

## Farming the future: Youth enthusiasm and transforming Nepal's economy through agriculture

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### Abstract

The authors conducted a study in December 2019 to investigate youth enthusiasm in Nepal for transforming the economy of the nation through farming. A total of 320 respondents from four towns in three districts were selected for interviews that used a pretested questionnaire. Descriptive statistics were employed to analyze the data. Most of the youth had positive perceptions and enthusiasm toward farming, but many felt that farming was “burdensome,” due mainly to its perceived perception to provide only a low income.

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Almost half the respondents (45%) were found to have a low level of contribution to economic transformation through farm involvement, with high (34%) and medium (21%) levels of contribution to the economy, respectively. There are several constraints hindering youth engagement with agriculture and overall agro-economic development. The major constraint is access to credit and markets, followed by poor social perception of farmers, inadequate government and extension service resources, access to modern technology, and other factors. The study authors recommend that the government and NGOs encourage youth engagement with agriculture by enhancing agricultural education, extension, financial support, and so forth. There is a need for extension program staff and policy-makers to better understand the role of youth in the community development process.

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## Keywords

Agro-enterprises, Economy, Farming, Extension, Nepal, Youth, Beginning Farmers, Agricultural Education

## Introduction

Agriculture has been called the backbone of the national economy for the majority of developing countries (Lawal, 2011; Mogue, Yu, Fan, & McBride, 2012). As 66% of the population of Nepal is directly engaged in farming, agriculture contributes to nearly 28% of total national GDP (Khanal & Shrestha, 2019). The population is predominantly rural, and agriculture remains the primary occupation, with the majority of farmers engaged in subsistence agriculture. In the past, the scope of farming was limited to the production of crops and goods for human consumption. With the rapid advances in science and technology, however, the present scope of agriculture extends to areas such as macroeconomics, environmental science, forestry, aeroponics, and hydroponics. The significant potential for agricultural development in Nepal is predicated on rapid advancement in numerous fields of science and technology. Consequently, agricultural development means economic development.

No sector of a national economy can attain its intended level of development unless the involvement of youth is ensured (United Nations, 2008). Countries that are considered high economic achievers rely substantially on the continual efforts of youth (United Nations, 2018). It is vital to emphasize nurturing youthful knowledge and attracting skilled, capable youth to agriculture (Fatunla, 1996). Nevertheless, in developing countries most youth are highly apathetic toward agriculture (Adedoyin & Jibowo, 2005). This has contributed to severe unemployment in the agriculture sector and a shortage of sustainable livelihood activities among youth (Breitenbach, 2006). However, youth in developing countries have different perspectives regarding the acceptability of farming. In the less developed countries of Africa, youth non-engagement in agribusiness has partly been ascribed to there being few attractive resources in agriculture and to disconnects between youth program offerings and vocational training and the actual require-

ments of agricultural sectors (Aphunu & Atoma, 2010; Nhamo & Chikoye, 2017).

Because community development is a dynamic process involving all segments of the community, including the often-overlooked youth population, significant progress in farming could be achieved through youth involvement. Youth participation in organized groups facilitates their engagement in the community. As most Nepali youth are relatively disadvantaged in terms of access to skills and social capital, with little engagement with organizations, many regard farming as a 'no-go' area for career options. The perceived lack of techniques, experience, and knowledge in agriculture makes it less interesting to disadvantaged youth. Contemporary agriculture, transformed by globalized markets and new technologies, requires significant effort on the part of new farmers to gain skills necessary for success. Disadvantaged youth have less of the initiative required to succeed in this field. Some youths accept working in farming passively, largely due to originating from poor families, having deficient literacy, or having failed in other jobs (Chaudhary, 2018). Nepal's agriculture sector is experiencing manpower and entrepreneurship weaknesses because Nepali youth who have more initiative and drive often seek foreign employment (The Rising Nepal, 2014). Moreover, institutional efforts to involve youth in collective action at the execution phase of project management leave little space to negotiate the interests of youth (Gebremariam, 2017; Hartley, 2014; Proctor & Lucchesi, 2012). The scientific and farming communities of Nepal need to realign the country's youth to cope with the bottlenecks arising while transforming economy through agriculture (Jabed, 2016).

