year				
	1961/62	1971/72	1981/82	1991/92	2001/2002
Total holdings (000)	1540.0	1721.2	2194	2736.1	3,364.1
% Increase		11.77	27.47	24.71	22.95
Holdings with land	1518.0	1707.3	2185.7	2703.9	3337.4
% Increase/decrease		12.5	28.0	23.7	23.4
Holdings with no land	22.0	13.9	8.2	32.1	26.7
% Increase/decrease		-36.8	-41.0	291.5	-16.8
Holdings with land:					
Area of holdings (000)	1685.4	1654.0	2463.7	2597.4	2654.0
% Increase/decrease		-1.86	48.95	5.43	2.18
Average holding size	1.11	0.97	1.13	0.96	0.80
% Increase/decrease		-12.61	16.49	-15.04	-17.16
Number of Parcels (000)	10318.2	12282.5	9516.4	10806.2	10,987.4
% Increase/decrease		19.04	-22.52	13.55	1.68
Ave. parcel/holding	6.8	7.2	4.4	4.0	3.3
% Increase/decrease		5.88	-38.89	-9.09	-17.50
Average parcel size (ha)	0.16	0.13	0.26	0.24	0.24
% Increase/decrease		-18.75	100.00	-7.69	0.00

TABLE 2. NUMBER AND AREA OF HOLDINGS BY SIZE OF HOLDING, NEPAL, 2001/02

Size of holding (In hectares)	Holdings			Area in Ha.		
	Number (000)	Percent	Cumulative Percent	Area (000 ha.)	Percent	Cumulative Percent
Total	3364.1	100.00		2654.0	100.00	
Holdings with no land	26.7	0.79	0.79	0.1	0.00	0.00
Holdings with land	3337.4	99.21	100.00	2653.9	100.00	100.00
Under 0.1	260.5	7.74	7.74	13.2	0.50	0.50
0.1 - <0.2	346.1	10.29	18.03	49.9	1.88	2.38
0.2 - <0.5	972.3	28.90	46.93	327.1	12.32	14.70
0.5 - <1.0	915.7	27.22	74.15	641.7	24.18	38.88
1.0 - <2.0	588.6	17.50	91.65	792.0	29.84	68.72
2.0 - <3.0	157	4.67	96.32	371.2	13.99	82.71
3.0 - <4.0	51.6	1.53	97.85	175.7	6.62	89.33
4.0 - <5.0	20.2	0.60	98.45	89.3	3.36	92.69
5.0 - <10.0	21.6	0.64	99.09	139.8	5.27	97.96
10.0 and over	3.8	0.11	99.21	54.2	2.04	100.00

TABLE 3. SELECTED CHARACTERISTICS OF HOLDINGS, NEPAL, 2001/02

Selected Characteristics	SIZE OF HOLDINGS IN HECTARES			
	Total	Less than 0.5 ha	0.5 - 2.0 ha	2 and over ha
All holdings (000)	3364.1	1605.6	1504.30	254.2
Average size of holdings (ha)	0.79	0.24	0.95	3.27
Average household size	5.9	5.2	6.2	7.8
Percent with agricultural credit	23.8	21.7	24.9	31.0
Holdings with land (000)	3337.4	1578.9	1504.30	254.2
Average size of holdings (ha)	0.80	0.25	0.95	3.27
Cropping intensity	1.83	1.94	1.85	1.73
Percent holding renting land	12.25	8.52	15.18	19.30
Percent of land rented	8.68	5.90	9.00	9.44
Percent irrigating	59.39	49.92	68.18	72.26
Percent using:				
Iron plough	26.08	17.5	29.88	56.89
Tractor	8.18	5.98	8.54	19.65
Pump set	6.30	3.11	6.83	23.04

TABLE 4. SELECTED HOLDING CHARACTERISTICS OF ECOLOGICAL BELTS AND DEVELOPMENT REGIONS, NEPAL, 2001/02

Geographic Area	Number of holdings (^{'000})	Area of holdings (^{'000} ha)	Average holding size (ha)	Paddy growers (^{'000})	Area of paddy (^{'000} ha)	Average paddy area (ha)
NEPAL	3,364.1	2,654.0	0.79	2,466.1	1,544.6	0.63
ECOLOGICAL BELTS						
MOUNTAIN	298.2	218.7	0.73	203.7	74.2	0.36
HILL	1,586.4	1,038.6	0.66	1,014.4	353.0	0.35
TARAI	1,479.5	1,396.7	0.94	1,248.0	1,117.4	0.90
DEVELOPMENT REGIONS						
EASTERN	810.0	795.5	0.98	558.5	500.5	0.90
CENTRAL	1,036.8	750.2	0.72	780.0	471.0	0.60
WESTERN	715.8	512.2	0.72	507.7	270.6	0.53
MID-WESTERN	469.5	370.7	0.79	324.1	164.1	0.51
FAR-WESTERN	333.0	225.4	0.68	295.8	138.4	0.47

TABLE 5. NUMBER, AREA AND AVERAGE SIZE OF HOLDINGS BY ECO-DEVELOPMENT REGION, NEPAL, 1991/92 - 2001/02

Ecological belt/ region	2001/02			1991/92			1991-2001 % Increase/(Decrease)		
	Number of Holdings (000)	Area of holdings (000) ha.	Ave holding size (ha).	Number of Holding (000)	Area of holdings (000) ha.	Ave holding size (ha).	No. of holdings	Ave. area of holding	Ave. size of holding
NEPAL	3,364.1	2,654.0	0.789	2736.1	2598.971	0.950	22.95	2.12	-16.94
MOUNTAIN	298.2	218.7	0.733	260.7	176.9	0.678	14.38	23.65	8.05
EASTERN	71.3	69.4	0.972	63.7	61.2	0.961	12.06	13.36	1.16
CENTRAL	105.5	67.8	0.640	89.9	58.4	0.650	17.32	16.00	-1.50
WESTERN	4.2	2.4	0.532	3.4	2.0	0.586	23.93	20.78	-9.18
MID WESTERN	50.2	38.8	0.546	46.0	24.5	0.531	9.05	58.69	2.86
FAR WESTERN	67.0	40.3	0.593	57.7	30.8	0.533	16.11	30.92	11.11
HILL	1,586.4	1,038.6	0.655	1357.7	1047.3	0.771	16.84	-0.83	-15.00
EASTERN	282.8	256.6	0.891	245.8	282.4	1.149	15.03	-9.12	-22.42
CENTRAL	429.2	237.0	0.550	360.8	236.0	0.654	18.95	0.43	-15.97
WESTERN	485.2	302.8	0.625	422.0	329.3	0.780	14.98	-8.06	-19.98
MID WESTERN	253.9	171.7	0.648	209.8	144.1	0.687	20.99	19.17	-5.69
FAR WESTERN	135.3	70.6	0.521	119.2	55.6	0.466	13.49	27.08	11.85
TARAI	1,479.5	1,396.7	0.944	1117.6	1374.8 0.0	1.230	32.38	1.59	-23.25
EASTERN	455.9	469.5	0.915	326.9	440.4	1.347	39.48	6.61	-32.10
CENTRAL	501.1	445.4	0.855	404.6	425.9	1.053	23.85	4.57	-18.74
WESTERN	226.5	207.0	0.884	183.4	235.2	1.282	23.48	-11.98	-31.03
MID WESTERN	165.4	160.2	0.953	115.6	156.3	1.352	43.11	2.52	-29.53
FAR WESTERN	130.6	114.6	0.877	87.2	117.0	1.343	49.83	-2.10	-34.68

TABLE 5.1. NUMBER AND AREA OF HOLDINGS WITH LAND/NO LAND BY ECOLOGICAL BELT AND

DEVELOPMENT REGION, NEPAL, 2001/02

Ecological Belt / Development Region	All Holdings			No Land		With Land		
	Number of Holdings	Total Area (ha)	Ave. Area (ha)	Number of Holdings	Total Area (ha)	Number of Holdings	Total Area (ha)	Ave. Area (ha)
NEPAL	3,364,139	2,654,037.2	0.789	26,700	118.2	3,337,439	2,653,918.9	0.795
MOUNTAIN	298,223	218,706.6	0.733	989	2.3	297,234	218,704.3	0.736
HILL	1,586,406	1,038,614.6	0.655	4,985	7.3	1,581,421	1,038,607.3	0.657
TARAI	1,479,510	1,396,716.0	0.944	20,726	108.6	1,458,784	1,396,607.4	0.957
DEVELOPMENT REGION								
EASTERN	810,017	795,521.4	0.982	10,339	50.8	799,678	795,470.6	0.995
CENTRAL	1,035,827	750,212.9	0.724	8,888	50.2	1,026,939	750,162.6	0.730
WESTERN	715,808	512,152.1	0.715	4,079	7.7	711,729	512,144.4	0.720
MID-WESTERN	469,527	370,702.1	0.790	2,108	5.8	467,419	370,696.3	0.793
FAR- WESTERN	332,960	225,448.8	0.677	1,285	3.7	331,675	225,445.0	0.680

TABLE 5.2 NUMBER AND AREA OF HOLDINGS WITH LAND OR NO LAND BY DISTRICT, NEPAL, 2001/02

Region/Districts	All Holdings			No Land		With Land		
	Number of Holdings (⁰⁰⁰)	Total Area (ha ⁰⁰⁰)	Ave. Area (ha)	Number of Holdings (⁰⁰⁰)	Total Area (ha ⁰⁰⁰)	Number of Holdings (⁰⁰⁰)	Total Area (ha)	Ave. Area (ha)
NEPAL	3364.1	2654.04	0.789	26.700	0.118	3337.4	2653.92	0.795
EASTERN MOUNTAIN	71.3	69.41	0.973	0.192	0.001	71.2	69.40	0.975
TAPLEJUNG	22.9	23.54	1.029	0.126	0.001	22.7	23.54	1.035
SANKHUWASABHA	28.2	25.20	0.893	0.066	0.000	28.2	25.20	0.895
SOLUKHUMBU	20.2	20.66	1.021			20.2	20.66	1.021
EASTERN HILL	282.8	256.62	0.908	0.704	0.000	282.1	256.62	0.910
PANCHTHAR	34.1	28.19	0.827	0.020	0.000	34.1	28.19	0.827
ILAM	48.5	52.89	1.091	0.337	0.000	48.2	52.89	1.098
DHANKUTA	28.4	24.80	0.874	0.068	0.000	28.3	24.80	0.876
TERHATHUM	19.3	19.41	1.006	0.011	0.000	19.3	19.41	1.007
BHOJPUR	37.0	33.64	0.908	0.022	0.000	37.0	33.64	0.909
OKHALDUNGA	29.0	31.49	1.085	0.041	0.000	29.0	31.49	1.087
KHOTANG	41.4	33.68	0.814			41.4	33.68	0.814
UDAYAPUR	45.1	32.52	0.721	0.206	0.000	44.9	32.52	0.725
EASTERN TARAI	455.9	469.50	1.030	9.442	0.050	446.5	469.45	1.051
JHAPA	104.7	109.53	1.047	2.150	0.013	102.5	109.52	1.068
MORANG	115.2	116.53	1.012	1.425	0.012	113.7	116.52	1.024

