



# A STUDY OF THE VEGETABLE SECTOR IN DADELDHURA & KASKI DISTRICTS, NEPAL

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## 1. Background

Samarth-NMDP is a five year, UK-Aid funded market development programme implemented by Adam Smith International, The Springfield Centre and Swiss Contact. The programme aims to increase incomes of 300,000 smallholder farmers and small-scale entrepreneurs through a Making Markets Work for the Poor (M4P) approach. The programme defines poverty, and its target groups, as those farmers and small-scale entrepreneurs living on less than US\$2.50 a day<sup>1</sup>.

The M4P approach is different from traditional poverty-reduction approaches as interventions are not carried out directly with beneficiaries, i.e. poor farmers and entrepreneurs. Instead, Samarth-NMDP acts as a facilitator outside the market system to influence market players inside the system, to strengthen the functioning of the market in favour of the poor. In M4P, the challenge is to unlock and develop the incentives and capacities of public, private and/or civil society actors to target new market segments, i.e. poor and disadvantaged people.

The M4P framework is designed to impact 'the poor', but poor people are not homogenous. Therefore understanding and unpacking 'the poor' is imperative for all M4P programmes so that they can be adequately targeted. This means identifying distinctions in the socio-economic and cultural position of men and women, different castes or ethnicities, or between those of different geographic locations, as well as when and where they face additional barriers to markets<sup>2</sup>.

The roles of the poor, and the specifics of inclusion and exclusion varies by sector. Samarth-NMDP works in ten rural sectors: Dairy, Pigs, Fish, Livestock Feed, Ginger, Vegetables, Crop Protection, Mechanization, Media and Tourism. This research examines the role of women in the Vegetable sector in Nepal by looking at the sector in Kaski and Dadelhdhura districts in the West and Far-West regions (See Figure 4.1).

## 2. The Vegetable Sector in Nepal

Eight and a half million Nepalese live below the official poverty line<sup>3</sup>. Poverty is 25% higher in rural areas and around seven percent higher in the hills than the terai, which makes an agricultural industry focused on high value produce relevant to poor people (WDI, 2012).

Smallholders account for almost all vegetable production in Nepal, and it is an important source of subsistence for over 3.2 million families (69% of all households) in Nepal – 17% of which are female-headed (Central Bureau of Statistics, 2010). However the majority (90%) of producers have less than 0.5 ha of land available to them and grow mainly for subsistence, with only 18% growing for the market and only 5% deriving their main income from vegetables (7% in the hills and 4.5% in the terai). For 12% of growers, vegetable farming (income and consumption) sustains them all year round, with a further 37% being sustained for 4-6 months. In all, 4.4 million parcels of land out of a total of 9.9 million are used for vegetable cultivation either in whole or in part for at least one crop per year (48% in the terai; 43% in the hills and 9% in the mountains), amounting to over 900,000ha or 38% of total cultivated area (Central Bureau of Statistics, 2010). Vegetables are also cultivable in different seasons from staple crops such as rice, maize and potatoes, which provides an opportunity for both income smoothing and net income increase if the crops can be sold.

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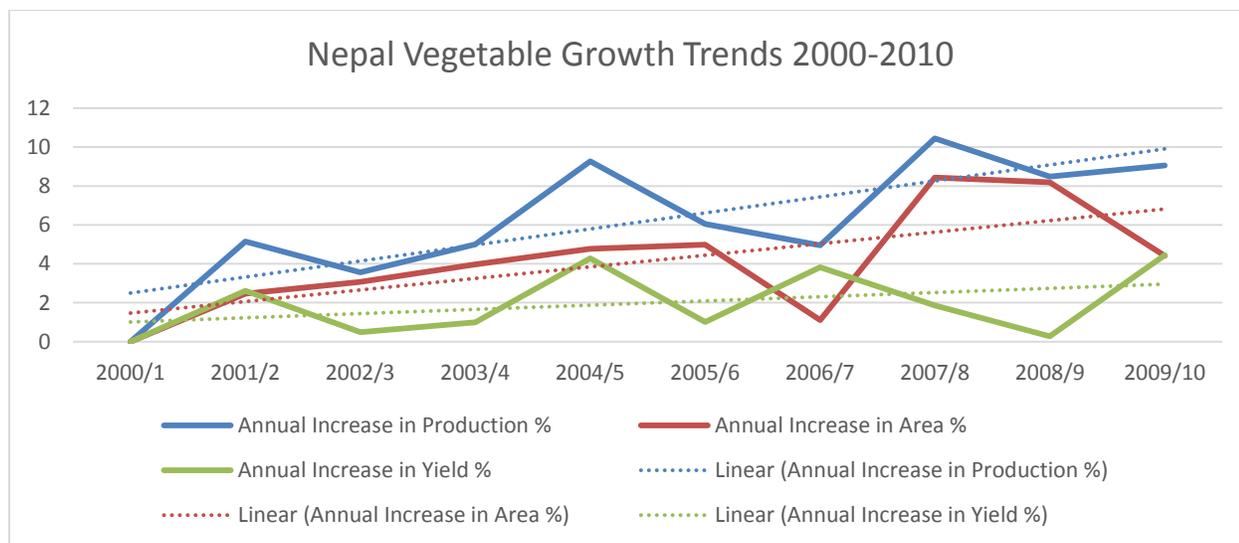
<sup>1</sup> Per capita daily consumption, upper international poverty line. Precise definitions of 'poverty', 'farmers' and 'small-scale entrepreneurs' are provided in the explanatory note to the Samarth-NMDP logframe.

<sup>2</sup> GESI Strategy 2013. Samarth-NMDP.

<sup>3</sup> The poverty line in Nepal is based on the Cost of Basic Needs (CBN) – the level of capital expense needed to meet basic needs which is far below 1.25 USD/d. Also the calorie requirement is set at 2,144/d (DFID, 2013).

A further incentive for Samarth to investigate the vegetable sector is provided by recent growth trends. The vegetable sector has grown considerably over the last 10 years, primarily through farmers diversifying away from staple crops, although a slight growth in yield also contributed. Between 2000 and 2010 overall vegetable production increased by an average of 6.9% per annum (45% overall) keeping well ahead of overall average population growth of 1.47% over the same time period (World Bank, 2013a). The most significant factor in this increase was the area cultivated (33.2% increase – 4.6% annually), however the total arable land area has not increased over this time period, indicating that vegetables are displacing other crops (World Bank, 2013b). Average yield has also increased but by 2.2% on average annually (17.7% overall).

**Figure 2.1: Nepal Vegetable Growth Trends 2000-2010 (SNV & IFAD, 2011)**



It is commonly observed that the majority of participants in vegetable farming are women. Nepal has seen a growing trend of out-migration of men to India, the Middle-East and beyond for employment opportunities, which has increased women’s involvement in production and marketing of vegetables in what has been termed the “feminization” of agriculture (Paudel, 2012; Tamang, Paudel, & Shrestha, 2014). However, whether this results in women being more in control of the income earned and participating more prominently in economic and community life remains to be seen, and forms part of the motivation for this study<sup>4</sup>.

### 3. Study Purpose

In line with Samarth’s Gender and Social Inclusion (GESI) strategy, this qualitative study was carried out to investigate the actual situation of women in vegetable farming households. This information would help Samarth’s vegetable sector team to fine-tune interventions so that they actually reach and benefit these women, and to ensure that impact upon women at the household level could be measured.

Additionally, it is hoped that this and similar research in other Samarth sectors will help to address the following key questions around the benefits to women from interventions using the M4P approach:

***Does raising overall household income from an agricultural enterprise (vegetable farming) mean women have access to income, and participation in decision making on how the money is spent?***

<sup>4</sup> Samarth-NMDP. Vegetable Sub-Sector: Analysis and Vision.

This question addresses whether elevating overall household income from vegetable production benefits, or is detrimental to, women. Because a systemic approach does not select direct beneficiaries but aims to impact markets as a whole, it is assumed that this creates large scale, positive impact on household income, equally benefiting women and men. It is important to try to ascertain whether elevated household income does in fact benefit women in the household and if so, how.

***Does reducing time spent on a given agricultural enterprise (vegetable production) improve women's situation?***

Market systems development interventions often aim to raise overall productivity of a given agricultural activity - in this case vegetable production. Part of this may be labour productivity, e.g. by increasing access to mechanized power. If women are heavily involved in vegetable farming and their labour is effectively displaced, it is important to understand whether this is positive, negative or neutral for women's overall situation. Do they allocate time saved on vegetable production in ways which are ideally positive (e.g. leisure or other activities of choice) or at worst neutral? Would displacing women's agricultural labour impact on their influence over decision-making within the household, including economic decisions and their ability to engage directly in market activities and transactions?

***Does women's involvement in direct transactions (vegetable sales) give them economic agency?***

Market systems development interventions may seek to increase women's direct participation in the sale of the commodity they produce with the assumption that if they transact, they have increased say in how the money is spent and are likely to spend it in ways which benefit them and their families. It is necessary to test this assumption and also to look for unintended consequences, such as increased tension in household relationships (and potential domestic violence), as a result of women's changing roles and increasing autonomy.

This paper: (i) describes the research approach and presents a summary of the research findings; (ii) discusses how the research was used in programming and any implications for the three key questions on M4P benefits to women at the household level; and (iii) proposes recommendations for further research and for Samarth vegetable sector-specific interventions.

## **4. Methodology**

### **4.1 Study Area**

Two districts were selected as study areas, Kaski in the Western Region and Dadeldhura in the Far Western Region. Kaski was chosen because Samarth, through a previous implementing partner, had been working in this district for two years. It was felt there was a need to understand the situation of women in an area in which Samarth was already intervening. Dadeldhura was chosen because it is one of the likely districts for Samarth's intervention, with high pro-poor vegetable production potential. The study in Dadeldhura was expected to identify opportunities and constraints for women in vegetable farming which could guide the sector team to develop market interventions that were more inclusive of women. A comparison between the situation of women in Kaski and Dadeldhura could further assist the vegetable sector team to fine tune interventions in Kaski and to assess whether a similar or different approach might be required in Dadeldhura. The study districts are indicated with an arrow in the Figure 4.1.

**Figure 4.1: Vegetable Sector Study Districts (clicknepal.com 2015)**



## 4.2 Sampling

A purposive sampling method was used to select participants in both districts, i.e. the people selected for group discussion and individual interviews were engaged in vegetable farming. A semi-structured interview technique was used, based on three questionnaires (see Annex I), one each for individual interviews and focus group discussions (FGDs) with vegetable farmers, and one for individual interviews of demand-side market actors (vegetable buyers, wholesalers, rural agricultural facilitator<sup>5</sup>). Two FGDs were held in each district, one women only and one men only. FGD discussions were recorded for later reference. All interviews were conducted in Nepali and responses noted English.

In Dadeldhura district, an agriculture cooperative member voluntarily helped to identify vegetable farmers in Dhoti-Datal and Amarghadi-Dola villages for FGDs. Individual interviewees were selected randomly among the vegetable farming households in those areas. Two vegetable wholesalers from Dadeldhura bazar (marketplace) were also interviewed in order to understand women’s access to market and to information, and also to triangulate the information provided in farmer group discussions and individual interviews.

**Table 3.1: Sample Sizes**

	Dadeldhura 50		Kaski 30	
	Women	Men	Women	Men
<b>FGD</b>	32	10	8	10
<b>Ind. Interview</b>	5	3	9	3
<b>Total</b>	37	13	17	13

In Kaski district, the Rural Agricultural Facilitator from Lahachowk Village Development Committee (VDC) helped to gather vegetable farmers for FGDs. Individual interviewees were selected randomly with the help of the Rural Agricultural Facilitator. Three vegetable buyers/wholesalers and the Rural Agriculture Facilitator (who helped to gather farmers for interviews) were interviewed in order to understand women’s opportunities to access markets and information, which also helped to triangulate information.

