

A Study On the Potato Seed Flow for the Selected Districts of Nepal

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INTRODUCTION

This paper summarizes on a regional basis the seed flows of Nepal as described in the seed flow study series. Only the major findings of the reports are dealt in the paper. The need for the study along with agronomical practices and marketing aspects in potato production in the private sector in the selected districts of Nepal are also mentioned briefly.

The districts surveyed represent most of the sub-Himalayan hill districts (Annex 1). Altogether, 43 districts were surveyed. Of the 43 districts surveyed nine each were located in the Eastern and Central Development Regions (EDR and CDR) ten in the Western Development Region (WDR), eight in the Mid Western Development Region (MWDR), and seven were surveyed in the Far Western Development Region (FWDR).

Since the Seed Flow study was done in two phases there is considerable variation on the type of data generated. Therefore, it is difficult to give a consistent reporting of the two phase study. Moreover, the reports of the first phase study are inconsistent because the same type of data were not collected for all the different districts where the survey was being conducted.

This report is organised into two sections. The first section consists of the background, objectives, and methodology employed in conducting the study. The second section consists of reports on each development region. For each region the main findings on the seed flow aspects are discussed separately.

The national agriculture development efforts of HMG/Nepal for many years have been targeted to help to make the Hills and Mountain region of the country food sufficient areas and official agricultural statistics have shown that the Hills and Mountains have remained food deficit areas. Agricultural practices in the relatively inaccessible Hills and Mountain regions of Nepal are characterised by the heavy dependence on cereal grains production. Potato is also a main food crop in the high Hills of the country.

Potatoes have several advantages over cereals in the high Hills. They have better nutrient value in terms of mineral and vitamin content over most cereals. Its yield per

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hectare is higher than cereals. Potatoes fetch high prices when sold and farmers are placed in an advantageous position when potatoes are exchanged with cereals in a 1:1 proportion. Bartering of potatoes with cereals is very common in the hill economy where cash transactions are normally low or even absent in some cases.

In spite of having several advantages over other crops potato has always been a risky crop and easily susceptible to different kinds of diseases and pests. Diseases and pests not only destroy the crop, but also ruin the economy of the farmers who might be heavily dependent on only potatoes. Apart from diseases and pests the bulkiness of the crop makes long transportation non-feasible, seed storage problematic and procurement of good clean and superior seeds to farmers from greater distance unmanageable.

The principle objective of the National Potato Development Program (NPDP) has not been to increase the area of potato cultivation, but to improve the quality of seeds used by farmers and to increase crop productivity on the existing areas. Since NPDP has limited financial and manpower resources the need has arisen to identify key potato growing sites for intervention in order to have the best multiplier effect with respect to area order to have the best multiplier effect with respect to area coverage an supply of clean seeds and new varieties.

RESEARCH OBJECTIVES

The overall objective of the study is to identify key intervention sites for potato improvement efforts in the Hills of Nepal. The specific objectives of the study are:

- to identify the major potato production areas, seed flow channels, main seed source and renewal source,
- to know the potato agronomy and management with respect to seeds,
- to know the potato marketing and its trends in the areas,
- to identify the major problems for potato seed production, storage and marketing system

METHODOLOGY

The current agricultural statistics of Nepal provides information on potatoes only at the district level. They do not provide information on villages within the districts where more potatoes are grown of information differentiating (village-wise) whether potatoes are grown for ware or for seeds. The first task of the survey team has therefore been to identify the villages in which potato seed is grown. The collection and identification of potato growing villages in the districts in general and seed flow in particular was begun at the district headquarters. Information on the villages was first generated from the Agriculture Development Office (ADO) and other knowledgeable officials. A working map was then prepared according to the information received and the field itinerary planned to collect information to verify and supplement the information received from the district headquarters.

Three groups of informants were interviewed for generating information. They were:

- local Leaders and the officials of the ADO,
- merchants,
- farmers.