SUNSARI	81.7	80.41	0.984	4.197	0.021	77.5	80.39	1.038
SAPTARI	75.5	77.80	1.030	1.140	0.001	74.4	77.80	1.046
SIRAHA	78.9	85.23	1.080	0.531	0.002	78.4	85.23	1.088
CENTRAL MOUNTAIN	105.5	67.78	0.643	0.250	0.000	105.2	67.78	0.644
DOLAKHA	40.4	27.41	0.678	0.231	0.000	40.2	27.41	0.682
SINDHUPALCHOK	57.4	34.93	0.609			57.4	34.93	0.609
RASUWA	7.7	5.45	0.705	0.019	0.000	7.7	5.45	0.707
CENTRAL HILL	429.2	236.98	0.552	1.011	0.001	428.2	236.98	0.553
SINDHULI	46.3	30.49	0.659	0.070	0.000	46.2	30.49	0.660
RAMECHHAP	38.8	32.42	0.836	0.044	0.000	38.8	32.42	0.836
KAVRE	64.6	44.22	0.685	0.033	0.000	64.5	44.22	0.685
LALITPUR	32.6	9.96	0.306	0.049	0.000	32.5	9.96	0.306
BHAKTAPUR	25.7	6.00	0.233	0.046	0.000	25.7	6.00	0.233
KATHMANDU	53.6	13.29	0.248	0.344	0.000	53.3	13.29	0.249
NUWAKOT	49.8	30.48	0.612	0.117	0.000	49.7	30.48	0.614
DHADING	58.7	35.87	0.611	0.206	0.000	58.5	35.87	0.613
MAKWANPUR	59.1	34.26	0.580	0.102	0.000	59.0	34.26	0.581

continuation...

TABLE 5.2 NUMBER AND AREA OF HOLDINGS WITH LAND OR NO LAND BY DISTRICT, NEPAL, 2001/02

Region/Districts	All Holdings			No Land		With Land		
	Number of Holdings ('000)	Total Area (ha '000)	Ave. Area (ha)	Number of Holdings ('000)	Total Area (ha '000)	Number of Holdings ('000)	Total Area (ha '000)	Ave. Area (ha)
CENTRAL TARAI	501.1	445.45	0.889	7.627	0.049	493.5	445.40	0.903
DHANUSHA	87.5	76.79	0.878	1.461	0.010	86.0	76.78	0.893
MAHOTTARI	72.6	67.87	0.934	1.309	0.010	71.3	67.86	0.951
SARLAHI	85.1	86.26	1.014	1.779	0.007	83.3	86.25	1.035
RAUTAHAT	67.0	66.37	0.991	1.781	0.017	65.2	66.35	1.017
BARA	62.3	53.62	0.861	0.595	0.001	61.7	53.62	0.869
PARSA	55.2	52.42	0.949	0.628	0.005	54.6	52.42	0.960
CHITWAN	71.4	42.11	0.590	0.074	0.001	71.4	42.11	0.590
WESTERN MOUNTAIN	4.2	2.38	0.574	0.008	0.000	4.1	2.38	0.575
MANANG	1.5	1.13	0.769	0.003	0.000	1.5	1.13	0.771
MUSTANG	2.7	1.25	0.467	0.005	0.000	2.7	1.25	0.468
WESTERN HILL	485.2	302.78	0.624	2.030	0.003	483.2	302.78	0.627
GORKHA	54.6	32.94	0.603	...	...	54.6	32.94	0.603
LAMJUNG	31.9	19.06	0.597	0.119	0.000	31.8	19.06	0.599
TANAHU	54.2	29.33	0.541	0.449	0.001	53.8	29.32	0.545
SYANGJA	55.9	30.39	0.544	0.175	0.001	55.7	30.39	0.545

KASKI	51.8	22.82	0.440	0.475	0.000	51.3	22.82	0.444
MYAGDI	21.5	13.19	0.612	0.030	0.000	21.5	13.19	0.613
PARBAT	28.5	14.14	0.496	0.069	0.000	28.4	14.14	0.497
BAGLUNG	48.7	33.02	0.678	0.088	0.000	48.6	33.02	0.679
GULMI	54.4	41.42	0.761	0.160	0.000	54.3	41.42	0.763
PALPA	44.4	31.62	0.712	0.026	0.000	44.4	31.62	0.713
ARGHAKHANCHI	39.1	34.86	0.891	0.439	0.000	38.7	34.86	0.901
WESTERN TARAI	226.5	206.98	0.914	2.041	0.005	224.4	206.98	0.922
NAWALPARASI	82.8	58.75	0.709	0.533	0.001	82.3	58.75	0.714
RUPANDEHI	86.3	77.32	0.896	1.299	0.002	85.0	77.32	0.910
KAPILBASTU	57.3	70.91	1.237	0.208	0.002	57.1	70.91	1.241
MID-WESTERN MOUNTAIN	50.2	38.84	0.774	0.355	0.001	49.8	38.84	0.779
DOLPA	5.4	2.51	0.465	0.098	0.001	5.3	2.51	0.474
JUMLA	14.9	8.18	0.550	...	...	14.9	8.18	0.550
KALIKOT	15.5	15.31	0.987	0.257	0.000	15.3	15.31	1.004
MUGU	7.6	6.45	0.845	...	...	7.6	6.45	0.845
HUMLA	6.8	6.38	0.941	...	...	6.8	6.38	0.941

... Not applicable.

continuation....

TABLE 5.2 NUMBER AND AREA OF HOLDINGS WITH LAND OR NO LAND BY DISTRICT, NEPAL, 2001/02

Region/Districts	All Holdings			No Land		With Land		
	Number of Holdings ('000)	Total Area (ha '000)	Ave. Area (ha)	Number of Holdings ('000)	Total Area (ha '000)	Number of Holdings ('000)	Total Area (ha)	Ave. Area (ha)
MID-WESTERN HILL	253.9	171.66	0.676	0.837	0.001	253.1	171.66	0.678
PYUTHAN	37.9	26.56	0.701	0.118	0.000	37.8	26.56	0.703
ROLPA	36.8	30.17	0.819	0.229	0.000	36.6	30.17	0.824
RUKUM	32.5	18.12	0.557	0.042	0.000	32.5	18.12	0.558
SALYAN	35.9	29.53	0.823	0.041	0.000	35.9	29.53	0.824
SURKHET	48.3	27.61	0.571	0.031	0.000	48.3	27.61	0.572
DAILEKH	38.8	22.98	0.592	0.359	0.000	38.5	22.98	0.597
JAJARKOT	23.7	16.70	0.705	0.016	0.000	23.7	16.70	0.706
MID-WESTERN TARAI	165.4	160.20	0.969	0.917	0.005	164.5	160.20	0.974
DANG	68.5	65.98	0.963	0.519	0.001	68.0	65.98	0.971
BANKE	49.4	45.79	0.927	0.256	0.003	49.1	45.79	0.932
BARDIYA	47.5	48.43	1.019	0.141	0.000	47.4	48.43	1.022
FAR-WESTERN MOUNTAIN	67.0	40.30	0.601	0.182	0.001	66.9	40.30	0.603
BAJURA	19.6	9.09	0.465	0.014	0.000	19.5	9.09	0.465
BAJHANG	27.6	13.70	0.496	0.099	0.001	27.5	13.70	0.498

DARCHULA	19.9	17.51	0.881	0.070	0.000	19.8	17.51	0.884
FAR-WESTERN HILL	135.3	70.57	0.522	0.403	0.002	134.9	70.56	0.523
ACHHAM	42.4	18.65	0.440	0.058	0.000	42.3	18.65	0.441
DOTI	33.3	17.69	0.531	0.276	0.002	33.0	17.69	0.536
DADEL DHURA	20.6	12.22	0.593	0.014	0.000	20.6	12.22	0.593
BAITADI	39.0	22.01	0.564	0.055	0.000	38.9	22.01	0.565
FAR-WESTERN TARAI	130.6	114.59	0.877	0.699	0.001	129.9	114.59	0.882
KAILALI	77.1	67.84	0.880	0.203	0.000	76.9	67.84	0.882
KANCHANPUR	53.6	46.75	0.873	0.496	0.000	53.1	46.75	0.881

TABLE 6. LAND UTILIZATION, NEPAL, 1961/62 - 2001/02

Land use	1961/62	1971/72	1981/82	1991/92	2001/02
In thousand hectares					
Total area of holding, Nepal	1,685.4	1,654.0	2,463.7	2,597.4	2,654.0
Agricultural land	1,626.4	1,592.3	2,359.2	2,392.9	2,497.7
Arable Land	1,591.9	1,567.0	2,287.5	2,324.3	2,357.0
Land under temporary crops	1,550.5	1,537.1	2,250.2	2,284.7	2,326.1
Other arable land	41.4	29.9	37.3	39.7	30.9
Land under permanent crops	12.2	15.0	29.2	29.4	117.5
Land under perm. Pastures	22.3	10.3	42.5	36.9	19.8
Ponds	n.a.	n.a.	n.a.	3.9	3.5
Non-agricultural land	59.0	61.8	104.5	205.0	156.4
Woodland and forest	13.8	4.7	15.0	108.8	37.2
Other land	45.2	57.1	89.5	96.2	119.2
Percentage Distribution					
Total	100.00	100.00	100.00	100.00	100.00
Agricultural land	96.50	96.27	95.76	92.13	94.11
Arable Land	94.45	94.74	92.85	89.49	88.81
Land under temporary crops	92.00	92.93	91.33	87.96	87.64
Other arable land	2.46	1.81	1.51	1.53	1.16
Land under permanent crops	0.72	0.91	1.19	1.13	4.43
Land under perm. Pastures	1.32	0.62	1.73	1.42	0.74
Ponds	n.a.	n.a.	n.a.	0.15	0.13
Non-agricultural land	3.50	3.74	4.24	7.89	5.89
Woodland and forest	0.82	0.28	0.61	4.19	1.40
Other land	2.68	3.45	3.63	3.70	4.49