<sup>5</sup> Rural Agriculture Facilitator is assigned to that person who has completed School Leaving Certificate in agriculture; or who has passed skill test after having 3 years of work experience in agriculture project. S/he is employed by village development committee (VDC) office or non-governmental organization at ward or VDC level. Her/his responsibility is to teach farmers to do farming, or call farmers meeting when needed, or write meeting minutes etc. depending upon need and nature of tasks assigned by employer.

A total of fifty vegetable farmers in Dadeldhura and thirty in Kaski district were interviewed. The sample sizes and breakdown by gender and interview type are given in Table 3.1.

Data gathered from FGD and individual interviews was entered into spreadsheets, categorized into three groups (FGD vegetable farmers, individual vegetable farmers, and individual vegetable wholesalers/buyers) and disaggregated by gender. Data was analyzed manually. Each district’s findings and conclusions were drawn from respective data separately (see Annex II and III). A comparative analysis of the research conclusions from both districts was then undertaken and has been used as the basis for this paper.

Study findings from the vegetable sector and two other sectors were shared among Samarth’s sector teams in a half-day workshop, with participants divided into sector-based groups, led by sector analysts. The vegetable sector group was asked to consider and apply the vegetable sector study findings to their proposed interventions and develop recommendations for improving women’s access to and benefits from these interventions. The recommendations were presented at the end of the workshop and form the recommendations section of this report.

## 5. Findings

### 5.1. Profile of Respondents

A total of eighty vegetable farmers from Dadeldhura and Kaski districts were interviewed. Among the thirty Kaski participants, seventeen were female and thirteen were male, and all were married. Thirty-seven women and thirteen men were interviewed in Dadeldhura, but marital status of the participants was not recorded. Among the total sample, 86% were Brahmin/Chettri, 13% Dalit ethnic group, and 1% did not disclose this information. Majority of the respondents identified as Hindu (78 out of 80, 97%) and 3% identified as Christian.

**Table 5.1: Profile of Respondents**

Districts	Gender		Ethnicity*		Religion	
	Female	Male	Brahmin / Chettri	Dalit	Hindu	Christian
<b>Kaski</b>	17	13	24	6	28	2
<b>Dadeldhura</b>	37	13	45	4	50	
<b>Total</b>	54	26	69	10	68	2
*1 non-disclosed						

### 5.2. Household Decisions

Kaski had a number of female-headed households, but in Dadeldhura, household heads were almost always male. In Kaski, women appear to have a strong role in decision-making on family matters (marriage, timing of child birth, education, health care and participation in community activities),

**Table 5.2: Household Decisions**

either making decisions themselves or jointly with husbands, with few exceptions. This was also the case with regard to decisions about buying and selling household property such as livestock, and personal property such as clothes. In Dadeldhura, contrary to Kaski, decision-making on family matters (marriage, timing of child bearing, birth control, education, healthcare and participation in community activities) was usually made jointly by husband and wife or wider family, but in some cases husbands alone made these decisions.

<b>Kaski</b>	<b>Dadeldhura</b>
Women have stronger role	Varied according to VDC
Either women or jointly with husband	Jointly with husband or men only

### 5.3. Household Tasks

In both districts, women reported doing the majority of household tasks. In Kaski, division of labour in the home was traditional, with women doing the majority of household work and spending up to 8 hours/day on household tasks, while men did ‘outside’ work such as caring for livestock for 2 to 5 hours a day.

In Dadeldhura, women also did most of the household work (in addition to vegetable farming), with the majority spending up to 7 hours/day on household tasks. Notably, women reported spending little time on childcare (less than an hour a day) although most had 3-4 children. This may be because extended family take on this responsibility and/or the children are older.

**Table 5.3: Household Tasks**

Kaski	Dadeldhura
Women spend up to 8hrs/day on HH tasks	Women spend up to 7 hrs/day on HH tasks

### 5.4 Asset Ownership

Land ownership by women was relatively high in Kaski. All households owned some land and in 40% of households, land was in the wife’s name only. Where land was in the parents or parent-in-law’s name, the majority were a mother or mothers-in-law: 27% of husbands had land in their name. Decisions about buying/selling land would be made jointly by wife and husband or the wider family, not by women or men alone. Regarding other assets, women indicated that they could make decisions to buy or sell goats, chicken/ducks and clothes, but decision about cattle were made by themselves or jointly with husband.

**Table 5.4: Asset Ownership**

Kaski	Dadeldhura
Women owning land is high. 40% land in wives’ name; 27% in husbands’ name.	Men owned land
Women own small livestock, clothes	Very few women reported owning any assets (cattle, furniture, clothes, and jewelry).

In Dadeldhura also, almost all households owned some land and ownership was in the name of a male family member. The majority of women in individual interviews reported that they did not own (or could not make decisions to buy or sell) land, houses, cattle or other livestock, mobile phones or their gold jewelry. One owned cattle and furniture, two felt they owned their clothes, one said she owned her jewelry. Men in individual interviews said they owned or could decide to buy/sell land, house, cattle, furniture, TV and radio (in one case, consulting wife and son for land and cattle decisions). In no case did they nominate an item of property that belonged to their wife.

### 5.5 Income Sources

Vegetable farming was one of several sources of income for most households in Kaski. Both women and men were aware of the market demand for vegetables and in recent years had shifted from producing for household consumption to producing vegetables for income. However, only two considered themselves commercial producers. Many households sold from 100 to 6,000kg of vegetable per year. Poor quality vegetable seed supplied by agrovets appeared to be a constraint on vegetable production, according to both women and men farmers in this district. Many men and a few women also had paid employment in a variety of other jobs.

**Table 5.5: Income Source**

Kaski	Dadeldhura
Vegetable production one of the several sources of income	Vegetable production one of the main sources of income
Sale 100 - 6,000 kgs/year	Sale 500 – 20,000 kgs/year

In Dadeldhura, vegetable farming was an important source of income for households, but most households had additional sources of income, including remittances from family members working overseas, labouring and trades, usually done by male family members. Both women and men were aware of the strong market demand for

vegetables and some households were increasing their production to benefit from this. Household production of vegetables for sale varied greatly, from estimates of 500kg/year to 20,000kg/year.

## 5.6 Vegetable Farming Practice

In Kaski, most participants (both women and men) had been doing vegetable farming for many years, mostly for household consumption but in the last 1-4 years they were doing it as a business, often to cover basic HH expenses. Two male respondents in group discussion reported doing commercial vegetable farming for 40 and 20 years respectively, with another 2 being in the business for 17 years. Most women spent 4-6 hours a day in vegetable farming, and men spent 2-3 hours a day.

In Dadeldhura, many women and men stated that vegetable farming was a traditional family activity, while others started a decade or so ago because vegetable production was a profitable activity. Households tended to be extended families and often around 4 household members worked on vegetable farming, including the husband and wife. Women spent equal or more (often double) hours working on vegetable farming than men: from 4 to 9 hours a day compared to 2 to 5 hours a day for men. Some men worked in paid employment, limiting their time for vegetable farming.

## 5.7 Access to Information on Vegetable Farming

In Kaski the majority of women had access to information and training on vegetable farming techniques organized by government or NGOs. Both men and women were able to access information on vegetable prices, but most women relied a market intermediary such as a trader for this information. Men and women who took vegetables to Pokhara (from Lahachowk VDC) would get better prices.

In Dadeldhura, those women who were able to participate in market transactions had access to information on prices, agricultural inputs and suitable vegetables to meet the demand. Cooperatives were a source of information and training on better farming techniques, and a few respondents reported that those trainings had increased their productivity and vegetable quality. However many men and women appeared to have limited access to information on improved farming practices (many are still using traditional techniques). Vegetable wholesalers could be a useful source of information on agricultural inputs and consumer demand, for those farmers who dealt with them directly. There were evidently market incentives for wholesalers to collect vegetables directly from farms at times, as this was also reported. Agricultural inputs were offered on credit by one wholesaler, but only to men.

**Table 5.6: Vegetable Farming Practice**

Kaski	Dadeldhura
Women spend more hours than men in Veg. Women: 4-6; Men: 2-3	Women spend more time than men in Veg. Women: 4-9; Men: 2-5
Progressed from HH production to commercial farming	Aware of market demand

**Table 5.7: Access to Information on Vegetable Farming**

Kaski	Dadeldhura
Majority of women had access to info & training on veg. farming, prices	Women transacting in market had info on price, ag. inputs
Training info from NGOs & Govt.	Cooperatives were a source of info, trainings, but many men & women appeared to have limited info. on better farming practices

## 5.8 Sales Transactions and Control of Income

In Kaski, most women had control over vegetable income, even when their husbands transacted the sales. The majority of women made the decisions about selling vegetables; most transported vegetables to the collection point manually themselves (by basket carried on the back); conducted the sales transactions and kept the money earned. A few women and half the men interviewed transported produce to other markets, including in Pokhara, by vehicle. The majority of men gave their wives the income from vegetable sales.

In Dadeldhura, there were distinct differences in women's involvement in market transactions and control of income between different villages (Dhoti Datal and Amarghadi-Dola). Women in Dhoti Datal made decisions jointly with husbands about when to sell vegetables, but they manually transported vegetables to market themselves, transacted directly with vegetable wholesalers and the majority kept the money from sales.

In the village of Amarghadi-Dola, men more often made the decision to sell vegetables, transacted with buyers in the market, and kept the money from sales. Perhaps indicating that change is occurring in gender roles, there were a few instances of a wife selling vegetables and wives receiving the income from vegetable sales. In this location, vegetables were either transported to market manually by women, or by vehicle (rental, community or personal) by men.

It is evident from Dadeldhura that the distance to market may impact on whether a woman is directly involved in market transactions. According to a vegetable whole saler, women from nearby places (around 15km) would come to the market themselves (manually carrying vegetables), but if further away, men would bring the vegetables (transporting by vehicle).

## 5.9 Decision on Use of Vegetable Income

In Kaski, women made decisions concerning the use of income from vegetable sales alone or jointly with husbands in almost all cases, and income was used to pay for household expenses like basic needs, health care, children's education, reinvestment in vegetable farming, household infrastructure, vehicles and mobile phones.

In Dhoti Datal, Dadeldhura, even though women kept the income, decisions about spending the income were made jointly with husbands. A small number reported giving money to their husbands. In Amarghadi-Dola, most women reported that men made the decisions on expenditure of income, while men reported that decisions were made jointly with wives, although this was disputed by one male respondent who claimed men actually controlled the income. Income was used for household needs, children's education, healthcare, reinvestment in vegetable farming, household infrastructure, vehicles and mobile phones.

**Table 5.8: Decision and Control of Vegetable Income**

Kaski	Dadeldhura
Most women control income, even when husband transacted the sale	Appears to vary from VDC to VDC. Majority of women controlled income in Dhoti Datal; men mainly controlled income in Amargadi-Dola
Majority of women made decision about selling veg.	In Dhoti Datal- women jointly made decisions about selling veg. Amargadi, Dola- men often made decision to sell veg.
Women transported veg. to collection center manually	In Dhoti Datal- women manually carried veg. to market In Amargadi, Dola- men usually transported veg. in vehicle
Women almost always conducted the sales transaction	In Dhoti Datal- women conducted sales Amargadi, Dola- men handled the sales transaction
Women kept the money	In Dhoti Datal- majority of women kept income. Amargadi, Dola-most men kept the money

**Table 5.9: Decisions on Use of Vegetable Income**

Kaski	Dadeldhura
Women alone or joint decisions on expenditure	In Dhoti Datal- joint decision on expenditure Amargadi, Dola- women say men decide; men say joint decisions
Income was used in household needs, education, healthcare etc.	Income was used in household needs, education, healthcare etc.

## 5.10 Access to Savings and Credit Facilities

Both women and men had access to financial services in Kaski. Many women had taken out loans in their own name, and most men had also taken out loans. All women respondents saved money, often having multiple accounts with savings groups or cooperatives and sometimes with a bank. All men had savings with village groups/associations and banks. All households could potentially invest more in their vegetable businesses.