INTERVIEW WITH THE LOCAL LEADERS AND THE OFFICIALS OF THE ADO

Information on potatoes grown in different villages, approximate area under cultivation, main potato seeds sources, types and varieties of seeds demanded and problems identified with potato cultivation were collected by means of semi structured questionnaires. These identified as leaders include working in the ADO's office, the then Pradhan Panchas, District Assembly Members, Village Assembly Members, School headmasters and other respected and influential persons or anyone who has knowledge about the district from where information can be obtained. Persons from the mentioned categories were interviewed. Based on the initial interviews at the ADO, the district working map was prepared and the field interview program made.

INTERVIEW WITH MERCHANTS

Information and opinions of the village level merchants were also collected by means of a structured questionnaire. The information generated from the merchants sought particulars on the types of seeds bought for sale, information on customer's demand, price variations, and supply sources.

INTERVIEW WITH FARMERS

The major field survey activity involved semi-structured interviewing of the farmers, who were mainly involved in the production of potatoes. A roster of progressive farmers in each village was prepared from the information provided by the agricultural workers in the ADO office, the local leaders, and the farmers themselves who were interviewed. The interview with the farmers made available basic data on the seed flow, potato agronomy and management, and potato marketing, describing farmers' and consumers' preferences. The interview with the farmers provided data to determine the potato trends in the area.

OBSERVATIONS

Information associated with the seed flow survey and not included in the questionnaire was collected through observation by the field researchers.

DATA COMPUTATION

Data computation was conducted on the basis of responses given by the farmers interviewed. Total production for (VDCs) Village Development committees is calculated by multiplying the area under potato cultivation by average productivity per unit of land wherever farmers were unable to provide data on production. Total seed

available for each district was estimated by adding total seed sold and seed used by the farmers. Data generated from the interviews do pertain to only important seed potato producing areas, particularly summer production areas.

TIME FRAME

This study covers a period from 1988 - 1990

LIMITATIONS OF THE STUDY

Several important limitations of the study deserve mention. Firstly, in identifying the potato seed pockets of different districts the chief informants were the officials from the ADO office. The ADO officials seem to lack the information about all the seed pockets. Therefore, all of the seed pockets may not have been covered in the study. Nevertheless, most of the important seed pockets have been covered in the study. Secondly, the information on the main seed pockets were provided by the farmers, but the majority of the farmers tended to provide information on the most important seed pockets. Areas producing small quantities of seeds tended to be left out or not be included in the study. Finally, it proved to be quite difficult to orient the survey teams to determine the seed renewal sources for the main production areas, therefore, important seed renewal sources were often not identified.

FINDINGS OF THE STUDY

General Findings

- Wide variations in the planting and harvesting time do not exist across regions. However, the dates for plantation and harvests vary. Planting season is found to begin on January and end in early March. There are several factors which explain this phenomenon. The type of the variety selected by the farmers affects his planting time; whether the farmers are using local varieties or improved ones. Variations also are found in areas prone to snowfalls. The harvesting is closely correlated with the plantation period. Late varieties are harvested late and the early varieties early. Harvesting a crop is also found to depend on whether the farmer wants the potatoes for ware or seeds. Problems of storing the potatoes may compel the farmers to keep their seeds in the fields.
- Some farmers in the seed growing areas in the study were found to select seeds immediately after harvest. Small farmers tended to obtain seeds just before plantation.
- Both whole and cut tubers were used by farmers for plantation. Sprouted, desprouted and unsprouted tubers were used for seeds. If sprouts were long they were pinched off before plantation. Seed rates varied with cropping pattern. The lowest seed rate was for Bhojpur district (0.6 tons/ha) (EDR) and the highest for Solukhumbu (2 tons/ha) (EDR). Seed density was low, especially in areas where potato is obtained as a mixed crop with maize and higher when single cropped. A very clear distinction could not be made from the study whether the farmers were

using cut pieces or whole seeds for plantations. Responses all throughout the survey indicated that with big tubers cut pieces were used while with medium size ones whole piece. However, there was a strong indication that in areas where NPDP seed production and Self-reliant promotional activities were prevalent whole tubers were preferred over cut pieces.