TABLE 7. NUMBER AND AREA OF HOLDINGS WITH LAND BY LAND TENURE, NEPAL,
1991/92 – 2001/02

Land tenure	1991/92	2001/02	% Increase/ Decrease
	In thousands		
Total number of holdings	2,703.9	3,337.4	23.43
One form of tenure	2,303.3	2,939.6	27.63
Owned	2,239.1	2,896.2	29.35

Rented from others	47.0	35.5	-24.47
Other tenure form	17.3	7.9	-54.34
More than one tenure form	400.6	397.9	-0.67
Total area of Holdings	2,597.4	2,653.9	2.18
One form of tenure	2,152.7	2,241.1	4.11
Owned	2,109.5	2,212.8	4.90
Rented from others	36.1	26.3	-27.15
Other tenure form	7.1	2.0	-71.83
More than one tenure form	444.7	412.9	-7.15
Owned	252.6	204.5	-19.04
Rented from others	185.1	204.2	10.32
Other tenure form	7.0	4.2	-40.00

Note: Details may not add up to total due to rounding.

TABLE 8. HOLDING RENTING LAND: AREA BY CONDITION OF RENT, NEPAL, 1991/92-2001/02

Condition of rent	1991/92					2001/02				
	Holdings* ('000)	% to Total	Area ('000 ha)	%	Ave. Area	Holdings* ('000)	% to Total	Area ('000 ha)	%	Ave. Area
Total holdings renting land	429.2	100.0	221.20	100.0	0.52	412.4	100.0	230.5	100.0	0.56
Fixed amount of money	27.3	6.4	12.4	5.6	0.45	28.4	6.9	11.5	5.0	0.40
Fixed quantity of produce	129.9	30.3	56.80	25.7	0.44	65.7	15.9	35.3	15.3	0.54
Share of produce	199.6	46.5	125.10	56.6	0.63	256.4	62.2	159	69.0	0.62
Exchange for service	16.4	3.8	3.70	1.7	0.23	11.6	2.8	2.6	1.1	0.22
Mortgage	78.7	18.3	18.20	8.2	0.23	69.1	16.8	18.9	8.2	0.27
Other	16.9	3.9	5.00	2.3	0.30	14.6	3.5	3.2	1.4	0.22

*Some holdings have more than one condition of renting land.

TABLE 9. HOLDINGS WITH IRRIGATION AND AREA IRRIGATED BY SOURCE OF WATER, ECOLOGICAL BELT, NEPAL, 1991/92-2001./02

Source of irrigation water	1991/92				2001/02			
	Nepal	Mountain	Hill	Tarai	Nepal	Mountain	Hill	Tarai
Number of holdings in thousands								
All land holdings	2703.9	259.9	1351.3	1092.8	3337.4	297.2	1581.4	1458.8
Holdings with irrigation	1377.5	150.5	681.8	545.3	1998.00	172.9	902.1	923.1
% to total land holdings	50.94	57.91	50.46	49.90	59.87	58.18	57.04	63.28
% Increase (1991/92 to 2001/02)	...	...	...	...	45.0	14.9	32.3	69.3
Tube well/bore	119.9	0.6	5.1	114.2	303.4	1.5	12.4	289.5
Canal (permanent)	474.3	55.6	259.7	159	747.8	77.5	386.8	283.5
Canal (seasonal)	787.1	102.6	439	245.5	1092.8	112.7	561.7	418.4
Pond/tank	51.7	1.9	9.2	40.5	71.8	1.8	18.8	51.3
Others	129.6	11.5	42.5	75.6	115.7	2	36.7	77.0

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Mixed sources	n.a.	n.a.	n.a.	n.a.	25.7	2.1	9.3	14.4
Total area of holdings ('000 ha)	2597.4	176.8	1046.2	1374.3	2653.9	218.7	1038.6	1396.6
Area under irrigation in thousand hectares								
Area Irrigated ('000 ha.)	882.4	41.8	245.5	595.1	1168.3	62.1	304.9	801.3
% to total area of holdings	33.97	23.64	23.47	43.30	44.02	28.40	29.36	57.38
% Increase (1991/92 to 2001/02)	...	...	...	...	32.4	48.6	24.2	34.6
Tube well/bore	99.8	0.1	0.9	98.8	214.9	0.3	2.4	212.2
Canal (permanent)	245.8	13.7	84.1	148	346.8	20.8	118.3	207.6
Canal (seasonal)	436.7	24.5	144.0	268.2	521.3	39.2	172.3	309.7
Pond/tank	25.4	0.5	1.8	23.2	23.9	0.6	2.8	20.4
Others	74.7	3.0	14.8	56.9	46.9	0.3	7.4	39.2
Mixed sources	n.a.	n.a.	n.a.	n.a.	14.6	0.8	1.6	39.2

¹ Some holdings availed of more than one source of irrigation water.

TABLE 10. NUMBER AND AREA OF HOLDINGS GROWING SELECTED TEMPORARY CROPS, NEPAL, 1981/82-2001/02

Selected crop	Holdings ('000)			Crop area ('000 ha)			% Increase/decrease (Crop area only)	
	1981/82	1991/92	2001/02	1981/82	1991/92	2001/02	91/81	2001/91
Cereal grains	1685.6	2649.0	3221.6	2509.0	3251.7	3423.0	29.60	5.27
Paddy	1021.7	2037.5	2466.1	1394.1	1481.2	1544.6	6.25	4.28
Wheat	649.5	1636.5	1934.3	389.2	633.1	793.5	62.67	25.34
Maize	838.6	1875.6	2107.0	522.5	768.7	769.4	47.12	0.09
Millet	709.0	1065.8	1060.0	154.4	301.5	250.5	95.27	-16.92
Barley	183.8	279.3	251.0	27.7	46.2	39.3	66.79	-14.94
Buckwheat	48.0	95.5	111.4	10.8	16.3	20.8	50.93	27.61
Other cereals	n.a.	33.8	35.9	n.a.	4.7	4.9	...	4.26
Legumes	870.0	1191.6	1362.2	334.6	340.4	379.4	1.73	11.46
Tubers	376.5	814.5	950.0	86.0	79.2	92.5	-7.91	16.79
Cash crops	242.0	169.2	124.6	86.0	62.9	60.6	-26.86	-3.66
Oilseeds	281.4	1013.2	1021.3	224.1	260.1	214.2	16.06	-17.65
Spices	427.7	336.4	473.4	58.1	29.3	40.7	-49.57	38.91
Vegetables	324.2	763.1	977.5	17.2	39.5	60.0	129.65	51.90
Holdings with temporary crops	2157.4	2701.9	3306.3	...	...	...	...	...
Total land holdings	2185.7	2703.9	2653.9	...	...	...	...	...
Area sown to temporary crops (Effective crop area)	...	...	...	3315.0	4063.0	4251.7	22.56	4.64

Details may not add up to total due to rounding.

TABLE 11. CROPPING INTENSITY OF ECOLOGICAL BELTS, NEPAL, 1981/82 - 2001/02

Category	Ecological belt			
	Nepal	Mountain	Hill	Tarai
1981/82				
Arable land ('000 ha)	2287.5	115.7	856.5	1315.3
Physical area under temporary crops	2250.2	113.5	840.5	1296.2
Effective area sown to temporary crops	3315.0	144.3	1056.6	2114.2
Cropping intensity (a)	1.45	1.25	1.23	1.61

Cropping intensity (b)	1.47	1.27	1.26	1.63
	1991/92			
Arable land ('000 ha)	2323.4	162.3	871.3	1289.7
Physical area under temporary crops	2284.6	158.7	848.2	1277.7
Effective area sown to temporary crops	4063.0	261.8	1538.2	2262.9
Cropping intensity (a)	1.75	1.61	1.77	1.75
Cropping intensity (b)	1.78	1.65	1.81	1.77
	2001/02			
Arable land ('000 ha)	2357.0	200.0	863.0	1294.0
Physical area under temporary crops	2326.1	197.2	844.4	1284.5
Effective area sown to temporary crops	4251.7	333.8	1569.1	2348.8
Cropping intensity (a)	1.80	1.67	1.82	1.82
Cropping intensity (b)	1.83	1.69	1.86	1.83

(a) Effective area sown to temporary crops divided by the area under arable land. Effective area is counting the area as many times as a temporary crop is harvested as a result of successive cropping.

(b) Effective area sown to temporary crops divided by physical area under temporary crops. Physical area is the actual land area devoted to the planting of temporary crops in the holding.