In Dadeldhura, all households had access to loans, although mainly small amounts through village groups and associations. All had access to savings mechanisms, often also village savings and loan groups. Many women and men in all study locations had taken out loans. Most women and men saved money, though again, only small amounts. Women often saved in Mother's groups (which also gave loans). Men sometimes accessed loans through women's membership of such groups. Households could potentially invest more in their vegetable enterprises.

**Table 5.10: Access to Financial Services**

Kaski	Dadeldhura
Both men & women have access to loans	Both men & women have access to loan
Many women have taken loan	Many men & women have taken loans
All women saved (often multiple accounts)	Women save with village groups (often very small amount)

## 5.11 Leisure

Most women and men in Kaski had some leisure time, but most expressed a preference to do other income-generating activities rather than recreational activities if they had the opportunity.

In Dadeldhura, women rarely had leisure time and understood leisure as a break from farming. There was a strong preference to do other tasks if time were available, including learning skills such as sewing to earn income. Most men appeared to have some leisure time and while some used the time to do additional tasks for the home, many enjoyed social or recreational activities.

**Table 5.11: Leisure Activities**

Kaski	Dadeldhura
Most men & women had some leisure time	Women rarely had leisure time Most men had some leisure time
Both prefer to do income generating activities if they had more leisure time	Women: if leisure time would do HH tasks & learn skills to generate income Men: outside HH tasks, socialize & do recreational activities

## 6. Discussion

### 6.1. Improving Outcomes for Women in Samarth Interventions

This research set out to better understand women's roles in vegetable production in two districts of Nepal, and to use this knowledge to guide intervention design and results measurement. The research findings did provide valuable insight into women's situation within both the household and the family vegetable production enterprise, both of which need to be considered to understand women's agency and economic empowerment.

The use of a workshop process with sector teams to apply the research findings was intended to ensure they viewed the research as something that would help them get the best outcomes from their interventions, not just a gender presentation they were obliged to attend. It also allowed teams to integrate the understanding and accounting for gender differences that might be relevant to interventions into their day-to-day work, shifting away from reliance on a 'gender expert' to provide suggestions on how to make interventions gender-inclusive. Sector teams had responsibility for considering the research outputs in the context of their sector strategy and interventions and then developing gender-inclusive actions that they felt were appropriate and achievable. Ownership of the actions, implementation and results lies with the sector team.

## 6.2. How do Women in Households Benefit from M4P Interventions?

The second purpose of this research was to contribute towards testing assumptions about the benefits to women at the household level from M4P interventions. The research results are discussed below against the three key questions posed in Section 3 of this paper.

### 6.2.1. Does raising overall household income from vegetable farming mean women have access to income, and participation in decision making on how the money is spent?

In both the study districts, vegetable farming was an important source of income for families, but most of the households had additional sources of income, including remittances from family members working overseas. Data collected in both Kaski and Dadeldhura did not give a clear picture of whether farmers had increased their income from vegetable farming, yet farmers were aware of the market demand and some households in Dadeldhura were increasing their production to benefit from this. In Kaski too, women reported increased time spent on vegetable farming in order to increase income, by growing off-season vegetables and tomatoes in a plastic tunnel.

Although the data are not comprehensive or conclusive enough to answer the above question, we did collect data on whether or not women participated in decisions about whether to sell vegetables, whether they conducted sales transactions, received the money from sales and whether they were involved in decisions over use of income from selling vegetables. In Kaski, the majority of women made decisions regarding when to sell vegetables, and most of them transported vegetables to collection centers themselves. In Dadeldhura, there was a clear distinction between different villages in terms of women's involvement in making decisions and carrying out sales transactions. Women in Dhote Datal made joint decisions with husbands regarding vegetable sales, but they transported vegetables to market themselves. In Amargadi-Dola, men often made the decision to sell vegetables, and they transported vegetables to market by vehicle.

In Kaski most women received the vegetable sales income, even when their husbands conducted sales transactions. In Dhote Datal, Dadeldhura, women transacted directly with wholesalers and a majority kept the money from vegetable sales. In Amargadi-Dola, men transported vegetables to market and they largely received and kept the income from these sales. Regarding decisions on use of income from vegetable sales, women in Kaski made these decisions alone or jointly with husbands and in Dhote Datal, decisions were made jointly with husbands. In Amargadi-Dola, men made the decisions on spending the income.

It would appear therefore that simply increasing household income from vegetable production does not necessarily mean that women will have access to the income or increased participation in how this money is spent, irrespective of how much of their labour they contribute to production. Women do appear to have more agency over earnings from vegetable production if they are directly involved in their sale. However, the ability of women in Kaski and Dhote Datal to control or influence use of income and conduct sales transactions may be due to different household/enterprise gender relations more broadly in these communities, compared to Amargadi-Dola. Based on the respondent profiles, these differences did not appear to be related to ethnicity/caste or religion, as the vast majority of respondents were Brahmin-Chhetri and Hindu in all three study locations.

None of the data collected suggests that raising household incomes from vegetable production has a negative effect on women's access to income and participation in decision-making, but it's possible that the effect would be neutral in some communities, such as Amargadi-Dola.

### **6.2.2. Does reducing time spent on a given agricultural enterprise (vegetable production) agricultural activities improve women's situation?**

Examining time spent in vegetable farming, women in Kaski had increased their time on vegetable farming in order to increase income. In Kaski, women reported having access to information and training on vegetable farming techniques from government and non-government organizations which had enhanced their vegetable farming capacity on one hand, but on the other they had to spend more hours in farming. Comparing hours worked by women and men in Kaski on vegetable farming, women worked more hours (4-6 hrs/day) than men (2-3 hrs/day), increasing their overall workload of farming and also doing household chores (1-8 hrs/day). In Dadeldhura, some households had increased production of vegetables due to increased market demand, but the data collected in this location did not capture whether or not women had increased time spent in vegetable farming, although it might be assumed that they did. Women spent more hours (4-9 hrs/day) compared to men (2-5 hrs/day) in vegetable farming because men were often engaged in other paid employment. Besides vegetable farming, women also did most of the household tasks, working about 16 hours a day doing both vegetable farming and household tasks, which rarely gave them leisure time.

If time-saving techniques, processes and transportation methods for vegetable production were able to be introduced, women in both Kaski and Dadeldhura districts would benefit from a reduced burden of work, but perhaps more so in Dadeldhura, where many households still use time-consuming traditional farming methods. Given the differences in gender relations noted in each of the three study sites in Section 6.1, it's likely that reducing the time spent on vegetable production would have a positive impact on the situation of women in Kaski. Women respondents in Kaski largely expressed a preference for doing other income-generating activities if they had more time, and it is expected that they would directly benefit from this. Based on the data, women in Dhote-Datal, Dadeldhura might also experience positive impacts from reducing the time spent on vegetable production and transport, without detriment to their influence in decision-making and access to income, but this assumption would need to be field-tested. These women also expressed a preference to learn skills and take up other income-generating activities if they had time, and would be likely to directly benefit from this. Reducing the burden of manual work could also have positive impacts on health and well-being. For women in Amargadi-Dola, with apparently the least influence and agency among the three study sites, reducing the time spent laboring in vegetable production would also likely be positive for their health and well-being, but whether the time saved might be put towards rest or learning skills and taking up other income-generating activities as they also expressed hopes of doing, is uncertain. It is also uncertain whether introducing more efficient farming practices might increase the opportunities for these women to move out of their traditional gender roles and increase their participation in decision-making, if not access to income, but it has the potential to do so (IFAD, 2014).

In summary, it would appear that measures to increase labour productivity and decrease transport effort in vegetable farming have good potential to impact positively on women, but because of the variability in household-level gender relations in different locations, the effect may be neutral in some cases. The data collected did not give indications of potential for negative impacts or unintended consequences, but follow-up studies should investigate this aspect.

### **6.2.3. Does women's involvement in direct transactions (vegetable sales) give them economic agency?**

Looking at responses from both districts, it can be said that women's direct involvement in the sale of vegetables may give them greater control of how the income is spent, however this varied from one place to another. In Kaski most women had control over vegetable income even when their husbands were involved in selling vegetables. Either woman alone or jointly made decisions to spend the money in household expenses. By contrast in Dhote Datal, Dadeldhura women were directly involved in transporting and selling vegetables, but decisions on use of vegetable income was made jointly made with their husband. In Amargadi-Dola, men decided when to sell vegetables, carried out sales transactions and also made decisions on use of the income.

There does therefore appear to be a relationship between the involvement of a party in the sale of vegetables, the degree to which they have some control over the revenue from these sales and their participation in decisions as to how it is spent. However the data is not sufficient to draw a firm conclusion. As noted in Section 6.1, existing differences in household gender relations may be a reason for the differences in economic agency noted among the three study locations in relation to vegetable sales and income, but increased agency and economic empowerment can also result from giving women opportunity to engage directly in markets.

## **7. Conclusion and Recommendations**

### **7.1. Conclusions**

We conclude that the use of small-scale research efforts such as this study to better understand the role of women within the household as well as in a target market sector, and using these research findings to fine-tune interventions, will improve the prospects of Samarth-NMDP delivering measurable benefits to women at the household level in the vegetable sector. The process of asking sector teams to workshop the implications of the research findings for their proposed interventions and develop appropriate adjustments ensured that they understood and 'owned' this aspect of their work, and built their capacity and confidence to consider and integrate gender and social inclusion issues at the earliest stages of market analysis and intervention design in future.

In terms of the three key questions about the actual benefits to women from M4P approaches, this study cannot draw firm conclusions but the data has provided useful indications as to where, how and if women involved in vegetable production might benefit from M4P interventions in the vegetable sector. The study sites would need to be re-visited after a period of implementation for learning and intervention-adjustment purposes, and/or after the programme completes to assess whether potential benefits eventuated or whether effects were neutral or negative. A better understanding of the reasons for the existing variability in gender relations in different locations, for example, why women in Kaski have a relatively stronger position within the household and economic enterprise than the other two study locations, would help to explain whether and to what degree women's economic agency is increased because of participation in sales and exposure to vegetable markets, rather than other factors.

However, we can fairly confidently say that it is not safe to assume that raising household income from vegetable farming alone means women will have access to and participate in decisions over use of that income. Differences in gender relations at the household level in different locations, as identified in this research, suggests that the assumption may be valid in some locations but not others. Effects may be positive or neutral, and the data is insufficient to assess whether impacts might be negative in some cases.

The data were not conclusive as to whether decreasing time spent in vegetable production would improve women's situation, but there are strong indications that women in Kaski and Dhote Datal, Dadeldhura would directly benefit from the time saved on vegetable production and transport. These women generally wanted to pursue other activities to improve their incomes, and this was viewed as a positive by them in interviews. In Amargadi-Dola, Dadeldhura, effects for women's health and well-being might be positive or neutral and perhaps neutral for women gaining other direct benefits, including economic, from the time saved.

It is not possible to draw definitive conclusions about cause and effect in the relationship between women's involvement in sales transactions and her economic agency, but there does appear to be a positive relationship between the two factors in our data.

In summary, we conclude that raising household income from vegetable production appears to be at worst neutral for women in these districts, and that measures taken to increase labour productivity including in transport of produce and to improve women's participation in sales transaction of vegetables is likely to have a neutral to

positive effect on women's access to income, participation in decision-making on use of income, and health and well-being. More data from a wider range of locations and with larger sample sizes would be required to be more definitive, due to the heterogeneity of Nepali communities.

## **7.2. Recommendations for Research**

### **7.2.1. GESI Research**

Samarth-NMDP should continue with GESI research activities in key sectors, to maximize the benefits to women in households from Samarth interventions.

A follow-up vegetable sector study should be carried out in the same VDCs of Kaski and Dadeldhura Districts towards the end of the programme, to document what if any changes have occurred in the situation of women in vegetable farming households and what impact Samarth-NMDP interventions might have had on those changes.