- Land ploughing varied from 2 to 4 ploughings.
- In the majority of the areas only farm yard manure (FYM) was used. Only in some places chemical fertilizers were found to be used. Information generated from the first phase of the Seed Flow Study show that out of six districts in the EDR namely, Dhankuta, Terathum, Sankhuwasabha, Taplejung, Ilam and Panchthar, only Panchthar did not reveal the use of chemical fertilizers. Of the five districts revealing chemical fertilizer use 40 per cent of the sample households of Dhankuta used chemical fertilizers and roughly 3.5 per cent of Taplejung. The second phase Seed Flow Study revealed that chemical fertilizers were in use in Nuwakot (CDR), Palpa, Gulmi (WDR), Rukum (MWDR), Accham and Baitadi (FWDR). Road access as well as programs associated with modernization of agriculture were strong factors associated with use of chemical fertilizers.
- Mainly three methods of planting prevailed. Scattered, ridge and Bukma (Shifting cultivation practised in some parts of Nepal). In MWDR and FWDR Nepal dibble planting in holes was also found. In WDR this practice was observed only in Myagdi district.
- Blight was prevalent in all the areas surveyed. The severity of blight was not same in all the areas. Insects like red ants and white grubs were also rampant in all the areas surveyed. The second phase Seed Flow study shows that brown rot was encountered in Rasuwa, Nuwakot, and Dolakha of the CDR Syangja, Parbat, Baglung of WDR, and Darchula and Accham of the FWDR.
- The farmers were found to take their produce to important local markets (hat bazaars). The merchants procured the potatoes and sold to different farmers and growers. The merchant found it cheaper to buy potatoes from the farmers who brought them at the hat bazaar. If the merchants were to go themselves to the farmers at the farm gate it would be more expensive to buy the crop, because they would have to pay the porters. The farmers do not seem to calculate their labour cost when they bring their produce for sale in the hat bazaar. It is also a common practice that farmers/merchants were found to engage in barter transaction. Equal volumes of grain were found to be exchanged for potatoes. Farmers were also found to borrow seeds prior to plantation from their neighbours.
- The price of potatoes shows seasonal variation. Post harvest price are usually lower.
- The storage systems were found to be traditional (Bamboo baskets spreading in a room), pit storage; field store. The methods are based on what they have been practising from time immemorial.

- Road and transport systems are found to allow for easy conveyance of seed and ware stocks of the main potato growing areas in the Hills. Wherever road access is available potatoes seem to flow to the hill market centres from the Tearai region. Although such upward flows were encountered, in the case of FWDR such flows were often identified with ware and not seed, or with seed for winter cultivation.
- Seed production areas in most of the districts are found to be located mostly in the high hill areas. This has created social problem with to extension workers, who often are not willing to live and work far away from the town or district headquarters.
- Sufficient land is not available in the hills for adequate crop rotation. The potato/maize pattern was more prevalent in the east, and potato-wheat rotation was more common in higher elevations.
- The perceived difference between seed and ware potato is often weak. The farmers think that the differentiation is necessary. This feeling becomes weaker as the plantation period approaches because of the shortage of the availability of good seeds. This is particularly true with small farmers who do not store seeds.

PRODUCTION DATA

Potato production data is not available for all the districts surveyed. The first phase study gives production data only for the sample households. This even is missing for most of the districts. Production data is available (rough estimates) for the selected districts surveyed in the second phase of the study. Potato production for major seed producing areas surveyed in the second phase reveals that potato production was the highest for the EDR. The WDR was also important compared to the CDR (the 3 Kathmandu valley districts were not included). Data for the FWDR and MWDR are some what less than that of WDR and CDR. (See tables 1-5).

Data on total seeds availability which is computed by adding up total seeds sold and seed used shows that the EDR has the highest quantity of seeds. MWDR ad FWDR have roughly the same quantity of seeds availability. (See tables 1-5).