TABLE 11.1 NUMBER AND AREA OF LAND HOLDINGS GROWING PADDY BY REGION AND DISTRICT, NEPAL, 2001/02

Belt/Region/District	Total area of holdings with land (ha)	Total area of arable land in holdings (ha)	Holdings reporting	Growing paddy			
				Area sown (ha)	Ave. holding size (ha)	% to total area of holdings	% to total arable land
NEPAL	2,653,918.9	2,356,981.3	2,466,097	1,544,603.5	0.626	58.20	65.53
MOUNTAIN BELT	218,704.3	200,025.0	203,678	74,226	0.364	33.94	36.17
HILL BELT	1,038,607.3	862,961.2	1,014,393	352,991	0.348	33.99	40.90
TARAI BELT	1,396,607.4	1,293,995.0	1,248,024	1,117,388	0.895	80.01	86.35
EASTERN MOUNTAIN	69,404.4	63,481.3	38,848	23,909	0.615	34.45	37.66
TAPLEJUNG	23,539.9	21,998.0	13,488	7,451.3	0.552	31.65	33.87
SANKHUWASABHA	25,200.6	23,271.8	19,022	14,023.7	0.737	55.65	60.26
SOLUKHUMBU	20,663.8	18,211.5	6,338	2,434.3	0.384	11.78	13.37
CENTRAL MOUNTAIN	67,784.1	63,564.1	68,746	24,652	0.359	36.37	17.55
DOLAKHA	27,406.0	25,287.1	22,902	7,194.4	0.314	26.25	28.45
SINDHUPALCHOK	34,929.1	33,245.8	42,188	16,248.0	0.385	46.52	48.87
RASUWA	5,449.0	5,031.2	3,656	1,209.7	0.331	22.20	24.04
WESTERN MOUNTAIN	2,383.6	1,952.1	275	10	0.037	0.42	0.52
MANANG	1,130.6	907.4	3	5.3	1.767	0.47	0.58
MUSTANG	1,253.0	1,044.7	272	4.8	0.018	0.38	0.46
MID-WESTERN MOUNTAIN	38,837.0	37,061.9	35,796	10,661	0.298	27.45	28.77

DOLPA	2,510.8	2,479.2	789	108.2	0.137	4.31	4.36
JUMLA	8,183.6	7,765.2	9,433	905.6	0.096	11.07	11.66
KALIKOT	15,310.6	14,602.5	14,165	6,811.8	0.481	44.49	46.65
MUGU	6,453.5	6,268.4	6,405	1,628.1	0.254	25.23	25.97
HUMLA	6,378.6	5,946.6	5,004	1,207.7	0.241	18.93	20.31
FAR-WESTERN MOUNTAIN	40,295.2	33,965.6	60,013	14,993	0.250	37.21	44.14
BAJURA	9,092.9	8,505.9	17,985	3,559.4	0.198	39.14	41.85
BAJHANG	13,695.2	11,801.0	25,131	5,959.8	0.237	43.52	50.50
DARCHULA	17,507.1	13,658.7	16,897	5,473.4	0.324	31.26	40.07

TABLE 11.1 NUMBER AND AREA OF LAND HOLDINGS GROWING PADDY BY REGION AND DISTRICT, NEPAL, 2001/02

District	Total area of holdings with land (ha)	Total area of arable land in holdings (ha)	Holdings reporting	Growing paddy			
				Area sown (ha)	Ave. holding size (ha)	% to total area of land	% to total arable land
EASTERN HILL	256,617.9	214,362.0	151,986	80,353	0.529	31.31	37.48
PANCHTHAR	28,187.2	23,138.6	16,951	6,904.7	0.407	24.50	29.84
ILAM	52,890.4	35,841.6	21,195	11,338.5	0.535	21.44	31.64
DHANKUTA	24,800.4	22,154.9	12,460	7,439.4	0.597	30.00	33.58
TERHATHUM	19,411.6	17,771.4	12,903	7,452.1	0.578	38.39	41.93
BHOJPUR	33,640.9	30,933.1	21,449	12,449.5	0.580	37.01	40.25
OKHALDUNGA	31,493.3	23,725.0	13,362	4,642.9	0.347	14.74	19.57
KHOTANG	33,676.4	30,732.0	23,663	11,935.1	0.504	35.44	38.84
UDAYAPUR	32,517.7	30,065.4	30,003	18,190.4	0.606	55.94	60.50
CENTRAL HILL	236,981.0	213,194.2	274,689	89,887	0.327	37.93	42.16
SINDHULI	30,493.4	27,970.2	30,669	15,348.3	0.500	50.33	54.87
RAMECHHAP	32,418.9	26,223.7	23,863	7,922.0	0.332	24.44	30.21
KAVRE	44,218.6	37,404.7	36,802	11,459.8	0.311	25.92	30.64
LALITPUR	9,958.5	9,336.5	18,830	3,048.7	0.162	30.61	32.65
BHAKTAPUR	5,999.9	5,539.6	23,549	4,008.2	0.170	66.80	72.36
KATHMANDU	13,285.3	12,764.6	42,280	8,511.3	0.201	64.07	66.68
NUWAKOT	30,479.4	29,087.0	30,164	14,790.6	0.490	48.53	50.85
DHADING	35,871.4	33,127.6	43,574	14,625.9	0.336	40.77	44.15
MAKWANPUR	34,255.6	31,740.3	24,958	10,171.8	0.408	29.69	32.05
WESTERN HILL	302,781.6	225,515.5	304,400	102,597	0.337	33.88	45.49
GORKHA	32,942.5	29,907.4	41,098	17,134.2	0.417	52.01	57.29
LAMJUNG	19,059.1	17,102.7	28,555	11,051.3	0.387	57.98	64.62
TANAHU	29,324.8	25,999.1	36,308	14,583.4	0.402	49.73	56.09
SYANGJA	30,392.3	22,011.0	38,728	10,283.8	0.266	33.84	46.72
KASKI	22,815.9	19,779.7	37,551	12,804.1	0.341	56.12	64.73
MYAGDI	13,188.5	11,588.9	12,258	3,865.5	0.315	29.31	33.36
PARBAT	14,141.4	11,735.0	19,668	6,333.1	0.322	44.78	53.97
BAGLUNG	33,015.8	23,922.5	22,899	5,689.0	0.248	17.23	23.78
GULMI	41,420.2	21,182.6	23,504	6,465.0	0.275	15.61	30.52
PALPA	31,623.3	22,734.9	23,830	8,877.2	0.373	28.07	39.05
ARGHAKHANCHI	34,857.8	19,551.7	20,001	5,510.1	0.275	15.81	28.18
MID-WESTERN HILL	171,663.4	145,149.2	164,062	48,806	0.297	28.43	33.62
PYUTHAN	26,562.1	20,973.5	21,353	5,862.0	0.275	22.07	27.95
ROLPA	30,165.5	23,948.3	19,396	6,251.1	0.322	20.72	26.10
RUKUM	18,116.7	15,506.7	13,547	2,545.4	0.188	14.05	16.41
SALYAN	29,533.5	23,472.7	24,361	7,593.1	0.312	25.71	32.35
SURKHET	27,610.4	24,704.8	35,876	12,406.1	0.346	44.93	50.22
DAILEKH	22,978.0	21,578.1	31,931	9,096.3	0.285	39.59	42.16
JAJARKOT	16,697.2	14,965.1	17,598	5,051.9	0.287	30.26	33.76
FAR-WESTERN HILL	70,563.4	64,740.3	119,256	31,349	0.263	44.43	48.42
ACHHAM	18,646.9	17,055.1	40,261	8,974.3	0.223	48.13	52.62
DOTI	17,685.1	16,428.8	30,645	10,499.2	0.343	59.37	63.91
DADELDHURA	12,223.7	11,168.1	18,053	5,685.9	0.315	46.52	50.91
BAITADI	22,007.7	20,088.3	30,297	6,189.3	0.204	28.12	30.81

TABLE 11.1 NUMBER AND AREA OF LAND HOLDINGS GROWING PADDY BY REGION AND DISTRICT, NEPAL, 2001/02

District	Total area of holdings with land (ha)	Total area of arable land in holdings (ha)	Holdings reporting	Growing paddy			
				Area sown (ha)	Ave. holding size (ha)	% to total area of land	% to total arable land
EASTERN TARAI	469,448.3	431,378.7	367,642	396,261	1.078	84.41	91.86
JHAPA	109,518.2	98,048.0	83,453	97,151.9	1.164	88.71	99.09
MORANG	116,516.7	109,945.6	85,816	97,425.7	1.135	83.62	88.61
SUNSARI	80,390.8	75,250.5	62,359	67,399.4	1.081	83.84	89.57
SAPTARI	77,796.0	71,256.1	66,983	66,995.8	1.000	86.12	94.02
SIRAHA	85,226.6	76,878.5	69,031	67,287.9	0.975	78.95	87.52
CENTRAL TARAI	445,397.5	413,554.3	436,517	356,473	0.817	80.03	86.20
DHANUSHA	76,781.9	69,928.1	80,591	61,503.4	0.763	80.10	87.95
MAHOTTARI	67,860.6	61,990.0	64,424	54,243.4	0.842	79.93	87.50
SARLAHI	86,253.7	79,696.0	68,989	58,860.9	0.853	68.24	73.86
RAUTAHAT	66,354.9	62,761.3	54,329	54,207.6	0.998	81.69	86.37
BARA	53,616.5	51,303.4	58,301	46,733.9	0.802	87.16	91.09
PARSA	52,417.3	49,526.6	52,383	47,024.1	0.898	89.71	94.95
CHITWAN	42,112.7	38,348.9	57,500	33,899.2	0.590	80.50	88.40
	445,397.6	413,554.3					
WESTERN TARAI	206,979.2	193,507.9	203,064	167,954	0.827	81.15	86.79
NAWALPARASI	58,751.8	55,010.2	66,022	41,545.0	0.629	70.71	75.52
RUPANDEHI	77,320.4	71,873.0	82,001	67,763.9	0.826	87.64	94.28
KAPILBASTU	70,907.0	66,624.7	55,041	58,644.8	1.065	82.71	88.02
	206,979.2	193,507.9					
MID-WESTERN TARAI	160,195.8	147,528.8	124,275	104,595	0.842	65.29	70.90
DANG	65,979.1	57,727.1	47,029	30,686.4	0.652	46.51	53.16
BANKE	45,788.9	44,237.7	41,777	36,299.4	0.869	79.28	82.06
BARDIYA	48,427.8	45,564.0	35,469	37,609.1	1.060	77.66	82.54
	160,195.8	147,528.8					
FAR-WESTERN TARAI	114,586.4	108,025.3	116,526	92,106	0.790	80.38	85.26
KAILALI	67,838.4	64,155.7	67,609	55,841.5	0.826	82.32	87.04
KANCHANPUR	46,748.1	43,869.6	48,917	36,264.2	0.741	77.57	82.66