### **7.2.2 Testing Assumptions about Benefits to Women from M4P Approaches**

Sample study sites from different Samarth sectors should be re-visited at least 2 years after the programme has completed, to look for evidence of sustained changes catalyzed by the Samarth-NMDP programme. This process should also specifically seek out and document information about changes to the situation of women in households as a result of Samarth interventions. Analysis of this data across sectors will give a broader picture of whether, when and how women may benefit from M4P interventions more generally.

## **7.3 Recommendations for Programming**

Samarth's vegetable sector team and other staff, led by the vegetable sector analyst, considered the findings and conclusions of research into women in the vegetable sector in Dadeldhura and Kaski Districts and developed the following recommendations for their vegetable sector interventions.

### **7.3.1. Promoting Women in Vegetable Farming**

The research indicated that women participate more readily in vegetable production than men. This therefore needs to be taken into account by market players in the vegetable market (traders and input suppliers); something that needs to be incorporated into the design of interventions. This may take the form of conducting a short perception survey among traders, and scoping study to validate the findings. These findings could be presented among the traders to encourage them to adjust their models to be more inclusive of women because this will make sound business sense.

### **7.3.2. Reducing Women's Work Hours in Vegetable Farming and Utilize in Other Income Earning Activities**

The study showed that women spend more hours in vegetable farming than men, and also in doing household tasks which give them less leisure time (especially women of Dadeldhura district). Yet the majority of women nominated to do other income earning activities if they had spare time; e.g. as the result of saving time in vegetable production. Thus measures taken in improving vegetable productivity through improved information on better farming techniques, access to transport and bringing collection closer to them, could help reduce women's workload from vegetable farming which could be used in other income earning activities, or recreation.

### 7.3.3. Best Utilization of Credit Access of Women

Women in both the districts indicated having access to credit/loan and saving mechanisms (village saving and credit, mother groups, women's group etc). This credit access could be one of the opportunities for women to invest in vegetable farming which may increase knowledge and decision making capacity, leading to economic empowerment.

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## Annex I: Questionnaires

### Focus Group Discussion Questionnaire

1. Firstly, we are interested to find out who does what kind of task in the family (*Identify whether male or female, adult, child*) :

a. Who does the Income earning activities in the family, including foreign employment, and how much time do they spend on these activities? (*This will also identify if they are involved in pig/vegetable farming*)

b. Who does the Household work (*including cleaning, cooking, caring for children/elderly, tending garden, etc* ) and how much time do they spend on these activities?

c. Does anyone in the family participate in Community activities (*eg, working as a community group member or Female Community Health Volunteers*)? If yes, what do they do and how much time do they spend on these activities? Whatever kind of role do they play – participant, organizer, leader?

2.a. What is the main source of income in your family? (*If livestock: do you have any livestock as 'pewa' meaning personal property?*)

2.b. Approximately what percentage of your total household income comes from this activity?

3.a. Do you have any other sources of income?

3.b. If yes, approximately what percentage of your total household income comes from each of these activities?

4. Why did you decide to become involved in pig/vegetable farming, and how long have you been doing it?

5. Do you spend more or less time now than before in rearing pig/growing vegetable?

6. Can you get better quality vegetable seed/ pig breed? If yes, which family member does this?

7. Can you learn about or buy better technology/techniques for farming pigs/vegetables (*eg, machinery, fertilizers, drugs, training, etc*)? If yes, who gets access in the family?

- 8. Who makes the decisions about selling pigs/vegetables? (Man/Woman?)**
  
- 9. Where do you sell the pigs/vegetables, any particular place/person/trader/vendor/market (local/regional/national)?**
  
- 10. How do you transport the product to the market?**
  
- 11. How do people get information about current prices, best place to sell vegetables/pigs and so on? Who in the family gets this information (Man/Woman)?**
  
- 12. Who in the family receives the money earned from selling pigs/vegetables? (Man/Woman?)**
  
- 13. How does your family make decisions about use of household income? (*Are decisions made by the one who receives the income or is it joint decisions?*)**
  
- 14. What does your family do with the income from selling pigs/vegetables?**
  
- 15. Do you have access to microfinance/loan? If yes, who in the family usually gets the loan (Man/Woman)?**
  
- 16. Do you save money? If yes, how do you save? (*eg, saving at home, village saving group, bank account, etc*)? Who in the family usually does the saving (Man/Woman)?**
  
- 17. After pig/vegetable farming, what would be the next economic activities you would prefer to do?**
  
- 18. Do you own the land you use for farming? In whose name is the land ownership (Man/Woman)?**

**19. Who usually takes the lead in decisions related to family affairs about:**

- a. Marriage (own/children's):**
- b. Timing of child bearing:**
- c. Birth control:**
- d. Child education:**
- e. Health care**
- f. Taking part in community activities:**
- g. Any other decisions (please detail):**

**20a. Do you have leisure time?**

**20b. If yes, what do you do in your leisure time (allow them to nominate)?**

**21. Do you prioritize income earning activities over leisure time?**

**22. If you had more leisure time, how would you spend it**

## KEY INFORMANT INTERVIEW AT HOUSEHOLD LEVEL

NAME: \_\_\_\_\_ AGE: \_\_\_\_\_  
 GENDER: \_\_\_\_\_ ETHNICITY: \_\_\_\_\_  
 MARITAL STATUS: \_\_\_\_\_ RELIGION: \_\_\_\_\_  
 EDUCATION: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_ PHONE NO.: \_\_\_\_\_  
 NO. OF FAMILY MEMBER: ..... ; MALE: ..... ; FEMALE: ..... NO. OF CHILDREN: Son: ...;  
 Daug.: ...  
 (details of the family- education of kids...)

QUESTIONS	INDICATOR	ANALYSIS
1. Who is the head of the household? (If female headed household, where is your husband/father/brother/son?)	percent of FHH	
2. What is the main source of family income?	% of families with agriculture as the main source of income	
3. How many are working in pig/vegetable farming in the family?	average income productivity per person	Total income/HH member
4. Approximately how much of your total income is from pig/vegetable farming? (If reluctant to tell, what percentage of total household income is from this activity)		

5. Proportion of sales/transaction								women's and men's involvement in direct transaction	gender analysis of sales
Products	Number/kilos/litres								
		woman (♀)	man (♂)	Both (♀♂)	woman (♀)	man (♂)	Both (♀♂)		
Pig									
Vegetable									
Ginger									
Dairy									

<b>Other (please list)</b>											
<b>6. Use of income from pig/vegetable farming</b>										women's access over investment decisions	gender disaggregated decisions pattern in investment
<b>Goods/services</b>		<b>Who decides</b>									
		<b>woman (♀)</b>				<b>man (♂)</b>					
<b>Basic needs (food, clothes)</b>											
<b>Healthcare</b>											
<b>Education</b>											
<b>pig/vegetable</b>											
<b>Infrastructure</b>											
<b>vehicles- motor bike/cycles</b>											
<b>Gadgets- mobile phones</b>											
<b>Other (please list)</b>											
<b>7. Why did you decide to do pig/vegetable farming? How long have you been doing it?</b>											
<b>8. Do you spend more or less time now than before in rearing pig/growing vegetable?</b>										labor efficiency	
<b>9. Can you get better quality vegetable seed/ pig breed? If yes, which family member does this?</b>										labor efficiency	
<b>10. Can you learn about or buy better technology/techniques for farming pigs/vegetables (eg, machinery, fertilizers, drugs, training, etc)? If yes, who gets access in the family?</b>										labor efficiency	
<b>11. Who makes the decisions about selling pigs/vegetables? (Man/Woman?)</b>											

12. Where do you sell the pigs/vegetables, any particular place/person/trader/vendor/market (local/regional/national)?				
13. How do you transport the product to the market?				
14. How do people get information about current prices, best place to sell vegetables/pigs and so on? Who in the family gets this information (Man/Woman)?				
15. How does your family make decisions about use of household income? ( <i>Are decisions made by the one who receives the income or is it joint decisions?</i> )				
16. Do you have access to microfinance/loans? If yes, who in the family usually gets the loan (Man/Woman)?				
17. Do you save money? If yes, how do you save? ( <i>eg, saving at home, village saving group, bank account, etc</i> )? Who in the family usually does the saving (Man/Woman)?				
18. After pig/vegetable farming what is the next economic activities you would prefer to do?				
19. Do you own the land you use for farming? In whose name is the land ownership (Man/Woman)?				
20. Decisions over other family issues			women's decisions over household affairs	decisions show women's empowerment
<b>Decisions</b>	<b>Who decides</b>			
	<b>woman (♀)</b>	<b>man (♂)</b>		
<b>marriage</b>				
<b>child bearing</b>				
<b>child's education</b>				
<b>health care</b>				
<b>taking part in community activities</b>				
<b>Other (please list)</b>				

<b>21. What do you think is your personal property (Pewa/Daijo)?</b>			women's access, control and decisions over the asset they own	
<b>Assets owned (Tick ✓ if appropriate)</b>	<b>Decision to sell and/or buy</b>			
	<b>Yes</b>	<b>No</b>		
<b>Land</b>				
<b>House</b>				
<b>Cattle</b>				
<b>goats/pigs</b>				
<b>chicken/ducks</b>				
<b>clothes</b>				
<b>mobile phone</b>				
<b>Other (please list)</b>				
<b>22. Tasks you usually do everyday</b>			total hours worked	work burden or at leisure work
<b>Tasks</b>	<b>Yes</b>	<b>No</b>		
<b>Cleaning house</b>				
<b>Cooking and cleaning dishes</b>				
<b>caring children and elderly</b>				
<b>caring livestock</b>				
<b>kitchen gardening</b>				
<b>vegetable farming</b>				
<b>office job</b>				
<b>Business</b>				
<b>Other (please list)</b>				
<b>23. Do you have leisure time?</b>				
<b>24. If yes, what do you do in your leisure time (allow them to nominate)?</b>				

<b>25. Do you prioritize economic activities (income earning) activities over leisure time?</b>		
<b>26. If you had more leisure time, how would you spend it?</b>		

END

**KEY INFORMANT INTERVIEW: MARKET PLAYERS (Vegetable /pig)**

NAME:

AGE:

GENDER:

ETHNICITY:

MARITAL STATUS:

RELIGION:

EDUCATION:

ADDRESS:

PHONE NO.:

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1. What is your main business?
2. What type of services do you provide to vegetable farmers/pig farmers?
3. Do you go to the farmers? Or do they come for the services?
4. Who are your customers in terms of gender (men/women)?
5. Who reaches you often, men or women, to receive the services?
6. What type of caste group do you usually serve?
7. Any positive discrimination to promote women customers?

END

## Annex II: A Study of Vegetable Sector in Dadeldhura District - Results

### Research sites

- Dadeldhura District: Dadeldhura; Dhoti Datal; Amarghadi-Dola

### Research Sample

- Total farmer sample size: 50
- Women – 37, Men – 13

[Women's FGD 32, individual interview 5: total 37]

Men's FGD 10, individual interview 3: total 13]

- 90% Brahmin/Chhetri (45 people), 8% Dalit (4 women), 2% undisclosed (1 woman). All Hindu.

### Other

- Vegetable wholesaler: 2 [male], Dadeldhura market.

### Family/HH characteristics [Note: basic data collection in FGDs was incomplete]

- 7 out of 8 respondents in individual interviews indicated a male family member was head of HH; one woman was HH head due to absentee husband. No FHHs were reported in either women's or men's group discussions.
- Where reported, number of children per HH ranged from 1-2 to 9 or more. Most respondents reported 1-4 children. Several reported 5-8 children.
- HHs consist of extended family. 7 out of 8 respondents in individual interviews lived in HHs of 7-9 people or more. HH size reported in group discussions ranged from 3-4 to 9 or more, with a majority having 5-8 person HHs.
- Most participants belonged to community groups, often for savings and loan purposes, including Mother's Groups; goat rearing group; Agriculture Cooperatives; Community Development Group.

### Family decisions (IQ22; FQ19)

- Women in individual interviews indicated that family decisions (marriage, timing of children, birth control, education, healthcare and participation in community activities) were either made by both husband and wife, or only by a male family member. In the one female-headed HH, she made decisions. In group discussion, a majority of women indicated family decisions were made jointly.
- Men in individual interviews indicated that all decisions were made jointly with wife, except in one case, where healthcare and participation in community activities were decided by him. Men in group discussion said decisions were made jointly, except for participation in community activities where at least one said it was an individual decision.