SEED FLOW IN THE EDR

Of the ten districts selected for investigation in the Eastern Development Region of Nepal, Solukhumbu produced the largest quantity of seeds followed by Khotang and Bhojpur. The seed pockets in Solukhumbu district do not vary so much in altitude. All the seed pockets identified in the study in the Solukhumbu district are found to be above 2000 m. above sea level. Production data are not fully available for the districts surveyed during the first phase of the study (Ilam, Panchthar, Taplejung, Terhathum and Sankhuwasabha). In the previous year Solukhumbu district was found to supply seeds to different village of Okhaldhunga district (54.4t.).

Much of the seed flow activities in Okhaldhunga district is within the district. Potatoes were found to be bought by merchants in Solukhumbu in the month of October and supply them to Katari through Okhaldhunga. Bhojpur shows seed flow to Sankhawasabha district (53 t.) from Kimalung, Boya and Sangpang VDCs of Bhojpur district. In Khotang seed flow was limited only within the district (238 t.). The main pockets supplying seeds to different areas within the district are Nunthala (Nunthala Village), Baksila (Simpani Village) and Aiselukharka (Jhakribas). Among the there pockets Jhankribas is prominent.

Seed flow activities in Eastern Development Region also show that Ilam district is quite important. Ilam district shows both inter as well as intra district seed flow. Potatoes as well as seeds are found to enter into Ilam from India (Rimvik, Shree Khola). Some difficult parts of Ilam (Maipokhari area) with close proximity to Panchthar obtain seeds from Panchthar district (Lungrupa region). The seed flow study (first phase) shows seeds being transported all the way from Dhankuta district to Ilam district. Such a phenomenon is difficult to explain through the traditional commercial route, and is probably related to potato extension activities. Fikel in Ilam is the focal point for potato seeds. Seeds are found to move into Fikel from the adjoining areas like Nayabazaar. Nayabazaar is a very important area for seed production. The existence of a fair weather road which links Ilam with Panchthar facilities the transportation of seeds from Ilam to Panchthar. It is difficult to say whether potatoes are carried over all the way from Ilam to Taplejung through Panchthar. There is also a possibility that seeds move from Panchthar (Pancheme) to Taplejung where transportation is more difficult.

First phase seed flow reports also show that some seeds are found to enter from Taplejung into Sankhawasabha, and also from Dhankuta seeds are found to go all the way to Khandbari of Sankhawasabha district. But seed flow from Bhojpur to Khandbari is more important.

SEED FLOW IN THE CDR

Of the nine district surveyed in the Central Development Region of Nepal Nuwakot produced the largest quantity of seeds followed by Rasuwa and Dolakha (See table 2). Production data for Ramechhap, Sindhuli, Sindhupalchok, Makwanpur and Dhading are not available.

Nuwakot is easily accessible to Kathmandu. Potato production from Newakot is transported to Kathmandu (Balaju Cold Store) and later flows as seed to Nuwakot itself. In the previous year 50t of seeds were stored at Balaju Cold Store. Moreover, potatoes from Sankhu, Lalitpur and Bhaktapur in Kathmandu valley were stored at the Balaju Cold Stores and were sent to Bidur/Nuwakot for sale as seeds.

For Nuwakot, Rasuwa district is also found to be a traditional seed source. Roughly 20t of seeds are found to enter into different areas of Nuwakot district from Ysha and Bhorle VDCs of Rasuwa district. The seeds procured from Rasuwa are of local variety (both whit and red).

A small quantity of local potatoes are also found to reach Dhading district (less than two tons) from Rasuwa. Shyaphru and Gatlang VDCs were found to export local variety seeds to Dhading district. While in Rasuwa seed flow was observed from NPDP Kathmandu through ADO office Dunche (5 t.) in the previous year. Tipling in Dhading has a low potential because it is food deficit area. Borang/Jharlang has much more potential. This is because Borang has excess seeds and is nearer to the market.