The Nepali government is developing strategies and policies for youth-empowering programs (Hosein & Yadav, 2017). Extension programs, basic farming education for youth, and other policies are being implemented to persuade youth to become more interested in farming. The government is developing financial, social, and technological tools and packages in collaboration with private agencies for helping youth in agriculture. However, despite agriculture's ample money-making potential for youth, challenges related

specifically to youth involvement in farming and, more important, options for surmounting them are not extensively documented.

### **Objectives**

The main objectives of the study were to understand the attitudes of youth toward agricultural work, assess their levels of enthusiasm, and explore how attitudes affect their potential contribution to the economy, in the area of Nepal on which the study focused. The specific objectives were to investigate the perceptions of youth toward agricultural production, describe the role of different agencies involved in youth development, examine the factors that attract youth to farming, and discuss the constraints limiting youth engagement in farming activities.

### **Limitations of the Study**

Research on connecting youth with agriculture through their enthusiastic involvement is not a new approach, and we recognize that there are a number of potential limitations to our study. We sought to cover a larger area and involve more respondents than previous studies, but we acknowledge that we were not able to do so. The study was conducted in a small part of the country with a sample who was at least engaged in some kind of occupation related to agriculture. A detailed study with a larger area and a more representative sample from a wider range of vocations could be helpful for generalizing the results for all parts of Nepal. We were inexperienced with quantitative research tools that would enable us to fully analyze our data to answer our research questions. Even in terms of qualitative data, we did not capture as much information as we initially envisaged due to time limits and lack of funding.

### **Youth and Economic Transformation**

Franklin D. Roosevelt said, “We cannot always build the future for our youth, but we can build our youth for the future” (The Franklin Delano Roosevelt Foundation, n.d.). This highlights how much value youth represents for economic transformation and what youth can do for nations when empowered to be agents of positive change. One major critique of youth empowerment is that most

relevant official programs take a risk-focused approach, emphasizing what goes wrong with youth performance rather than what goes right. To youth, such an approach portrays development as a process of merely overcoming risk and may dissuade them from youth development programs (Guerra & Bradshaw, 2008). The risk-based approach can obscure the reality that adolescence is a period when youth can master skills and ideas. Research suggests that invigorating youth with the idea of entrepreneurship in the farming sector enables the attainment of economic goals at community and national levels (Bruton, Ketchen, & Ireland, 2013; Díaz-Pichardo, Cantú-González, López-Hernández, & McElwee, 2012; Sinyolo & Mudhara, 2018). Youth contributes significantly to land and agricultural reform, in turn sustaining youth enthusiasm (Gwanya, 2008). Largely because of their increased connectivity via social media and hence increased access to information, youth can conceive of ways to shape the economies around them in ways never possible before (Fletcher, 2019). Youth can be the driver of agribusiness, generating high returns on agricultural investment by using new ideas. In general, agribusiness does not mean just farming, but incorporates industries and services from farm production and processing to wholesale and retail, which can create youth job opportunities. Economic transformation, as used in this study, means a higher average income, broader diversity of economic enterprises, and greater contribution to GDP through agriculture produce surplus income (Allen et al., 2016; Leavy & Smith, 2010; Roepstorff, Wiggins, & Hawkins, 2011). Despite increasing recognition of the value of youth, too little is known about realizing the economic potential of youth for national development, thus slowing the pace of economic development.

### **Youth Vision-2025 and Youth Unemployment**

Buckminster Fuller said, “You never change things by fighting the existing reality. To change something; build a new model that makes the existing model obsolete” (as quoted in Haber, 2007, p. 363). Keeping social and economic transformation central, Youth Vision-2025, approved by

the Government of Nepal in 2015, aims at preparing youth for roles such as agricultural laborer, agro-businessperson, entrepreneur, and policy-maker in order to change the nation from underdeveloped to rapidly developing within the next 10 years (Nepal Government Ministry of Youth and Sports, 2015). The plan stresses unity, equity, justice, harmony, and inclusion in order to enhance collaboration; it also focuses on the need to invest directly in youth for the economic progress of the country. The program also includes a Guarantee of Rights and Realization of Obligations, which encourages youth to work freely and independently.