### **Land (IQ21; FQ18)**

- Almost all HHs own some land and land ownership is in a male family member's name.
- Discussion in men's group suggested the amount of land owned was from 3 to 30 ropani (1500sq m to 1.6ha), although not all land would be used for vegetable farming. Men in individual interviews said the same.
- The one woman head of HH had only 2 ropani (in her absentee husband's name) to farm, which was not enough; she farmed an additional 4 ropani of other people's land and shared the harvest with them (sharecropping). Her husband had used the land as collateral for a loan without her knowledge and they had had to fight to get it back; they originally owned more than 2 ropani but some land was taken by men; as women, they were unable to speak out about it.

[Note: 1 ropani = 521m<sup>2</sup>]

### **Personal property (IQ23)**

- The majority of women in individual interviews reported that they did not own (or could not make decisions to buy or sell) land, house, cattle or other livestock, mobile phones or their gold. One owned cattle and furniture, two felt they owned their clothes, one said she owned her jewellery. One said there was no Pewa system.
- Men in individual interviews said they owned or could decide to buy/sell land, house, cattle, furniture, TV and radio (in one case, consulting wife and son for land and cattle decisions). In no case did they nominate an item of property that belonged to their wife. One man said there was no Pewa system.

### **Division of labour in HH work (IQ24; FQ1)**

- All women in group discussion agreed that women do the HH work.
- A majority of women in group discussion reported waking at 5am and sleeping at 9-10pm, with most of their time spent working in the field and doing housework.
- In individual interviews, women reported spending 1-3 hours on cooking meals and cleaning dishes, 1-3 hours on cleaning house, from 1 to 5 hours caring for livestock; one spent 2-3 hours in her shop. Notably, women reported spending less than an hour on childcare (or care of elderly) – the extended family appeared to absorb this responsibility and/or children were older and required less time.
- In group discussion, men claimed that both men and women did HH tasks, however, they were not specific about time spent on HH tasks. (*Chaupadi* custom, where women are isolated during menstruation, is still practiced in this village and men do the cooking during this time).
- In individual interviews, two men reported spending up to one hour on cleaning house and one spent 2-3 hours looking after children.

### **Division of labour in vegetable farming (IQ24; FQ1)**

- Women in both group discussion and individual interviews reported spending from 4-5 up to 8-9 hours a day on vegetable farming. Some women indicated that men helped with ploughing and preparing the

land; others said they did all the tasks themselves, including buying and planting seed.

- Men reported spending from 2-3 up to 4-5 hours a day on vegetable farming in individual interviews. In group discussion men did not specify the time spent on vegetable farming, but one claimed that men and women worked together on vegetable farming.

#### **Income sources (IQ2,3; FQ1a,2,3)**

- All HHs did vegetable farming and it was a key, but usually not the only, source of HH income.
- Both wife and husband engaged in vegetable farming, usually with a number of other family members (often around 4 people in total).
- Other sources of income included running small shops, labouring work, remittances from relatives in foreign employment, sale of small livestock, sale of surplus grain crops, and males of the family doing trades or other jobs.

#### **Why in vegetable farming (IQ7;FQ4)**

- For many it's a traditional family activity, others started a decade or so ago because vegetables grow well and it's a profitable activity. Both women and men gave these responses.
- A vegetable wholesaler interviewed confirmed that the market for vegetables is good [there is strong demand] and that his business has been increasing.

#### **Farming practices (IQ8,9,10; FQ5,6,7)**

- Women had different views about the time spent on farming during individual interviews. One reported spending more time now than before. It was the only source of income so more time was put into growing vegetables to earn more money. Two reported a significant reduction in the time spent. Provision of a road reduced transport time and knowledge of better farming techniques had also reduced the time required. Another said the time spent was the same, as she still used ox to plough and did other tasks by hand, while another was unsure, being busy all the time with HH tasks and vegetable farming.
- Four out of five women in individual interviews said their husbands or a male member of family bought the seed; three didn't know about seed quality as a consequence, but thought their husbands did, with one saying her husband does buy better quality seed and they have seen the difference in quality and quantity of vegetables. One reported that all family members participated in training provided by the Cooperative, which taught them about the better quality seed which they now use and new crops such as zucchini. The woman head of HH said she had no idea what was good or bad, she asked the traders for seed but they didn't tell her about different types of seed. In women's group discussion, it was unclear whether there was access to better quality seed. Half the women stated that they bought seed themselves, others said they went with their husbands; one said they could access better quality seed while another said there was no good quality seed.
- Four out of five women also reported that they had access to knowledge about better farming techniques/technology. Two said a male in the family got the information while two could access information themselves. Two mentioned the Cooperative as the source of information, and in one case, it

provided training in planting techniques, irrigation and bio-pesticide use. None had heard about mini-tillers. The woman head of HH had no access to information about better techniques and technology; she hasn't used pesticide even when her crops were destroyed by insects as she didn't have money for it, didn't know what to use/how to use and traders didn't tell her. The women in her village got together and discussed problems and tried traditional methods to treat them. Women in group discussion indicated an interest in getting access to better technology such as mini-tillers, and they thought women would have access to this information/techniques if it were provided to their village.

- Men in individual interviews reported spending the same time on vegetable farming, using the same techniques such as ox ploughing. One grew soybeans that did not require much effort and another said he spends about the same time (before and after his office job) but his wife, father and mother spend more time because of high demand for vegetables. Two out of three men said they know about better seed quality; one said he had an idea about better quality seed and the different companies, and could find seed at the agrovet. Another said he saved seed to plant the following year [unclear whether he did not know about improved seed varieties or preferred to save money by not buying]. Only one of the men said he had access to information on new technology or techniques, through organisations that sometimes provided information about hybrid seed, etc. In this case anyone in the family (male or female) could go and learn and then share with other family members. Two said they had not learned about any new techniques/technology; one said anyone in the family (male or female) could go and learn if there was an opportunity.
- In men's group discussion, one said men get access to information on new techniques/technology; another said mini-tillers were not used, and would be hard to use in terraces; and the third said he reared and used ox for ploughing and also used the manure for fertilizer.

#### **Comments by vegetable wholesalers:**

One said he shared information with farmers, including suggesting suitable vegetables to grow based on season or demand, and advised on use of fertilizer and pest control. Most of the farmers coming to him were women, so they received the information and services themselves.

The other said he supplied fertilizer and seed to farmers on credit and would deduct the cost when he bought vegetables from those farmers. It was men who got these supplies on credit.

#### **Vegetable production (IQ4,5; FQ2,3)**

- Based on all individual interviews, 2 HHs produced less than 500kg vegetables for sale; 2 produced between 500-1000kg and 3 produced 3-5000kg. One HH also sold onion plants, earning about Rs 7000. In addition, 2 HHs produced up to 200kg and 1 HH up to 500kg of grains/seeds for sale.
- Income from vegetable sales was variously reported by women in individual interviews as being sufficient only for HH expenses; earning less than Rs 13,000; earning Rs 40,000; and earning Rs 50,000 in 3 months. [No data from women's FGD]
- Men in group discussion reported that 200-400kg of vegetable could be produced during the least productive season. Two reported selling 20,000kg/year in total, another 9000kg/yr and another indicated 3000kg per 3 month season. Vegetable production was possible for 9 months of the year (Oct-Nov to June-July), with paddy farming done mid-July to late September. Other comments were that insufficient labour to work the land could be a constraint; younger women were not interested in farming as they

could go to India and earn 8000 Indian Rs/mth; the attractiveness of agriculture was decreasing and costs of production were increasing.

- Responses from men in individual interviews were that Rs 50,000 was earned in 3 months, and Rs 6,000 from soybean sales.
- [Note: Based on interviewees' estimates of quantity of vegetables sold and prices received, 3000kg sold at Rs 20/kg would earn Rs 60,000]

### **Vegetable sales, control of earnings (IQ5,11,12,13; FQ8,9,10)**

- A majority of women in group discussion (Dhoti Datal village) reported that they were involved in direct transactions for vegetable selling, but the decision to sell vegetables was made jointly with their husbands. They sold vegetables in Dadeldhura market (their local market) and transported vegetables in baskets carried on their backs.
- One of the Dadeldhura vegetable wholesalers interviewed confirmed that women farmers from Dhoti Datal sell their vegetables to him.
- A majority in women's group discussion agreed that women kept the money from vegetable sales, however, five women in the group reported that women give the money from sales to the men, some of whom used it for alcohol and gambling.
- In individual interviews, 4 out of 5 women (from Amarghadi-Dola villages) reported that men in the HH did the selling of vegetables and men received the money from the sale. One did the selling by herself (FHH) and kept the money (Dhoti Datal village). The decision to sell vegetables was reported to be made by a male in 3 cases, jointly between husband and wife in one case and by the female HH head in one case. Produce was sold in Dadeldhura market to traders or retail shops, with one woman noting that the produce was then sent to Dipayal District. Two women reported that they carried vegetables to market on their backs, with one commenting that 'before, women couldn't walk freely, now they can'; and three said vegetables were transported by vehicle (2 using village vehicle, 1 using husband's jeep).
- Several men in group discussion (Amarghadi –Dola villages) indicated that men did the selling of vegetables; some gave reasons why women could not do this job – they were illiterate, couldn't deal with traders, might be cheated by traders, it was too hard/heavy for women to carry vegetables to market, and who would look after the house. Vegetables were sold in Dadeldhura, Doti and Dipayal markets. They transported vegetables to market in vehicles (the village had 3 for rent, Cooperative now had one and outside vehicles were also available for rent).
- Although not stated directly in group discussion, the impression gained was that men kept the money from sales, or controlled use of the money. One said if women were educated and could keep account of money husbands would give the money to their wives; if not, husbands would keep the money. When asked if they give money easily to wives when they ask, one said it was obvious there would be control in the family.
- In contrast to the above, during individual male interviews (Amarghadi), one man reported that he was the seller, while another said his wife did the selling; both said the wife kept the income from vegetable sales. The decision to sell was reported to be made by the man in two cases and by both husband and wife in one case. Vegetables were sold in Dadeldhura/local market; one said buyers came to the village. One man said his wife carried vegetables to market on her back while another said he transported vegetables

to market in basket carried on the back with his daughter-in-law's help.

### **Comments by vegetable wholesalers, Dadeldhura market:**

One wholesaler said he sometimes used his own vehicle to collect vegetables from farmers and they sometimes phoned him and asked him to come to collect vegetables. He didn't charge a fee for this. Other times, farmers (mainly women) brought vegetables to him, from a 15km radius. They were aware of prices and only sometimes bargained with him. The quality of vegetables suffered when brought in baskets, as they got squashed. He dealt with all ethnic groups/castes and said women were active and knowledgeable. As vegetable growing commercialised, women were selling more. He would support women growers as there was strong demand for vegetables.

The other wholesaler said farmers from nearby brought vegetables to him but he would send a vehicle to collect from farmers who lived far away. Often women brought vegetables from nearby places such as Dhote Dhatal. Men would bring the vegetables from further places. He sometimes barter wheat for vegetables. He also deals with any person that comes to sell.

### **Prices (IQ14,FQ11)**

- Women in discussion group agreed that they have to sell vegetables at the trader's rate; even if they bargain, the price was fixed by traders. One said produce sold by them at Rs20/kg is sold in Mahendranagar and Dhangadi for Rs 70/kg.
- Most women in individual interviews were unaware of prices given for the produce as they didn't do the selling. The one woman HH head (Dhote Datal) reported that she consulted with other women - each sold to a trader and they compared prices; and sometimes outside traders came and offered higher prices. She didn't listen to radio or TV programs about agriculture to get more information on prices as she didn't have time.
- Men in group discussion also commented on price-fixing among traders – for example, Dadeldhura traders would tell Dipayal and Doti traders they were buying vegetables at a cheaper price than they actually paid farmers. Dipayal and Doti traders would then fix a lower price and would accuse farmers of trying to cheat them; they would only buy if farmers sold cheaply. Dadeldhura traders thereby ensured farmers would sell only to them. Dadeldhura was closer and easier for transportation, however, they felt it would be beneficial if they could sell in other districts.
- In individual interviews, one man indicated that traders bargained a lot with farmers and farmers were compelled to sell at the trader's price; his wife knew about prices as she went to the market herself. Another cross-checked prices with buyers by phone, and another only got information by asking at the market.