Seed from different areas of Dolakha are found to reach Janakpur, Kathmandu, Lamasangu and Barabise as well as Ramechhap. The seeds as well as ware potatoes from Shyama, Jhyanku, Jiri and adjoining areas of Dolakha district are collected by merchants in Jiri. Likewise the potatoes from Sailung and adjoining areas are collected in Charikot by the merchants. Thus, procured seeds and ware potatoes in Jiri and Charikot are sent to Kathmandu and Janakpur markets. Some seeds are also found to reach Sindhuli from Ramechhap. Because of a road linkage, the potatoes are found to be transported all the way from Janakpur to Sindhulimadi of Sindhuli. Because of the long distance the potatoes travel it has a strong indication that it could be used as seeds. A total quantity of 416.34 t of potatoes were found to reach different areas within the Dolakha district as well as outside the district. Roughly 20-30 per cent of the seeds are found to leave the district.

SEED FLOW IN THE WDR

Of the ten districts surveyed in the Western Development Region of Nepal Maygdi district produced the highest quantity of seeds flowed by Baglung. Gorkha is also found to be an important area for seed production. Kaski district was also rated as an important seed producing area. Lamjung and Syangja are found to produce roughly the same quantity of seeds (See table 3). Gulmi and Palpa produced very little of seeds. Although one place (Wolesh) in Palpa was found to be a summer potato area no seed flow was reported. In Syangja only Panchamul was found to cultivate summer crop of potatoes. In Tanahau summer cultivation was found to be absent.

The seed pocket areas of Myagdi district not only cover the areas within the district but also the adjoining districts (Kaski Baglung and Parbat districts). In Myagdi four very important seed pockets were identified. They are Sikh, Tharakhani, Gurja and Lulang. Total seeds supplied from the seed pockets is estimated to be 1,287.2t. Of the total seeds a major share is found to go into Baglung usually from Tharakhani, Gurja and Lulang. It is also difficult to estimate exactly what proportion of seeds go outside the district. Roughly 200t. of seeds are estimated to go to Baglung, Parbat and also parts of Kaski taken all together. Sikh Village/Myagdi district was found to supply the major share of seed requirements to Parbat District.

Intra district annual seed flow in Baglung is estimated to be 159.6t. and in Parbat district it was found to be 217.5t. Parbat district has mainly two important seed pockets. They are Banaun and Kyang VDCs. Seeds from Banaun were found to go to Baglung and from Kyang to Syangja. Lekh Phant and Durlung VDCs/Parbat are of lesser importance. In Syangja most of the seed requirements are obtained from Bhairahawa because of its easy access by road. Only Panchamul produces seeds (288t.).

Potato seeds needed in Kaski district are produced either within the district or procured from Myagdi, Dhading and Bhairhawa. In Kaski, Dhampush, Ghandruk and Lumle are found to produce seeds. The total annual production for the three areas estimated to be 1,77.4t.

Lamjung has only two important seed producing areas. They are Bajhakhet and Bhulbule. The major seed production areas in Lamjung renew seed from Laprak/Gumda (Gorkha). Seeds are also found to come into Lamjung from the Tearai areas of CDR and WDR. The major seed producing villages in Gorkha, Laprak, Gumda, are said to renew seed from Tibetan settlements North. of Sirdibas.

Tanahu district obtains its seed requirements either from the adjoining districts like Lamjung, Kaski and Gorkha or from the CDR and WDR Tearai towns.

SEED FLOW IN THE MWDR

Eight districts were surveyed in the Midwestern Development Region of Nepal. Of the eight districts Kalikot district revealed an upward flow from Dailekh/Channa and also roughly horizontal flow from Jumla. Apart from inflow from the southern seeds (from big farmers) are targeted to Gauri and Ranggat/Surkhet district.

Both inflow and mainly outflow of seeds are observed in Rolpa districts. Seeds are found to leave Rolpa and are found to be targeted to Pyuthan and Dang (11 t.) Five Village Development committees (VDCs,) namely Thawang, Merul, Jhenam, and Jhinowang are found to export their products outside the district. The demand of seeds in northern parts of the districts are fulfilled by importing seeds from Rukum.

Both intra and inter district (317.9t.) seed flows are observed for Rukum. Some seeds are also found to enter Pyuthan from Rukum (30t.). Apart from inter-district flow we also observe intra district seed flow (97.2t.).