TABLE 12. CROPPING PRACTICES IN ECOLOGICAL BELTS, NEPAL, 1991./92 - 2001/02

(In thousands)								
Cropping Practice	Nepal		Mountain		Hill		Tarai	
	Holdings Reporting	Area (ha)	Holdings Reporting	Area (ha)	Holdings Reporting	Area (ha)	Holdings Reporting	Area (ha)
	1991/92							
All holdings	2704.0	2597.4	260.7	262.6	1357.7	1047.31	1117.6	1374.8
Total temporary crops sown	2701.9	4063.0	346.9	261.8	1676.1	1538.2	1322.8	2262.9
Total permanent crops	618.0	29.9	13.2	0.8	79.2	6.8	193.8	22.4
Pure stand crops								
Temporary crop	2666.5	3779.7	256.9	231.6	1357.7	1402.3	1091.1	2144.8
Permanent crop	236.4	25.3	10.1	0.7	63.1	5.6	163.5	19.1
Mixed crops								

Temporary crop	639.70	283.80	90.0	30.2	318.4	135.8	231.7	117.7
Permanent crop	46.8	3.9	2.8	0.1	15.4	1.0	28.7	2.8
Associated crops	2.6	0.7	0.3	a/	0.7	0.2	1.6	0.5
			2001/02					
All holdings	3337.4	2653.9	298.2	218.7	1586.4	1038.6	1479.5	1396.7
Total temporary crops sown	3306.3	4251.7	297.0	333.8	1577.7	1569.1	1432.7	2348.8
Total permanent crops	618.1	117.5	40.4	6	360.6	81.2	217.2	30.2
Pure stand crops								
Temporary crop	3254.8	3990.4	294.4	319.7	1538.9	1443.8	1422.5	2226.8
Permanent crop	545.9	106.1	37.8	5.5	330.5	75.0	177.6	25.5
Mixed crops								
Temporary crop	667.1	260.9	41.20	14.10	362.5	125.1	263.5	121.8
Permanent crop	51.3	5.4	1.8	0.2	24.6	2.7	25.0	2.5
Associated crops	2.1	0.4	0.1	a/	1.3	0.2	0.7	0.1

a/ Less than 0.1 hectare

Details may not add up to total due to rounding.

TABLE 13. HOLDINGS USING AGRICULTURAL IMPLEMENTS AND OTHER FACILITIES BY ECOLOGICAL BELT, 2001/2002

Agricultural implements and other facilities	(In thousands except percent)							
	Nepal		Mountain		Hill		Tarai	
	No. of holdings using	% to total holdings	No. of holdings using	% to total holdings	No. of holdings using	% to total holdings	No. of holdings using	% to total holdings
All holdings	3,364.1	100.00	298.2	100.00	1,586.4	100.00	1,479.5	100.00
Iron ploughs	871.0	25.89	5.2	1.75	54.8	3.46	810.8	54.80
Power tillers	15.6	0.46	0.06	0.02	7.9	0.50	7.6	0.52
Shallow tube well	120.1	3.57	0.02	0.01	4.0	0.25	116.1	7.85
Deep tube well	58.7	1.74	0.05	0.02	0.8	0.05	57.8	3.91
Rower pump	22.8	0.68	0.12	0.04	1.6	0.10	21.0	1.42
Tractor	273.0	8.11	0.10	0.03	9.6	0.61	263.2	17.79
Thresher	249.5	7.42	0.22	0.07	33.8	2.13	215.5	14.57
Pumping set	145.9	4.34	0.16	0.05	6.7	0.43	139.0	9.39
Animal drawn cart	226.6	6.73	0.2	0.06	5.3	0.34	221.1	14.94
Sprayer	203.1	6.04	3.8	1.27	65.4	4.12	133.9	9.05
Others	450.3	13.39	25.4	8.53	125.5	7.91	299.4	20.24

TABLE 14. HOLDINGS USING DIFFERENT INPUTS FOR SELECTED CROPS BY ECOLOGICAL BELT, NEPAL, 2001/2002

Crop/ Ecological Belt	Holdings with crop		Improved seeds		Pesticides		Chemical fertilizer	
	1991/92	2001/02	1991/92	2001/02	1991/92	2001/02	1991/92	2001/02
	('000)	('000)	%	%	%	%	%	%
	Percent to total holdings with crop							
Nepal	2,703.9	3,337.4	100.00	100.00	100.00	100.00	100.00	100.00
Paddy	2,037.5	2,466.1	24.0	25.3	13.2	25.3	48.8	20.5
Wheat	1,635.8	1,935.1	30.7	30.0	5.4	8.9	52.4	64.4

Maize	1,872.6	2,107.3	11.9	15.4	2.8	15.4	22.6	38.6
Potato	734.7	820.5	17.9	27.1	10.7	20.3	30.5	44.5
Sugarcane	82.6	85.2	31.8	31.4	23.5	30.9	71.2	75.6
Mountain								
Paddy	179.18	203.68	5.9	16.7	2.0	16.7	26.2	6.0
Wheat	184.63	194.91	9.3	22.3	1.0	3.9	17.2	20.5
Maize	228.46	255.46	6.3	15.5	0.6	3.5	25.2	30.2
Potato	101.78	116.99	3.4	21.2	1.0	7.2	8.9	14.9
Sugarcane	2.06	1.84	1.4	3.6	3.2	4.4	5.1	2.4
Hill								
Paddy	905.70	1014.39	14.0	16.7	7.4	16.7	5.2	13.1
Wheat	755.43	856.32	22.1	20.5	3.5	4.3	36.7	45.0
Maize	1,264.41	1419.69	11.1	13.7	2.5	3.0	23.8	40.1
Potato	307.53	393.94	12.4	20.9	7.7	14.8	26.0	33.8
Sugarcane	13.12	10.80	28.9	1.9	1.6	3.1	6.1	8.2
Tarai								
Paddy	953.33	1248.02	36.9	33.6	20.9	33.6	66.1	28.9
Wheat	696.43	883.15	45.7	40.9	8.7	14.4	78.7	92.9
Maize	381.15	432.16	17.8	20.7	5.1	9.2	16.9	38.5
Potato	326.75	309.53	27.3	37.2	16.6	32.3	41.5	69.3
Sugarcane	67.41	72.61	33.3	36.4	28.4	35.7	85.9	87.5

Note: Details may not add up to total due to rounding

TABLE 15. HOLDINGS WITH PERMANENT CROPS, COMPACT PLANTATION AND SCATTERED TREES, NEPAL, 1991/92-20

(In thousands)								
Permanent crops	1991/92					20		
	Total holdings reporting	Area of compact plantation (ha)	No. of trees		Total scattered trees	Total holdings reporting	Area of compact plantation (ha)	Prod
			Productive	Non-Productive				
Holdings with fruit trees	1318.1	29.387	5923.9	3188.2	9640.4	1356.9	33.237	
Orange	277.7	2.390	368.7	250.9	788.9	265.9	3.200	
Lemon	190.2	0.446	81.9	42.8	421.5	191.8	0.623	
Lime	164.3	0.182	40.4	11.8	298.2	131.0	0.292	
Sweet Orange	24.4	0.049	6.7	7.2	60.8	37.0	0.228	
Junar	n.a.	n.a.	n.a.	n.a.	n.a.	23.8	0.513	
Other citrus	114.0	0.370	58.5	14.6	224.4	104.3	0.339	
Mango	460.7	15.203	1259.9	278.7	834.9	565.4	18.479	
Banana	535.9	2.126	1210.1	587.0	3803.0	467.1	3.140	
Guava	247.5	0.358	82.7	24.7	617.2	229.4	0.484	
Jackfruit	122.7	0.587	34.1	16.2	177.4	136.0	0.676	
Pineapple	25.7	0.249	2112.5	960.9	519.7	26.4	0.229	
Lychee	43.2	0.277	28.6	16.2	64.8	79.3	0.779	

Pear	75.7	0.114	10.7	23.5	154.3	113.6	0.346
Apple	54.4	0.605	90.9	60.0	184.3	35.0	1.380
Plum	190.5	0.113	28.0	8.4	393.8	206.2	0.447
Papaya	175.0	0.110	65.6	11.0	420.3	191.5	0.301
Pomegranate	22.9	0.077	10.7	6.4	40.0	25.9	0.087
Other fruit trees	150.0	2.662	433.7	867.5	636.6	156.5	1.696
Other permanent crops		78.332					87.467
Tea	7.6	3.467				21.8	6.197
Thatch*	217.6	66.385				266.3	67.643
Fodder tree	572.9	2.455	663.1**		5765.1	585.3	7.281
Bamboo*	405.4	6.024				353.1	6.346

*/Not compact plantation

**/Not specified whether productive age or not.

TABLE 16. HOLDINGS RAISING LIVESTOCK AND LIVESTOCK POPULATION BY KIND, NEPAL,
1981/82 TO 2001/02
(Includes only livestock kept by household population)

Kind of livestock	Holdings ('000)			Livestock population ('000)				
	1981/82	1991/92	2001/02	1981/82	1991/92	2001/02	% Increase/Decrease 91/81	2001/91
Total	2,194.0	2,736.1	3,364.1	22,032.8	31,217.7	38,794.0	41.7	24.3
Livestock:	...	2498.5	3017.5	13,691.2	17,175.2	18,867.1	25.4	9.9
Cattle	1,261.9	2,067.1	2,297.1	6,501.6	7,359.3	7,215.2	13.2	(2.0)
Chaunri	6.9	9.0	14.2	55.5	58.6	95.4	5.6	62.8
Buffaloes	778.6	1,307.8	1,586.8	2,379.7	3,116.3	3,477.7	31.0	11.6
Goats	787.0	1,382.8	1,686.4	3,643.7	5,515.5	6,932.9	51.4	25.7
Sheep	99.0	92.7	67.7	677.1	602.8	471.2	(11.0)	(21.8)
Pigs	164.1	267.5	327.8	433.6	495.8	632.6	14.3	27.6
Others	n.a.	3.5	n.a.	n.a.	7.3	16.0	...	119.2
Other animals								
Horses	n.a.	9.0	9.1	n.a.	14.3	20.1	...	40.6
Mules and asses	16.1	12.0	1.4	27.5	5.3	6.0	(80.7)	13.2
Poultry:	...	...	...	8,341.6	14,042.5	19,926.9	68.2	41.6
Chicken	616.9	1,400.4	1,594.4	7,368.6	12,333.1	17,631.3	67.4	43.0
Ducks	37.2	92.6	110.1	142.3	280.3	393.1	97.0	40.2
Pigeons	116.8	215.8	202.1	830.7	1,419.9	1,845.2	70.9	30.0
Others	n.a.	3.9	5.7	n.a.	9.2	57.3	...	522.8