### **Use of Income from Veg Production/Decisions on HH Expenditure (IQ6,16; FQ13,14)**

- 4 out of 5 women in individual interviews said the male head of HH (husband, brother-in-law, father-in-law) made the decisions about spending income or controlled the money, although one said decisions on HH infrastructure spending were made jointly. One woman, as head of HH, made the decisions herself. Income was spent on basic needs, education, healthcare, reinvestment in vegetable production, infrastructure, vehicles, mobile phones, gold, buffalo/oxen, TV.

- By contrast, a majority of women in group discussion (Dhoti-Datal) said expenditure decisions were made jointly, especially when buying goods or investing in education. A majority said income was spent on HH needs, as well as education and health.
- All men in individual interviews said decisions on income expenditure (from all sources and for all categories of expenditure) were made jointly. One mentioned that both he and wife use the money, especially for HH needs.
- Five men in group discussion said decisions on expenditure were made jointly, while another 3 said expenditure decisions were family decisions. Income was spent on HH needs, children's education, healthcare and clothes. One said he wanted to be truthful and money was controlled by men. One commented that his wife may be interested in a Rs 25-30,000 sari, but he may not be able to buy it.

#### **Access to financial services (IQ18,19; FQ15,16)**

- All women in individual interviews said the HH had access to credit or loans. In 3 cases the woman had access, in 2 cases the male in the HH had access. Women belonged to village saving and loan groups such as Mothers Groups. Two women said they had taken out loans themselves, one stating it was to buy vegetable seed and fertilizer. One said her brother-in-law had taken out loans for emergencies, and another said they had access but had never needed to take out a loan. All women said the HH saved money. In two cases the woman saved; both husband and wife saved in one case and a male HH member saved. Most saved with village associations, one with a bank. Four out of five women saved Rs 10-20/month in a village savings group. At least one husband saved with a bank.
- Women in group discussion said both women and men could get loans from Mother's Groups and a few mentioned taking loans for HH expenses, neonatal care, cow and goat purchases and child's education. People now also got credit from the savings group for vegetable farming. The interest rate varied from 1.5-2% and a few mentioned the maximum loan was Rs 20,000. All women were involved in groups that could provide credit. Women saved from Rs 5-50/mth in village groups and all had an account and saved in the Mother's Group.
- All men in individual interviews said the HH had access to credit or loans. 2 had access themselves and one said his wife had access. One reported taking out loans; one had access via the women's saving group, and one had access through Cooperative and bank but had never taken out a loan. All three men said they had access to savings mechanisms, one with a village association and two with a bank. Two said their wives did the saving (one in the Mothers Group and one had a bank account in her own name) and one said both he and his wife saved (both with a bank).
- All men in group discussion said they had access to loans from the community groups they belong to but these groups could only lend a small amount of money – Rs 20-30,000. One said it was possible to get a loan for a larger sum from a rich person in a nearby village, up to 1 Lakh (Rs100,000). Another said getting loans from the bank was difficult, the collateral requirements such as land being near a road could not be met; a majority agreed their land could not be used as collateral to get a bank loan. All participants said they were members and had an account with the Dadeldhura Agriculture Cooperative. It was mentioned that there were 6 women's savings groups.

#### **Leisure (IQ25,26,27,28; FQ20,21,22)**

- Women in individual interviews and in group discussion mostly said they did not have leisure time, or rarely did; for one, leisure was understood as a break from agricultural activities, and when there was a break from the main agricultural or HH tasks, time was spent on other tasks such as washing clothes and collecting firewood. Some would use any free time to bathe, wash hair, chat with neighbours. There was a strong preference among women to do work, paid or unpaid, over actual leisure if time was available. Several said they would like to learn knitting and sewing, in order to make additional income; one said even if she made and sold items from these activities, she would have to give the money to her father-in-law and then ask him if she needed money. Only one mentioned socialising with friends and neighbours in leisure time and one wanted to spend time with her 8mth old daughter.
- In individual interviews, two men said they sometimes had leisure time and one said he did have leisure time. One read papers and books, another listened to radio music, while the third worked at home. Two would visit family and friends if they had more free time and one would work at home. Men in group discussion said there was not much leisure. They cited grazing oxen, working at home, going to the bazar, having tea and chatting with friends as examples of their leisure activities. One mentioned his wife's leisure activities, which were cutting grass for fodder, fencing and harvesting paddy. If they had more free time, men said they would do as they currently did.

#### **Next preferred economic activities (IQ20; FQ17)**

- Both women and men in group discussion nominated agriculture/farming as their next preferred economic activity, or had no other specific inclination.
- Two women in individual interviews nominated sewing/tailoring; others had no ideas or hadn't ever thought about it. One man in individual interview said he'd like to invest in shops, as he believed it was easier work and better income, while another had not thought about it.

#### **Conclusions**

- The majority (90%) of study participants belonged to the Brahmin-Chhetri ethnic group. However, differences were seen in women's participation in decision-making particularly in business and control of income, in different geographic locations.
- Household heads were almost always male and almost all households owned land, with ownership in the name of a male family member.
- Decision-making on family matters (marriage, timing of child bearing, birth control, education, healthcare and participation in community activities) was usually made jointly by husband and wife or wider family, but in some cases men made these decisions.
- Vegetable farming was an important source of income for households in this study, but most households had additional sources of income, including remittances from family members working overseas.
- Both women and men were aware of the strong market demand for vegetables and some households were increasing their production to benefit from this. Household production of vegetables for sale varied greatly, from estimates of 500kg/year to 20,000kg/year.
- Households tended to be extended families and often around 4 household members worked on vegetable

farming, including husband and wife. Women spent equal or more (often double) hours working on vegetable farming than men, from 4 to 9 hours a day compared to 2 to 5 hours a day for men. Some men worked in paid employment, limiting their time for vegetable farming.

- Women also did most of the household work in addition to vegetable farming, with the majority spending about 16 hours a day on both household tasks and vegetable farming. Notably, women reporting spending little time on childcare (less than an hour a day) although most had 3-4 children. This may be because extended family take on this responsibility and/or children are older.
- Women rarely had leisure time and understood leisure as a break from farming. There was a strong preference to do other tasks if time were available, including learning skills such as sewing to earn income. Most men appeared to have some leisure time and while some used the time to do additional tasks for the home, many enjoyed social or recreational activities.
- There were distinct differences in women's involvement in market transactions and control of income between different villages. Women in Dhote Datal made decisions jointly with husbands about when to sell vegetables, but they manually transported vegetables to market themselves (in baskets carried on the back), transacted directly with vegetable wholesalers and a majority kept the money from sales. However, decisions about spending the income were made jointly with husbands. A small number reported giving money to their husbands.
- In Amarghadi-Dola, men more often made the decision to sell vegetables, transacted with buyers in the market, kept the money from sales and made the decisions on expenditure of income. They also claimed ownership of most household property, with women having very limited or no ownership or decision-making capacity over property, including livestock, mobile phones or even clothes. Perhaps indicating change is occurring in gender roles, there were a few instances of a wife selling the vegetables and wives receiving the income from vegetable sales. In this location, vegetables were either transported to market manually by women, or by vehicle (rental, community or personal) by men.
- The distance to market may impact on whether a woman is directly involved in market transactions. According to a vegetable wholesaler, women from nearby places (around 15km) would come to the market themselves, but if further away, men would bring the vegetables.
- Opportunities for women to directly benefit from increased incomes from vegetable growing may vary considerably from village to village in Dadeldhura District.
- Women who were able to leave the home to participate directly in sales and purchasing were more likely to get information on prices, agricultural inputs and suitable vegetables to meet market demand.
- Many women and men appeared to have limited access to information on, or means to employ, improved farming practices. Many still used traditional time-consuming techniques.
- Cooperatives were a source of information and training in better farming techniques, including to families. Few in this study had had an opportunity to access this, but both women and men who participated valued the training and saw the benefits in increased quality and quantity of vegetables, as well as more efficient use of time and effort.
- Vegetable wholesalers could be a useful source of information on agricultural inputs and consumer demand, for those farmers who dealt with them directly. There were evidently market incentives for wholesalers to collect vegetables directly from farms themselves at times. Agricultural inputs were also

offered on credit by one wholesaler, but only to men.

- All households had access to loans, although mainly small amounts through village groups and associations. All had access to savings mechanisms, often also village savings and loan groups. Both women and men in all study locations were able to access loans and many had done so. Most women and men saved money, though again only small amounts. Women often saved in Mother's groups (which also gave loans). Men sometimes accessed loans through women's membership of such groups. Households could potentially invest more in their vegetable enterprises.

## Annex III: A Study of Vegetable Sector in Kaski District - Results

### Research site

- Lahachowk VDC, Kaski District

### Research Sample

- Total farmer sample size: 30
- Women – 17, Men – 13

[Women's FGD 8, individual interview 9: total 17

Men's FGD 10, individual interview 3: total 13]

- 80% Brahmin/Chhetri (24 people), 20% Dalit (6 people- 5 women and 1 man).
- 93% are Hindu (28 people), and 7% are Christian (2 women).
- All are married.
- All are above the age of 26 years, with 33% above the age of 51 years (10 people).

### Other

- Vegetable buyer/wholesaler: 3[male], Kaski
- Rural Agriculture Facilitator: 1[male], Lahachowk VDC, Kaski

### Family/HH characteristics

- 5 out of 9 female individual interviewees indicated a female family member as the head of household, either mother or mother-in-law (3), or themselves (2). 4 indicated a husband or father-in-law was head of HH. All 3 male individual interviewees indicated they were the HH head.
- A majority of interviewees (27 out of 30) had between 1 and 4 children.
- Of the 30 interviewees, 11 indicated family size between 3-4 members, 11 indicated size between 5-6 members, 5 indicated between 7-8 and 3 indicated more than 9 members.
- 15 out of 30 reported having 1-2 children, 12 reported 3-4 children, 2 reported 5-6 children and 1 respondent does not have a child.
- Most respondents belong to one or more community group (often savings and loan, also coops, school committees and others).

### Family decisions (Individual Q20; FGD Q19)

- Women in individual interviews indicated that family decisions (marriage, child birth, education, health

care, community activities) are either made by themselves or by husband and wife jointly. Only one respondent indicated that decision of child's education, healthcare and community activity is decided by husband; and one respondent was unsure about child birth as it happened naturally. In group discussion, all participants indicated that family decisions are made jointly, except the decision of timing of child birth where all indicated that it is decided by women.

- 2 out of 3 men in individual interviews indicated that family decisions like child bearing, education, and health care were decided jointly with wife, and community participation was decided by women alone, but all respondents indicated they decided about marriage themselves. One consistently indicated that he made all family decisions. In group discussion, most respondents indicated that family decisions were made jointly by husband and wife, though participation in community activities were decided individually. Three said marriage should be decided by those marrying; and one participant indicated that timing of child bearing, birth control and child's health care should be decided by the woman.

### **Land (IQ 19; FQ 18)**

- All households have some land.
- 40% of women (respondent or wife) own land (12 in total, 9 women and 3 men in individual and group discussion).
- 23% of men (respondent or husband) owned land (7 in total, 3 women and 4 men in individual and group discussion)
- 10% (3 respondents) indicated that land ownership was in both husband and wife's name. 27% (8 respondents) indicated that land ownership was in the name of one or both parents or parents-in-law (mothers/mothers-in-law mentioned by 7 respondents).