Seeds are found to be targeted to Baglung, Dang and Rolpa from Rukum/Taksera VDC (40t.) and another 20t. to Rolpa only from Mahat VDC. Some seeds enter into Rukum from Rolpa (Jinawang) (24t.) and also from Ranimata/Dailekh and Nepalgunj (1t.).

SEED FLOW IN FWDR

Seven districts were surveyed in the Far Western Development Region of Nepal.

Both inter and intra district seed flow patterns are observed in Bajura. One ton of seeds as brought in from Nepalgunj by the ADO office in the previous year. The intra district seed flow comes from the 4 main seed producing areas: Dugri, Martadi, Pandusen, and Kaliashmandu (125t.).

Seeds are also found to go to Accham (4 tons/year) from Martadi. It was also encountered that seeds go to Bajhang from Dugri (6 tons/year).

Both inflow and outflow of seeds are observed in Bajhang. Apart from inflow and outflow of seeds Bajhang also shows intra district seed flow. Majhigaon and Koiralkot were found to supply seeds to areas inside Bajhang district (Lamatole, Pawagabhi, Patadewal and Gadaraya) and also to the adjoining district Bajura and Doti. The main seed producing areas for Bajhang has been identified as Bhalichaur, Byasi, and Majhigoan. ADO office/Bajhang brought 0.5 tons of seeds in the previous year. Seeds from Bajhang were found to go to Doti (less than 15 tons) and to Bajura (roughly 10 tons) in the previous year.

Baitadi reveals both inter and intra seed flow. Seeds are found to enter into Baitadi from Jhulaghat India (5-10t. and in cases of bad harvest 20-25t.). From Darchula seeds enter into Baitadi (10-15t.; in case of bad harvest 20-25t.). Outflow from Baitadi to Dandeldhura is also found (100t./year). Farmers from Dandeldhura demand potatoes from Baitadi because farmers think they are good. The seeds from Khodpe (Baitadi) are in high demand in Dandeldhura.

Above 85 per cent of seeds demanded in Dandeldhura arrive from outside source (Baitadi). Other demand of the district are met from its own production. Potatoes produced in Baitadi and Dandeldhura (Summer Production) go down to Kanchanpur and Kalilali Districts in the months beginning July to September as ware. After September Indian potatoes are again found to go up as ware to Baitadi and Dandeldhura.

In Darchula three entry points for seed were observed. The three entry points are; Darchula, Jaljibe and Dattu (30-40t./year). Outflow of seeds from Darchula to Baitadi is also observed. In eastern area of Darchula seeds arrive from Iyrekot pass through Khari and Gokuleshore and from Gokuleshore seeds enter into Patan (10-15t./year) and go upto Dehimandu, and Gurukhola Baitadi. Seeds are channelled through Darchula to Fabi and then to Baitadi (Marmale Varieties). Roughly 18.5t. of seeds are found to leave Ralpa/Darchula but how much to Baitadi is unknown.

In Doti over 80 per cent of the required quantity comes from outside source because of poor storage system existing in Doti. Seeds are found to enter into Doti from Chana/Bajhang (100t./year). the rest is supplied from the seed pockets Dand and Godsera of Doti.

Brown not/witting was reported in Darchula (Source- India) and Accham (Source Ranimatta Dailekh).

Accham district shows that seeds entered into the district from Dailekh (2t./year) supplied from ADO source. Some inflow was also observed from Bajura (less than 4t./year). Seed requirements for the district are fulfilled from main pockets like Nandegada (Dadbada village), Daran (Chandali), Mattiko (Maltiko, Tali), Saltada (Saltada) and Birpath (Gaitand).