TABLE 17. CATTLE, CHAUNRI AND BUFFALOES POPULATION BY SEX AND AGE, NEPAL, 1981/82-2001/02

Sex and Age	(In thousands)								
	Cattle			Chaunri			Buffaloes		
	1981/82	1991/92	2001/02	1981/82	1991/92	2001/02	1981/82	1991/92	2001/02
Total holdings reporting	n.a.	2067.1	2297.1	n.a.	9.0	14.2	n.a.	1307.8	1586.8
Average animals per holding	...	3.6	3.1	...	6.5	6.7	...	2.4	2.2
Both Sexes	6,501.6	7,359.3	7,215.2	55.5	58.6	95.4	2,379.7	3,116.3	3477.7
Under 1 year	551.8	832.2	927.6	10.9	8.6	22.5	276.0	573.7	792.57

1 to less than 3 years	1,139.7	1,045.5	1,068.6	12.4	6.7	17.4	565.3	582.9	676.06
3 years and over	4,810.1	5,481.6	5,219.0	32.2	43.2	55.6	1,538.5	1,959.8	2009.1
Male	n.a.	4,134.4	4,333.0	n.a.	19.2	40.4	n.a.	679.0	766.39
Under 1 year	n.a.	415.6	446.0	n.a.	4.3	13.3	n.a.	249.1	327.81
1 to less than 3 years	525.0	511.2	491.7	5.7	3.3	6.8	175.9	155.1	175.29
3 years and over	2,148.7	3,207.7	3,395.3	8.8	11.7	20.3	170.7	274.8	263.29
Female	n.a.	3,224.9	2,882.1	n.a.	39.4	55.1	n.a.	2,437.3	2711.3
Under 1 year	n.a.	416.6	481.6	n.a.	4.4	9.2	n.a.	324.6	464.76
1 to less than 3 years	614.7	534.4	576.9	6.7	3.4	10.6	389.3	427.7	500.77
3 years and over	2,661.4	2,273.9	1,823.6	23.4	31.6	35.3	1,367.8	1,685.0	1745.8
Female animals in milk:									
Number	n.a.	824.2	918.8	n.a.	12.0	20.7	n.a.	789.1	1043.8
No. of holdings reporting	n.a.	631.3	759.7	n.a.	5.4	8	n.a.	680.4	922.8
Ave. milk animal per holding	n.a.	1.3	1.2	n.a.	2.2	2.6	n.a.	1.16	1.1

Note: Details may not add up to total due to rounding.

TABLE 17a. POPULATION OF SELECTED LIVESTOCK BY BREED, SEX AND AGE, NEPAL, 2001/02

Sex and Age	(In thousands except Percent)							
	Cattle				Buffalo Breed			
	Local Breed	Improved Breed	% to Total	Total	Local Breed	Improved Breed	% to Total	Total
Both Sexes	7,142.9	72.3	1.0	7,215.2	3,415.4	62.4	1.8	3,477.7
Under 1 year	910.9	16.7	1.8	927.6	775.2	17.4	2.2	792.6
1 to less than 3 yrs	1,055.1	13.5	1.3	1,068.6	666.9	9.2	1.4	676.1
3 years and over	5,177.0	42.0	0.8	5,219.0	1,973.3	35.8	1.8	2,009.1
Male	4,313.0	20.0	0.5	4,333.0	755.2	11.2	1.5	766.4
Under 1 year	438.8	7.2	1.6	446.0	320.6	7.2	2.2	327.8
1 to less than 3 yrs	487.8	4.0	0.8	491.7	173.6	1.7	1.0	175.3
3 years and over	3,386.5	8.9	0.3	3,395.3	261.0	2.3	0.9	263.3
Female	2,829.9	52.3	1.8	2,882.1	2,660.2	51.2	1.9	2,711.3
Under 1 year	472.1	9.5	2.0	481.6	454.6	10.2	2.2	464.8
1 to less than 3 yrs	567.3	9.6	1.7	576.9	493.3	7.5	1.5	500.8
3 years and over	1,790.5	33.2	1.8	1,823.6	1,712.3	33.5	1.9	1,745.8
Female animals in milk:	893.4	25.4	2.8	918.8	1,019.0	24.8	2.4	1,043.8

TABLE 17b. PIG POPULATION BY BREED AND BY AGE, NEPAL, 2001/02

Age	Population				
	Local Breed	Improved Breed	% to Total	Total	%
Total	610,502	22,050	3.49	632,552	100.0
Less than 6 months	276,968	9,992	3.48	286,960	100.0
6 months and over	333,534	12,058	3.49	345,592	100.0

TABLE 17c. CHICKEN POPULATION BY TYPE AND BREED, NEPAL, 2001/02

Type of Chicken	(In Thousands except Percent)				
	Population				
	Local Breed	Improved Breed	% to Total	Total	%
All Types	14,089.0	3,542.3	20.09	17,631.3	100.0
Chicks	7,792.6	1,106.8	12.44	8,899.4	100.0
Cocks	1,911.9	626.6	24.68	2,538.5	100.0
Hens	4,384.5	1,808.9	29.21	6,193.4	100.0

TABLE 18. LAND HOLDINGS WITH FOREST TREES AND FISHERIES BY SIZE OF HOLDING, NEPAL 1991/92-2001/02

Particulars	(In thousands, except percent)							
	Size of holdings in hectares							
	1991/92				2001/02			
	Total	<0.5	0.5-<2.0	2.0 & over	Total	<0.5	0.5-<2.0	2.0 & over
Number of holdings with land	2,703.9	1,166.0	1,241.1	296.8	2,653.9	390.2	1,433.6	830.1
Holdings with forest trees:	1,078.6	328.2	576.9	173.6	988.7	338.7	815.4	113.3
Holdings with compact plantation	n.a.	n.a.	n.a.	n.a.	165.9	27.7	103.6	34.6
Area of compact plantation	n.a.	n.a.	n.a.	n.a.	27.0	1.8	9.9	11.1
No. of trees in compact plantation	n.a.	n.a.	n.a.	n.a.	20,531.2	1,236.4	11,884.0	7,410.8
Scattered trees	n.a.	n.a.	n.a.	n.a.	18,152.8	4,028.4	11,036.1	3,088.3
Total Number of trees	33,455.2	3,293.1	15,916.5	14,245.6	38,684.0	5,264.8	22,920.1	10,499.1
Average no. of trees/holding	31	10	28	82	39	16	28	93
Holdings with fisheries	12.9	0.9	4.0	8.1	22.2	2.3	9.8	10.1
Area of fishponds in ha.	2.380	0.040	0.380	1.970	5.732	0.317	1.503	3.912
Percent to total holdings with land:	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% Holdings with forest trees	39.89	28.15	46.48	58.49	37.25	86.80	56.88	13.65
% Holdings with fisheries	0.48	0.07	0.32	2.72	0.84	0.60	0.68	1.21

TABLE 19. NON-RESIDENTIAL BUILDINGS USED FOR AGRICULTURAL PURPOSES BY SIZE OF HOLDING, NEPAL, 1991/92-2001/02

Purpose	(In thousands, except percent)							
	Size of holdings in hectares							
	1991/92				2001/02			
	Total	<0.5	0.5-<2.0	2.0 & over	Total	<0.5	0.5-<2.0	2.0 & over
Total holdings	2736.1	1198.1	1241.1	296.8	3364.1	1605.6	1504.3	254.2
Keeping Livestock								
Number of holdings reporting	1,238.2	377.6	664.3	196.3	1499.4	542.6	801.5	155.3
Number of buildings	1,407.9	399.2	755.4	253.3	1627.4	565.0	881.0	181.4
Keeping Poultry								
Number of holdings reporting	96.6	20.3	49.7	26.6	161.5	48.8	87.7	25.1
Number of buildings	101.9	21.1	51.7	29.1	167.5	50.3	90.9	26.4
Storing Agricultural produce								
Number of holdings reporting	91.1	17.2	41.2	32.7	77.0	11.2	40.4	25.4
Number of buildings	101.6	17.7	42.9	41.0	82.5	11.5	42.7	28.2
Other purposes								

Number of holdings reporting	132.0	26.5	65.9	39.6	85.0	22.0	43.0	20.0
Number of buildings	142.7	27.7	69.9	45.1	90.5	23.2	45.5	21.8
Percent of holdings using non-residential buildings by purpose to total holdings:								
% Keeping Livestock	45.26	31.52	53.52	66.14	44.57	33.79	53.28	61.10
% Keeping Poultry	3.53	1.69	4.00	8.96	4.80	3.04	5.83	9.86
% Storing Agricultural produce	3.33	1.44	3.32	11.02	2.29	0.70	2.69	9.99
% Other purposes	4.82	2.21	5.31	13.34	2.53	1.37	2.86	7.87

TABLE 20. NUMBER OF HOLDINGS WITH AGRICULTURAL CREDIT BY SOURCE AND SIZE OF HOLDING, NEPAL, 1991/92 - 2001/02

Source of credit	(In thousands, except percent)							
	Size of holdings in hectares							
	1991/92				2001/02			
	Total	<0.5	0.5-<2.0	2.0 & over	Total	<0.5	0.5-<2.0	2.0 & over
Total holdings	2736.1	1198.1	1241.1	296.8	3364.1	1605.6	1504.3	254.2
Total holdings with credit	622.0	216	309.8	96.3	801.3	347.7	374.9	78.7
% to total holdings with credit	100.0	34.7	49.8	15.5	100.0	43.4	46.8	9.8
% holdings with credit to total holdings	22.7	18.0	25.0	32.4	23.8	21.7	24.9	31.0
Institutional source:	316.0	76.5	169.6	69.9	323.9	98.7	172.1	53.2
Percent distribution by size	100.0	24.2	53.7	22.1	100.0	30.5	53.1	16.4
Non-institutional source	306.0	139.5	140.1	26.4	477.4	249.1	202.8	25.5
Percent distribution by size	100.0	45.6	45.8	8.6	100.0	52.2	42.5	5.3
Percent distribution by source and size								
All sources	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Institutional source	50.80	35.42	54.74	72.59	40.42	28.37	45.91	67.62
Non-institutional source	49.20	64.58	45.22	27.41	59.58	71.63	54.09	32.38