### **Personal property (IQ 21)**

- All women in individual interviews reported that they cannot make decisions to buy or sell land and house. Even where they own land, they indicated that joint decisions were needed. On the contrary, women indicated that they could make decisions to buy or sell goats or chicken/ducks, and decisions about cattle were their own or joint decisions with husband. All women indicated that they can decide to buy/sell clothes.
- All men in individual interviews also indicated that buying/selling land and house were family decisions. Decisions about livestock were also made by family. 2 out of 3 men indicated that they decide about buying/selling clothes, while one reported decision was made jointly with his wife.

### **Division of labor in HH work (IQ 22; FQ1b)**

- Women in group discussion reported that they work from 4-5 to 13-14 hours per day on both productive and HH work. Based on their estimates of time spent on vegetable production, time spent on HH work would be 1 – 8 hours/day.
- In individual interviews, a majority of women reported spending 2-5 hours/day on cooking meal and cleaning dishes, 1 hour cleaning house, 1-3 hours caring child/elderly. Two reported a daughter-in-law and mothers helped with HH tasks. One respondent also spent 6 hours/day teaching in school; one spends 1

hour in her Female Community Health Volunteer work; and one spends 4-5 hours doing her tailoring job.

- Majority of men in FGD indicated that they mainly do outside work, while wives mainly do work inside the house. One indicated he looks after two small children for almost the whole day.
- Only two respondents indicated that they do HH tasks when their wife can't do it, spending up to 1 hour on cleaning house and cooking/cleaning dishes.

#### **Division of labor in vegetable farming (IQ 22; FQ1)**

- All women in group discussion reported that they spend 4-6 hours/day on vegetable farming, The husbands of 5 women are in foreign employment while 3 reported their husbands work with them. Women in individual interviews reported spending from 1 to 6-7 hours a day on vegetable farming, with most spending 2-5 hours/day.
- In individual interviews, all men reported spending 2-3 hours doing vegetable farming. All men in group discussion reported being engaged in vegetable production, from growing vegetables mainly for HH consumption to commercial production. One respondent reported spending 2 hours/day, but no time estimate was recorded for other participants. One hired extra workers when needed.

#### **Income sources (IQ 2 & 3; FQ 1a, 2 & 3)**

- All households reported vegetable farming as one source of income, but it was not the only source of income for the majority of respondents
- A majority of women reported their husbands were in foreign employment, or in other salaried employment and one reported having a beauty parlour/cosmetic shop. Many men reported foreign employment, livestock/other agriculture and businesses as additional sources of income, with parents/children also contributing to HH income. One reported income from being a priest and another reported father's pension as HH income.
- A majority of respondents in individual interviews reported that 2-4 family members are engaged in vegetable farming. Four women individual interviewees reported that they alone are engaged in vegetable farming.
- Women in group discussion reported working 3- 6 hours in income earning activities.
- In individual interviews, a majority of women reported spending 1-3 hours caring for livestock. One spent 2-3 hours on a kitchen garden. One respondent also spends 6 hours/day teaching in school; one spends 1 hour in her Female Community Health Volunteer work; and one spends 4-5 hours doing her tailoring job.
- Majority of men in FGD indicated that they mainly do outside work like cleaning shed, caring for livestock, from 2-5 hours/day. One works at a school from 10am-4pm daily.
- In individual interview, one respondent indicated that he gets income from a teashop run by staff. Two reported spending 4-5 and 10+ hours/day caring for livestock.

#### **Why in vegetable farming? (IQ 7; FQ 4)**

- Most of the participants (both women and men) reported that they used to do vegetable farming for many years, mostly for household consumption but in the last 1-4 years they are doing it as a business, often to cover basic HH expenses. They were aware that there was market demand for vegetables.
- Two male respondents in group discussion reported doing commercial vegetable farming for 40 and 20 years respectively, with another 2 reporting being in the business for 17 years.

### **Farming practices (IQ 8, 9 & 10; FQ 5, 6 & 7)**

- Almost all women in both individual interviews and group discussion reported spending more time now on vegetable farming than before because they had increased vegetable production, including growing off-season vegetables and increasing the area planted because there was market demand, and some now followed proper farming techniques. One woman spent less time now because she buys seedlings instead of germinating seed herself and also replaced oxen with a tractor for ploughing her land..
- Contrary to women respondents, almost all men in group discussion and individual interviews reported spending less time now than before, because of modern farming technology including tractor use and knowledge of better techniques, selling locally and in one case, decreasing production because it was not profitable enough. 3 reported spending the same or more time, in one case due to increased area under production.
- Both men and women in group discussions shared their dissatisfaction regarding the quality of hybrid seed they were buying from agrovets. One man commented that imported seeds are not checked by government which may have created the problem of poor yields, while another male respondent reported that agro vets were buying and selling local seeds of bad quality.
- All nine women in individual interviews reported having access to information about better quality seed. Seven reported they themselves accessed this information and bought seed, one reported both she and her husband and one reported her husband only got this information and bought the seed.
- Only one woman in individual interviews indicated that she gets good quality hybrid seed which gives good yield; other women shared their dissatisfaction about seed quality. One woman noted that plants grew well but did not give good yield, unlike seed bought in earlier days. Another mentioned seed grows well in one season but does not survive for another season. It is unclear whether respondents were trying to save seed from hybrid plants to replant, and/or whether they were aware of fertilizer or other requirements for hybrid seed.
- Two out of three men in individual interviews reported they themselves have access to information about seed quality and both buy hybrid seed. One respondent was satisfied with the hybrid seed which grows fast while one reported that hybrid seed yields well during the main seasons but he is getting lower yields in the off-season and he has to invest in off-season vegetables than seasonal one. One did not have access to information about better quality seed.
- Regarding information about farming techniques, all women in group discussion reported that they received information and training on vegetable production from one or more of the non-governmental organisations: International Development Enterprises (IDE), Chase Nepal and ICC Nepal. Five out of ten men in group discussion received some kind of training individually from different organizations for free, whereas five did not receive any kind of training. One participant received 68 days of mushroom farming training from Village Development Committee (VDC), one received 7 days micro enterprise training from

VDC two received 16 weeks (one day a week) pest management training from District Agriculture Development Office (DADO), one also received 21 days training on vegetable farming from DADO, and one received one-day training on pesticide use and vegetable farming organized by DADO.

- Out of nine women in individual interviews, seven reported having access to better techniques/technology, while 2 did not have access. Six received vegetable farming training themselves and one reported that her husband took the training. Among the women who received training one reported that she received training from a NGO, Centre for Environmental and Agricultural Policy Research, Extension and Development (CEAPRED); one learned to plant tomato, use of pesticides, watering techniques, cutting leaves, distancing of vegetable; one got training on tunnel tomato farming provided by Annapurna Conservation Area Project (ACAP) one got vegetable farming training from Initiative for Climate Change Adaptation (ICCA); one got 3 days training on growing cabbage and cauliflower from Chase Nepal; and one got nursery training.
- Among the three men in individual interviews, two reported that woman family members have access to information and training on vegetable farming techniques and one reported that he himself has the access. He attended integrated pest management training for tomato farming some 4-5 years ago. One participant reported that his wife goes to vegetable farming training usually with a group of other women. The other respondent reported that his daughter got vegetable farming training provided by ACAP, but she only helps her mother and sister-in-law in vegetable farming sometimes.

#### **Vegetable production (IQ 4 & 5; FQ 2& 3)**

- Based on individual interviews of women, 3 HHs sold 201-500kgs of vegetables per year; 3 sold 501-1000 kgs; 2 sold 1001-3000 kgs; and 1 sold 3001-5000 kgs. One HH also sold less than 100 kgs of ginger every year.
- Income from vegetable sales varies. Among the women in individual interviews, 2 reported earning Rs 10,000/year or less, 1 reported about Rs 26,000, 4 reported earning Rs 48,000 to 55,000 in a year; and 2 reported Rs 80,000 in a year. Women in group discussion indicated earning more income compared to the women in individual interviews (possibly because FGD women were purposively selected by local facilitator while individual interviewees were selected randomly).
- Among women in group discussion, the lowest amount earned per year from vegetable production was Rs 18,000 in a year. Two reported earning Rs 60,000/year; 2 reported Rs 120,000 (1.2 lakhs); 2 reported from Rs 150,000 (1.5 lakhs) to Rs 160,000 (1.6 lakhs); and 1 reported Rs 300,000 (3 lakhs) in a year.
- Among men in individual interviews, 1 HH sold less than 100kgs of vegetable per year; 1 sold 1001-3000kgs; and 1 sold over 6000kg in a year and also green leafy vegetables (unable to estimate quantity). Two also sold 100kg and 2000kg of ginger.
- In men's individual interviews, 1 reported earning Rs 100,000 (1 lakh) per year from vegetables, 1 reported around Rs 150,000 and one reported earning Rs 66,000 from coriander and cauliflower but lost the earnings from tomato sales because of crop damage.
- Among men in group discussion, 2 reported earning between Rs 10 – 20,000 per year from vegetables, ; 3 reported Rs. 30,000/year; 2 reported earning Rs 100,000 (1 lakh)/year; and 2 reported earning between Rs 145 – 155,000/year. One participant used most for HH consumption and only sold surplus vegetables occasionally. .

- Among individual interviews, 7 HHs also reported selling milk, with 5 selling up to 4 litres/day; 2 selling up to 10 litres; and 1 selling 20 litres/day at Rs. 45 per litre. 5 HH also reported selling 1-2 goats every year, and 1 reported selling 3-4 goats in a year. 1 HH sold turkeys. Respondents in group discussion also reported selling milk, goats, paddy, oranges and flowers.

#### **Vegetable sales, control of earnings (IQ 5, 11, 12, 13; FQ 8, 9, 10, 12)**

- All 9 women in individual interviews reported selling vegetables themselves. 8 reported that they receive the money from vegetable sales whereas 1 reported both husband and wife receive the income. , 7 women reported making decisions about sales whereas 2 reported both joint decision-making between wife and husband. All women reported that they transport vegetables in baskets or sacks carried on their backs to the selling point. 7 reported selling their vegetables to a Lahachowk vegetable grower who recently started operating as a vegetable buyer and re-seller after the formally run Lahachowk Collection Centre closed. One woman sells at Harichowk Bazar, and some women also sell vegetables from home. All women previously sold their vegetables at the Lahachowk Collection Centre.
- Among 8 women in group discussion, 5 reported making the vegetable sales decisions themselves, and 3 reported decisions were made jointly by both husband and wife. . 7 women reported that they received the sales income and 1 reported her husband received the sales income. All participants used to sell their vegetables at the Lahachowk Collection Centre but after it closed they also sell to the new local vegetable buyer and re-seller. They all transport vegetables in baskets or bags on their backs to the local buyer.
- In contrast to the women, of the men in individual interviews, one reported his wife sold the vegetables, one sold vegetables himself and one reported both he and his wife did the selling. Similarly, one reported his wife received the money from sales, one received the money himself and one reported both he and his wife received the sales income. One reported his wife made the decisions about selling, one made the decisions himself and one said both he and his wife made decisions about selling. One participant sold his vegetables himself at Pokhara, transporting it by public jeep. He reported being able to sell all his produce and make a good profit. One reported his wife sells vegetables in Pokhara, transporting them by public jeep, and one sold vegetables from home. One reported previously selling to the Lahachowk Collection Centre.
- Among the 10 men in group discussion, 7 stated that decisions about selling vegetables are made jointly with wives whereas 3 stated their wives made the decision to sell. 3 reported their wives keep the income from vegetable sales, 6 reported giving them the money to their wives after they sell vegetables and 1 respondent said he keeps the money from vegetable sales himself. 6 reported taking vegetables to Chipledhunga Market in Pokhara by local jeep. 3 participants reported selling to the new Lahachowk vegetable buyer, transporting vegetables to him by basket carried on the back.. One participant sells vegetables to The Bazaar, a company in Kaski promoting fair trade and organic farming, which has a collection centre at Lahachowk. 2 participants mentioned previously selling to the Lahachowk Collection Centre.