Table 1

Potato Production for Selected Areas of Some Districts of Eastern Development Region (EDR) of Nepal (M. Tons)

Districts	Total Potato Production	Sold	Total Seeds Available	No. of VDCs* Surveyed
1. Solukhumbu	9604.0	5865.7	2427.2	6
2. Khotang	9875.2	889.6	1940.8	6
3. Bhojpur	8025.5	1100.2	1907.3	6
4. Okhaldhunga	7288.1	3051.0	1353.3	9
Total	34,792.8	10,906.5	6,628.6	27

Source: Field Survey

* VDC = Village Development Committees (Previously known as Panchayats).

Table 2

Potato Production for Selected Areas of Some Districts of Central Development Region (CDR) of Nepal (M. Tons)

Districts	Total Potato Production	Sold	Total Seeds Available	No. of VDCs Surveyed
1. Nuwakot	8310.24	1169.41	1575.27	10
2. Rasuwa	5164.15	970.82	1270.16	6
3. Dolakha	2862.08	140.63	413.34	8
4. Kabhrepalanchok	3181.00	N.A	N.A	4
Total	19,517.47	2,280.86	3,258.77	28

Source: Field Survey

Table 3

Potato Production for Selected Areas of Some Districts of Western Development Region (WDR) of Nepal (M. Tons)

Districts	Total Potato Production	Sold	Total Seeds Available	No. of VDCs Surveyed
1. Myagdi	1855.0	908.0	1288.18	4
2. Gorkha	882.7	390.0	573.0	2
3. Baglung	3391.4	169.6	528.7	6
4. Kaski	4422.2	N.A	279.5	7
5. Lamjung	947.4	169.5	273.53	4
6. Tanahu	1984.6	N.A	226.9	5
7. Parbat	6181.2	218.2	217.5	7
8. Syangja	2406.0	N.A	201.0	7
9. Gulmi	698.01	395.5	18.5	7
10. Palpa	422.8	266.7	4.4	6
Total	23,194.4	2,517.5	3,611.21	55

Source: Field Survey

Table 4

Potato Production for Selected Areas of Some Districts of Mid Western Development Region (MWDR) of Nepal (M. Tons)

Districts	Total Potato Production	Sold	Total Seeds Available	No. of VDCs Surveyed
1. Rukum	4773.20	316.9	1195.2	6
2. Rolpa	6047.00	1810.00	1031.2	7
3. Kalikot	443.96	46.05	20.76	5
Total	11,264.16	2,172.95	2,247.16	18

Source: Field Survey

Table 5
**Potato Production for Selected Areas of Some Districts Far Western
 Development Region (FWDR) of Nepal (M. Tons)**

Districts	Total Potato Production	Sold	Total Seeds Available	No. of VDCs Surveyed
1. Darchula	7177.00	436.00	861.50	7
2. Bajhang	2533.16	415.68	578.36	17
3. Baitadi	4043.00	1023.70	545.60	7
4. Accham	2688.55	212.43	439.25	5
5. Bajura	576.25	29.00	100.00	10
6. Doti	515.10	347.30	79.50	5
7. Daduldhura	758.40	566.00	26.00	4
Total	117,533.06	3,030.11	2,630.21	55

Source: Field Survey

Annex 1.
List of Districts Surveyed

Regions	First Phase	Second Phase
Eastern Development Region	i. Ilam ii. Panchthar iii. Talejung iv. Therathum v. Sankhawasabha	vi. Bhojpur vii. Khotang viii. Okhaldhunga ix. Solukhumbu
Central Development Region	i. Ramechhap ii. Sindhuli iii. Sindhupalchok iv. Makwanpur v. Dhading	vi. Dolkha vii. Kabhrepalanchok viii. Nuwakot ix. Rasuwa
Western Development	i. Gorkha	ii. Baglung iii. Gulmi iv. Kaski v. Lamjung vi. Myagdi vii. Parbat viii. Palpa ix. Syangja x. Tanahu xi. Gorkha (Part)
Midwestern Development Region	i. Pyuthan ii. Salyan iii. Jajarkot iv. Dailekh v. Surkhet	vi. Kalikot vii. Rukum viii. Rolpa
Far Western Development Region		i. Accham ii. Bajang iii. Bajura iv. Baitadi v. Doti vi. Darchula vii. Dandeldhura