TABLE 21. AGRICULTURAL HOLDERS BY SEX AND AGE, NEPAL, 1981/82 - 2001/02

Sex and Age	Number of Holders ('000)			Percent Distribution			Holding size (ha)	
	1981/82	1991/92	2001/02	1981/82	1991/92	2001/02	1991/92	2001/02
Total Holders	2,194.0	2,736.1	3,364.1	100.0	100.0	100.0	0.96	0.79

Male	2,055.1	2,560.5	3,092.6	93.7	93.6	91.9	0.98	0.81
Female	138.8	175.6	271.5	6.3	6.4	8.1	0.66	0.53
All ages	2194	2736.1	3364.1	100.0	100.0	100.0	0.96	0.79
Less than 25 years old	108.2	139.6	128.1	4.9	5.1	3.8	0.73	0.59
25-34	877.4	556.6	612.0	40.0	20.3	18.2	0.74	0.62
35-44	505.3	774.6	940.6	23.0	28.3	28.0	0.87	0.71
45-54	390.5	656.1	827.1	17.8	24.0	24.6	1.08	0.86
55 & over	312.5	609.2	856.4	14.2	22.3	25.5	1.20	0.95

TABLE 22. HOLDER AS HEAD OF HOUSEHOLD, HOLDINGS WITH HIRED MANAGER, LEGAL STATUS OF HOLDINGS AND USE OF PRODUCE BY SIZE OF HOLDING, NEPAL, 2001/02

Particulars of the holding	Size of holding in hectares							
	Total holdings	No land holdings	With land holdings	Less than 0.1	0.1 - <0.5	0.5 < 2.0	2.0 < 5.0	5.0 & over
Total number of holdings	3,364,139	26,700	3,337,439	260,547	1,318,372	1,504,323	228,840	25,358
Head of household as holder	3,278,625	26,161	3,252,464	250,939	1,286,566	1,467,667	222,674	24,618
% to total holdings	97.46	97.98	97.45	96.31	97.59	97.56	97.31	97.08
Hired manager	7,837	104	7,733	369	2,246	3,010	1,370	738
% to total holdings	0.23	0.39	0.23	0.14	0.17	0.20	0.60	2.91
Legal status:								
Single family	3,268,845	25,751	3,243,094	256,132	1,288,950	1,456,915	217,723	23,375
Joint family	93,892	880	93,012	4,414	28,936	46,779	10,935	1,947
Others	1,402	68	1,334		486	629	182	37
Use of produce								
Household consumption	2,630,789	21,714	2,609,075	242,996	1,174,339	1,081,704	102,505	7,532
Sale	8,091	526	7,565	716	1,849	4,033	803	164
Both	725,259	4,460	720,799	16,835	142,183	418,587	125,532	17,661

Percentage distribution to total holdings

Legal status:	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Single family	97.2	96.4	97.2	98.3	97.8	96.8	95.1	92.2
Joint family	2.8	3.3	2.8	1.7	2.2	3.1	4.8	7.7
Others	0.0	0.3	0.0	-	0.0	0.0	0.1	0.1
Use of produce	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Household consumption	78.2	81.3	78.2	93.3	89.1	71.9	44.8	29.7
Sale	0.2	2.0	0.2	0.3	0.1	0.3	0.4	0.6
Both	21.6	16.7	21.6	6.5	10.8	27.8	54.9	69.6

TABLE 23. SUFFICIENCY OF AGRICULTURAL/LIVESTOCK PRODUCE, NUMBER OF MONTHS INSUFFICIENT, MANNER OF COPING INSUFFICIENCY BY SIZE OF HOLDINGS, NEPAL, 2001/02

Particulars	Total No. of Holdings	No land Holding	Holding with land	Size of holdings in hectares			
				< 0.1	0.1 - <0.5	0.5 - <2.0	2.0 - <
Total Holdings	3,364,139	26,700	3,337,439	260,547	1,318,372	1,504,323	228,840
Sufficient to feed household	1,337,965	1,728	1,336,237	12,041	264,373	846,161	191,715
Not sufficient to feed Hh.	2,026,174	24,972	2,001,203	248,506	1,053,998	658,162	37,125
No. of Months Insufficient							
1 – 3 months	439,592	755	438,837	8,659	178,676	234,365	16,797
4 – 6 months	877,362	2,250	875,112	25,518	488,797	341,171	18,811
7 – 9 months	342,039	2,275	339,764	36,479	238,174	62,432	2,725
10 – 12 months	357,544	19,633	337,911	176,859	143,920	6,081	
Manner of coping insufficiency:							
Borrowing	241,975	2,509	239,466	18,373	106,295	104,000	10,887
Income within district	1,390,038	18,900	1,371,138	179,738	739,943	428,627	21,732
Income within Nepal outside dist.	174,393	2,167	172,226	22,488	91,093	146,623	2,702
Income outside Nepal	266,422	2,486	263,936	26,499	144,209	88,587	4,715
Other	165,793	3,409	162,384	30,899	79,008	48,479	2,521
Percentage Distribution to Total Holdings							
Total Holdings	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sufficient to feed household	39.8	6.5	40.0	4.6	20.1	56.2	8.4
Not sufficient to feed Hh.	60.2	93.5	60.0	95.4	79.9	43.8	91.6
No. of Months Insufficient							
1 – 3 months	21.7	3.0	21.9	3.5	17.0	35.6	4.4
4 – 6 months	43.3	9.0	43.7	10.3	46.4	51.8	4.4
7 – 9 months	16.9	9.1	17.0	14.7	22.6	9.5	0.9
10 – 12 months	17.6	78.6	16.9	71.2	13.7	0.9	
Manner of coping insufficiency: (Multiple response)							
Borrowing	11.9	10.0	12.0	7.4	10.1	15.8	2.5
Income within district	68.6	75.7	68.5	72.3	70.2	65.1	5.9
Income w/in Nepal outside dist.	8.6	8.7	8.6	9.0	8.6	22.3	0.4
Income outside Nepal	13.1	10.0	13.2	10.7	13.7	13.5	1.1
Other	8.2	13.7	8.1	12.4	7.5	7.4	0.7

Note: Details may not add up to total due to rounding.

TABLE 24. DISTRIBUTION OF LAND HOLDINGS BY TYPE AND COLOR OF SOIL AND BY SIZE OF HOLDING, NEPAL, 2001/2002.

Type and Color of Soil	Size of holding in hectares					
	Total	< 0.1	0.1 - < 0.5	0.5 - <2	2.0 - <5	5 & over
Total Holdings Reporting	3,337,439	260,547	1,318,372	1,504,323	228,840	25,358
Soil Type:						

Sand	1,457,918	87,625	527,186	707,593	116,639	15,059
Loam	2,006,773	119,509	730,884	964,177	166,469	19,843
Silt	557,458	20,098	190,732	293,084	48,506	4,685
Clay	1,316,369	56,154	458,168	674,068	113,773	11,774
Clay Loam	442,173	11,968	145,136	240,382	40,164	4,247
Soil Color:						
Black	1,879,661	102,827	680,028	922,786	152,856	17,140
Brown	2,092,953	131,304	762,464	1,004,382	169,552	18,918
Yellow	636,853	26,241	204,174	326,075	69,098	9,613
Red	824,529	27,403	310,245	432,483	48,978	4,386
Other	171,191	5,040	51,361	93,842	18,439	2,466
Total Area of Holdings	2,653,919	13,242	376,925	1,433,624	636,171	193,957
Soil type:						
Sand	589,418	3,820	94,541	326,212	124,335	40,510
Loam	884,643	5,189	131,516	479,625	210,756	57,557
Silt	167,820	757	224,992	94,402	39,344	8,325
Clay	532,466	2,334	77,209	304,278	124,011	24,634
Clay Loam	145,774	434	20,895	86,265	30,444	7,736
Soil color:						
Black	825,307	4,389	121,614	458,823	190,153	50,290
Brown	939,299	5,700	139,685	513,226	224,239	56,393
Yellow	215,460	1,002	28,268	113,208	55,148	17,819
Red	283,687	1,239	52,518	173,619	46,688	9,614
Other	56,485	204	7,068	31,903	12,664	4,646
Percent to total Area						
Total Area	100.0	100.0	100.0	100.0	100.0	100.0
Soil type:						
Sand	22.2	28.8	25.1	22.8	19.5	20.9
Loam	33.3	39.2	34.9	33.5	33.1	29.7
Silt	6.3	5.7	6.6	6.6	6.2	4.3
Clay	20.1	17.6	20.5	21.2	19.5	12.7
Clay Loam	5.5	3.3	5.5	6.0	4.8	4.0
Soil color:						
Black	31.1	33.1	32.3	32.0	29.9	25.9
Brown	35.4	43.0	37.1	35.8	35.2	29.1
Yellow	8.1	7.6	7.5	7.9	8.7	9.2
Red	10.7	9.4	13.9	12.1	7.3	5.0
Other	2.1	1.5	1.9	2.2	2.0	2.4

Note: Details may not add up to total due to multiple responses or non-response.