#### **Lahachowk (Subha Laxmi) Collection Centre**

- Farmers comments about the now-closed Subha Laxmi Collection Centre in Lahachowk (started by an INGO, IDE) were that the middle-person benefitted most from the Centre; it used to post a price list every day but paid much less to farmers (eg, posting a price of Rs40/kg for cucumber but paying Rs 5-8/kg); and it graded vegetables and only accepted the best quality.

#### **Comments by Lahachowk vegetable buyer/re-seller:**

- The new Lahachowk vegetable buyer/re-seller confirmed in an interview that he collects vegetable from the village and sells it at Pokhara bazar. According to him, almost all those selling vegetables to him are women. He also gives them information about vegetable farming techniques for producing quality and quantity and advises on what vegetables are in demand. He bought a pick-up van for transporting vegetables to market and collects at least 1 quintal (100kg) of vegetable before taking it to sell in Pokhara. According to him he earns Rs 1000 profit per day from this business.

#### **Comments by vegetable wholesaler, Pokhara vegetable market:**

- A wholesaler interviewed in Pokhara commented that the farmers of Lahachowk are not united and that is the reason the Lahachowk Collection Centre could not function more than a year. He also commented that farmers are not committed to supplying the Pokhara buyers who go to collect their vegetables. According to him, he went to Lahachowk 2-3 times to collect vegetables but stopped going because he was not given regular supply. Farmers would sell to whichever buyer offered the highest price and did not honour previous commitments, or sold the best produce to others and supplied him with lower quality product. According to him farmers should commit to providing regular supply so that he could collect their produce in all seasons both in-season with lower price and off-season with a higher price).

#### **Comments by representative of The Bazaar, Pokhara:**

The Bazaar is a not-for-profit social enterprise promoting organic/fairtrade farming and has registered company status. It also has its own farmer's cooperative. It has been operating a collection center in Lahachowk since last year, with 30-35 Lahachowk farmers involved as suppliers and/or cooperative members. The Bazaar sends a vehicle twice a week to collect vegetables, with a minimum of 700-800 kgs required for each pick up. They are planning to assign a village coordinator to keep records and accounts.

- According to him it is risky to work with Lahachowk farmers because they are not consistent suppliers and may sell to other suppliers if they are offered more money. He is aware of the previous collection centre and knows about the new Lahachowk buyer, who he claims adds a large profit margin to the vegetables bought from farmers when he sells in Pokhara.

#### **Prices of Vegetable (IQ 14; FQ 11)**

- Among women in individual interviews, 7 reported that they are able to get information about vegetable prices whereas 2 reported that they do not know about the price and they take whatever is offered or proposed by the local buyer. Of the 7 respondents who know about prices 5 get the information themselves and 2 said both husband and wife get this information. Three respondents depend on pricing information provided by the buyer/middle person, and two mentioned the previous collection centre was the source of pricing information... One respondent reported getting information from villagers, radio and newspaper, while another reported relying on villagers for information after the collection centre closed. Two women were aware that prices were better in Pokhara.
- All women in group discussion reported that they used to get information on vegetable prices from the previous collection centre and now depend upon information provided by the buyer/middle person. 5 participants reported that they get the pricing information for the family, whereas 3 reported both husband and wife get the information.

- Men in individual interviews reported different experiences to women. One respondent reported that he sets the price himself according to the vegetable season because he sells at Pokhara market. Another reported that his wife enquires about prices in the Pokhara market when she goes there to sell and sets prices accordingly.. The third respondent reported that sometimes he decides prices himself and sometimes he gets information from the market or local villagers.
- In the group discussion, 4 men, reported they get the information on vegetable prices, 4 reported their wives get the information, and 2 reported whoever goes to market, either wife or husband, gets pricing information.

#### **Use of Income from Veg Production/Decisions on HH Expenditure (IQ 6 & 15; FQ 13 & 14)**

- 7 out of 9 women in individual interviews said they make the decisions about spending the income from vegetable production. 1 reported both husband and wife decide on the use of this income and 1 reported her husband decides. The majority of women reported they make the decisions about use of income on basic needs, health care, children's education and reinvestment in vegetable growing., with one reported joint decision for each of these expenditures and one decision (education) made by a husband. Out of 5 women who reported expenditure on HH infrastructure, 4 made the decision themselves and 1 reported it was a joint decision by husband and wife... For expenditure on vehicles, 1 woman out of 4 reported making the decision, while 1 reported her husband and 2 reported both husband and wife as decision-makers. For expenditure on mobile phones, 2 out of 5 women reported making decisions to purchase, while 3 reported a joint decision.
- In women's group discussion, 5 reported that they make decisions about use of income themselves, whereas 3 said it was a joint decision. All the participants reported that income from vegetable production is used for children's school fees and school necessities; basic HH needs; seeds; medicine; saving; and paying loans.
- Among men in individual interviews, 2 out of 3 reported both husband and wife make the decisions about use of income from vegetable production and one reported making the decisions himself. In detailed responses on various expenditures however, only 1 of the 3 men reported joint decision-making, for expenditure on basic needs, healthcare and reinvesting in vegetable production. 2 men reported they made the spending decisions on children's education, reinvesting in vegetable production and mobile phone purchase, and one reported his wife made decisions about expenditure on basic needs.
- All respondents said decisions on use of income were made jointly with wives. One respondent clarified that large expenditures are decided jointly but small expenses decided individually. 7 participants reported spending on HH needs; 2 on education; and 1 for further investment in agriculture.

#### **Access to financial services (IQ16 & 17; FQ 15 & 16)**

- All women in individual interviews reported having access to credit or loans from saving & loan groups, cooperatives and/or banks. Only 2 women reported taking out a loan, while 7 had not taken loan yet. 1 had received loan in the past and had repaid it. . All the women reported saving money. 6 did the saving themselves while 3 reported both husband and wife saved. Most belong to more than one savings group or cooperative, and 3 saved with a bank. Where reported, the total amount saved per month ranged from Rs 100 - 1300.
- All women in group discussion reported they have taken a loan in their name. Participants reported taking loans from more than one association, or bank. All the women reported saving Rs 400/month in a saving

group and cooperative.

- All 3 men in individual interviews said they have access to credit or loans from saving and loan groups or cooperatives, but none of them have taken loan yet. All of them save money with a bank and/or village association. One reported his wife does the saving, one reported he does the saving and one reported both he and his wife save. Where reported, the total amount saved was Rs 200 or more per month.
- In men's group discussion, all 10 participants reported they had got loans, 5 from people they knew and 5 from bank, village savings and loan associations and community groups. All men reported saving money, with a village group, cooperative and bank.

#### **Leisure (IQ 23, 24, 25 & 26; FQ 20, 21 & 22)**

- 4 out of 9 women in individual interviews and all women in group discussion reported having leisure time. Two women reported no leisure time and 3 had leisure time sometimes or rarely. Most indicated doing household tasks (reproductive tasks) and socialising during leisure time; some also reported doing business, making handicrafts (productive tasks) or volunteer work; and watching TV and sleeping were reported by 2 women. 5 out of 8 women of group discussion and 6 out of 9 women in individual interviews indicated preference to do income-earning activities or HH activities over leisure activities, including producing off-season hybrid vegetables, grass cutting or firewood collection, rearing buffalo to sell milk and teaching.
- 9 out of 10 men in group discussion and 2 out of 3 men in individual interviews reported having leisure time. The majority used leisure time for recreational activities and socialising; two did farming and making handicraft (bamboo baskets). All men in group discussion and 2 out 3 men in individual interviews expressed a preference to do income-earning activities over leisure activities, specifically vegetable farming and goat rearing.

#### **Next Preferred Economic Activities (IQ 18; FQ 17)**

- In women's group discussion, 5 nominated different economic activities they would like to do. These were establishing tomato tunnels (3), tailoring (1) and running a beauty parlour (1). 3 reported they had not thought about other economic activities. In individual interviews, 7 women nominated other economic activities they would like to do. These were tailoring (3), rearing buffalo to sell milk (2), teaching (1), health work (1) and establishing tomato tunnels (1).
- Two out of 3 men in individual interviews, and 9 out of 10 in group discussion nominated different economic activities they'd like to do. For men in individual interviews these were grain growing and re-starting a rice and wood milling business. In group discussion, 5 men said they would like to rear goats, and others had different choices - chicken rearing, kiwi farming, flower farming, selling milk and , buying a tractor to plough/rent it for increased income. Two were satisfied with current activities.

#### **Conclusion**

- A majority (80%) of those interviewed in this study were from the Brahmin/Chettri ethnic group, while 20% identified as Dalit. In Kaski District, the women interviewed tended to have an active role in decision-making and owned assets. A number were female-headed households.
- Women appear to have a strong role in decision-making on family matters (marriage, timing of child birth,

education, health care and participation in community activities), either making decisions themselves or jointly with husbands, with few exceptions. This was also the case with regard to decisions about buying and selling household property such as livestock and personal property such as clothes.

- Land ownership by women was relatively high. All households owned land and in 40% of households, land was in the wife's name only. Where land was in parents or parent-in-law's name, the majority were mothers or mothers-in-law. 27% of husbands had land in their name. Decisions about buying/selling land would be made jointly by wife and husband or wider family, not by women or men alone.
- Vegetable farming was one of several sources of income for most households. Both women and men were aware of the market demand for vegetables and in recent years had shifted from producing for household consumption to producing vegetables for income. However, only two considered themselves commercial producers. Many households sold from 100 to 6000kg of vegetable per year. Poor quality vegetable seed supplied by agrovets appeared to be a constraint on vegetable production, according to both women and men farmers in this district.
- Overall, women appeared to spend more hours on both household work and vegetable farming than men. Division of labour in the home was traditional, with women doing the majority of household work, spending from 1 to 8 hours on these tasks, while men did 'outside' work such as caring for livestock for 2 to 5 hours a day. In addition, women spent 4-6 hours a day on vegetable farming, while men spent 2 to 3 hours a day. Many men and a few women also had paid employment in a variety of jobs. Most women and men had some leisure time, but most expressed a preference to do other income-generating activities rather than recreational activities if they had the opportunity.
- The majority of women had access to information and training on vegetable farming techniques from government or non-government organizations and several men reported women in the family had received training.
- Women had increased the time they spent on vegetable farming in order to increase income, including through growing off-season vegetables. By comparison, most men reported that access to mechanical equipment and modern farming technology meant they spent less time on vegetable farming.
- Most women had control over vegetable income, even when their husbands transacted the sales. A majority of women made the decisions about selling vegetables, most transported vegetables to the collection point manually themselves (basket carried on the back), conducted the sales transactions and kept the money earned. A few women and half the men interviewed transported produce to other markets, including in Pokhara, by vehicle. A majority of men gave their wives the income from vegetable sales. Women made decisions alone or jointly with husbands about use of income in almost all cases, and income was used to pay for household expenses (basic needs, health care, childrens education, reinvestment in vegetable farming, household infrastructure, vehicles and mobile phones).
- Both women and men were able to access information on vegetable prices, but women more often relied on the buyer (middleman and collection centre) for information on prices and took the price offered. Men and women who took vegetables to Pokhara would get better prices or set their own prices.
- Options for farmers to sell their vegetables in Lahachowk may be improving. While the sole vegetable collection centre initiated by an international NGO closed down in late 2014, a local farmer took on the role of 'middleman', buying local vegetables and reselling them in Pokhara, and an organic/fairtrade social enterprise also started a vegetable collection centre.

- Several traders commented that Lahachowk vegetable farmers were unreliable suppliers, often not honouring previous commitments but selling to anyone who offered a higher price. This problem might be overcome with more information and greater transparency about the terms of such arrangements being discussed between farmers and buyers. Contract farming may become a viable proposition.
- All women and men had access to financial services. Many women had taken out loans in their own name, and most men had also taken out loans. All women saved money, often having multiple accounts savings groups or cooperatives and sometimes with a bank and all men had savings with village groups/associations and banks. All households could potentially invest more in their vegetable businesses.