TABLE 25. NUMBER AND AREA OF HOLDINGS MADE UNCULTIVABLE DUE TO FLOODING/ EROSION BY SIZE OF HOLDING, NEPAL 2001

Total Area of Holding	Total		Land Made Uncultivable Due to Flooding/Soil Erosion		Percent to Total	
	Number of holdings	Area (ha)	No. of holdings reporting	Area (ha)	Number of holdings	Area (ha)

Total	3,364,139	2,654,037.1	156,883	30,845.2	4.66	1.16
Holdings without land	26,700	118.2	215	40.1	0.81	33.93
Holdings with land	3,337,439	2,653,918.9	156,668	30,805.1	4.69	1.16
Under 0.1 ha	260,547	13,241.6	3,031	407.6	1.16	3.08
0.1 ha and under 0.2 ha	346,113	49,864.2	7,971	577.3	2.30	1.16
0.2 ha and under 0.5 ha	972,259	327,060.8	34,828	4,251.0	3.58	1.30
0.5 ha and under 1 ha	915,674	641,659.3	45,339	6,520.8	4.95	1.02
1 ha and under 2 ha	588,649	791,965.0	40,463	8,929.0	6.87	1.13
2 ha and under 3 ha	157,026	371,223.0	13,286	4,636.4	8.46	1.25
3 ha and under 4 ha	51,573	175,690.5	5,264	1,908.8	10.21	1.09
4 ha and under 5 ha	20,241	89,257.5	2,700	1,024.2	13.34	1.15
5 ha and under 10 ha	21,575	139,750.2	3,327	1,776.6	15.42	1.27
10 ha and over	3,783	54,206.7	459	773.4	12.13	1.43

TABLE 26. DISTRIBUTION OF FARM POPULATION BY AGE GROUP AND SEX, NEPAL, 2001

Age group	Total farm population	%	Male	%	Female	%	Sex Ratio
TOTAL	19,032,499	100.0	9,385,811	100.0	9,646,688	100.0	97.3
0 - 9 Years	5,078,497	26.7	2,571,357	27.4	2,507,140	26.0	102.6
10 - 14 Years	2,581,058	13.6	1,321,501	14.1	1,259,556	13.1	104.9
15 - 24 Years	3,635,984	19.1	1,725,985	18.4	1,909,999	19.8	90.4
25 - 34 Years	2,500,510	13.1	1,160,086	12.4	1,340,424	13.9	86.5
35 - 44 Years	1,957,921	10.3	940,208	10.0	1,017,713	10.5	92.4
45 - 54 Years	1,451,868	7.6	726,991	7.7	724,877	7.5	100.3
55 - 64 Years	989,623	5.2	511,682	5.5	477,941	5.0	107.1
65 + Years	837,039	4.4	428,001	4.6	409,039	4.2	104.6

Source of basic data: National Population Census 2001.

TABLE 27. NUMBER OF HOLDINGS, AND FARM POPULATION BY SEX, SEX RATIO, HOUSEHOLD SIZE AND BY ECOLOGICAL BELT AND REGION, NEPAL, 2001

Ecological Belt/Region	Total number of holding	Farm Population				Sex Ratio	Average size of household
		Total	%	Male	Female		
NEPAL	3,364,139	19,032,499	100.0	9,385,811	9,646,688	97.3	5.7
MOUNTAIN	298,223	1,569,824	8.25	774,291	795,533	97.3	5.3
Eastern Mountain	71,343	384,338	2.02	187,763	196,575	95.5	5.4
Central Mountain	105,487	511,801	2.69	252,519	259,283	97.4	4.9
Western Mountain	4,155	19,754	0.10	9,818	9,936	98.8	4.8

Mid-Western Mountain	50,201	274,419	1.44	139,988	134,430	104.1	5.5
Far-Western Mountain	67,037	379,512	1.99	184,203	195,309	94.3	5.7
HILL	1,586,406	8,601,450	45.19	4,129,402	4,472,048	92.3	5.4
Eastern Hill	282,773	1,558,118	8.19	761,660	796,458	95.6	5.5
Central Hill	429,226	2,394,696	12.58	1,176,888	1,217,808	96.6	5.6
Western Hill	485,193	2,482,539	13.04	1,137,731	1,344,808	84.6	5.1
Mid-Western Hill	253,931	1,392,817	7.32	681,351	711,466	95.8	5.5
Far-Western Hill	135,283	773,280	4.06	371,772	401,508	92.6	5.7
TARAI	1,479,510	8,861,225	46.56	4,482,118	4,379,107	102.4	6.0
Eastern Tarai	455,901	2,337,774	12.28	1,173,520	1,164,254	100.8	5.1
Central Tarai	501,114	3,064,411	16.10	1,573,615	1,490,796	105.6	6.1
Western Tarai	226,460	1,506,729	7.92	757,478	749,251	101.1	6.7
Mid-Western Tarai	165,395	1,047,273	5.50	522,570	524,703	99.6	6.3
Far-Western Tarai	130,640	905,038	4.76	454,935	450,103	101.1	6.9
Eastern Development Region	810,017	4,280,230	22.49	2,122,943	2,157,287	98.4	5.3
Central Development Region	1,035,827	5,970,908	31.37	3,003,022	2,967,887	101.2	5.8
Western Development Region	715,808	4,009,022	21.06	1,905,027	2,103,995	90.5	5.6
Mid-Western Dev. Region	469,527	2,714,509	14.26	1,343,909	1,370,599	98.1	5.8
Far-Western Dev Region	332,960	2,057,830	10.81	1,010,910	1,046,920	96.6	6.2

Source of basic data: National Population Census 2001.

TABLE 28. DISTRIBUTION OF FARM POPULATION 10 YEARS OLD AND OVER BY ACTIVITY STATUS, SEX, PARTICIPATION IN FARM ACTIVITY, REGION, NEPAL 2001

Ecological Belt/Region	Farm population 10 years old & over			Activity status				
	Total	Male	Female	Economically active			Not economically active	
				Total	Male	Female	Total	Male
NEPAL	13,958,068	6,815,411	7,142,657	8,584,882	4,693,608	3,891,274	5,350,242	2,096,148
MOUNTAIN	1,151,279	561,462	589,817	851,533	415,378	436,155	299,746	146,148
Eastern Mountain	283,701	136,921	146,780	187,437	93,724	93,714	96,264	43,701
Central Mountain*	375,345	184,604	190,741	292,623	145,817	146,806	82,722	38,701
Western Mountain	16,254	8,048	8,206	11,487	5,981	5,505	4,767	2,254
Mid-Western Mountain**	209,015	104,629	104,386	162,963	79,500	83,463	46,052	25,015
Far-Western Mountain	266,964	127,260	139,704	197,023	90,356	106,667	69,941	36,964
HILL	6,308,138	2,962,117	3,346,021	4,021,069	1,966,491	2,054,578	2,287,069	995,138
Eastern Hill	1,152,141	556,853	595,288	739,451	374,443	365,008	412,690	182,141
Central Hill	1,806,883	880,762	926,121	1,111,388	598,340	513,048	695,495	282,883
Western Hill	1,840,150	813,440	1,026,710	1,126,751	499,773	626,978	713,399	313,440
Mid-Western Hill**	961,643	453,106	508,537	653,063	317,036	336,027	308,580	136,643
Far-Western Hill	547,321	257,956	289,365	390,416	176,899	213,517	156,905	81,321
TARAI	6,475,708	3,266,888	3,208,820	3,712,280	2,311,739	1,400,451	2,763,428	955,708
Eastern Tarai	1,763,004	881,015	881,989	1,021,003	619,479	401,524	742,001	261,004
Central Tarai	2,210,989	1,138,303	1,072,686	1,222,481	832,762	389,719	988,508	305,989
Western Tarai	1,096,371	548,084	548,287	660,969	387,663	273,306	435,402	160,371
Mid-Western Tarai	756,585	375,585	381,000	410,001	253,078	156,923	346,584	122,585
Far-Western Tarai	648,758	323,900	324,858	397,826	218,757	179,069	250,932	105,758

Eastern Region	3,198,846	1,574,789	1,624,057	1,947,891	1,087,646	860,246	1,250,955	487,778
Central Region*	4,393,217	2,203,669	2,189,548	2,626,492	1,576,919	1,049,573	1,766,725	626,778
Western Region	2,952,775	1,369,572	1,583,203	1,799,207	893,417	905,789	1,153,568	476,778
Mid-Western Region**	1,927,243	933,320	993,923	1,226,027	649,614	576,413	701,216	283,778
Far-Western Region	1,463,043	709,116	753,927	985,265	486,012	499,253	477,778	223,778

Source of basic data: National Population Census 2001.

*The farm population of Dolakha of Central Mountain was adjusted for undercoverage of some VDCs during the Population Census 2001 enumeration.

**/ Farm population of Dolpa, Jumla, Kalikot, and Mugu of Mid-Western Mountain and Salyan of Mid- Western Hill was adjusted for undercoverage of some VDCs during the Population Census 2001 enumeration.

TABLE 29. NUMBER OF HOLDINGS EMPLOYING AGRICULTURAL WORKERS BY SIZE OF HOLDING, NEPAL,
1991/92 – 2001/02

Agricultural Workers	(In thousands except percent)							
	SIZE OF HOLDINGS IN HECTARES							
	1991/92				2001/02			
	Total	<0.5	0.5-<2.0	2.0 & over	Total	<0.5	0.5-<2.0	2.0 & over
Total holdings	2736.1	1198.1	1241.1	296.8	3364.1	1605.6	1504.3	254.2
Holdings that did not hire workers	1760.8	943.5	724.7	92.7	2225.5	1243.8	890.2	91.6
Holdings employing permanent workers only	38.8	9.8	16.5	12.4	23.2	9.0	10.1	4.2
Holding employing occasional workers only	830.2	236.1	461.4	132.7	1046.4	345.6	574.8	124.8
Holding employing both kind of workers	106.2	8.7	38.5	59	68.9	6.1	29.3	33.6
Percent to total holdings								
:Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Holdings that did not hire workers	64.4	78.7	58.4	31.2	66.2	77.5	59.2	36.0
Holdings employing permanent workers only	1.4	0.8	1.3	4.2	0.7	0.6	0.7	1.7
Holding employing occasional workers only	30.3	19.7	37.2	44.7	31.1	21.5	38.2	49.1
Holding employing both kind of workers	3.9	0.7	3.1	19.9	2.0	0.4	1.9	13.2
Number of permanent workers	301.7	35.7	101.2	164.7	317.8	40.4	126.3	151.1
Male	230.3	25.3	76.9	128.2	179.0	24.2	71.3	83.5
Female	71.4	10.5	24.3	36.6	138.8	16.2	55.0	67.6
Percent to total permanent workers								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	76.33	70.87	75.99	77.84	56.32	59.90	56.45	55.26
Female	23.67	29.41	24.01	22.22	43.67	40.02	43.55	44.74