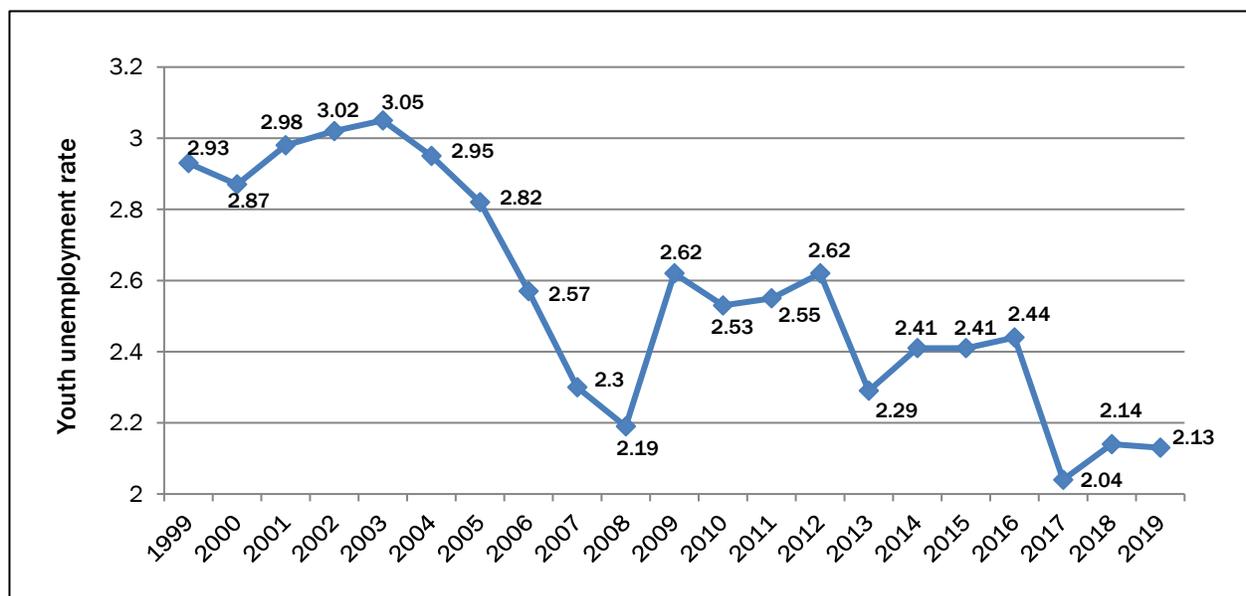
However, Nepal is lagging behind other nations in providing youth employment that is sufficiently productive and remunerative, potentially imposing considerable, enduring economic and social costs (Raju & Rajbhandary, 2018). As noted above, educated youth have a problem staying and working within the country due to the attraction of foreign employment with higher earnings. Every year many Nepali youths choose against their preference to leave the country for jobs or for higher education. Nevertheless, the youth unemployment rate of Nepal is decreasing in comparison to historical rates of unemployment. In 1999, the youth unemployment rate was 2.93%; in

2019, it fell to 2.14% (Statistica, 2020). From 1999 to 2019, the highest youth unemployment rate was 3.05%, in 2003 (Statistica, 2020). The government has been successful in supporting unemployed youth, especially those engaged in farming, as a large portion of the annual national budget is allocated to agriculture. The youth unemployment rate from 1999 to 2019 is shown in Figure 1.

### Methodology

The study was conducted in December 2019 in four communities in three districts of the southern lowlands of Nepal: Nawalparasi East, Nawalparasi West, and Chitwan (see Figure 2). A total of 320 youths, 15 to 35, were selected randomly from the study areas. Interviews were conducted with the help of a questionnaire for both quantitative and qualitative information (see Table 1). Data was gathered in face-to-face interviews by using a pretested semi-structured questionnaire and by observation. Primary data was obtained through the key informant survey (KIS), questionnaire survey, focus group discussion (FGD), and an online survey with the respondents. The FGD involved gathering people from similar backgrounds or experiences together to discuss a specific topic of interest. The respondents were asked questions about their perceptions, attitudes,

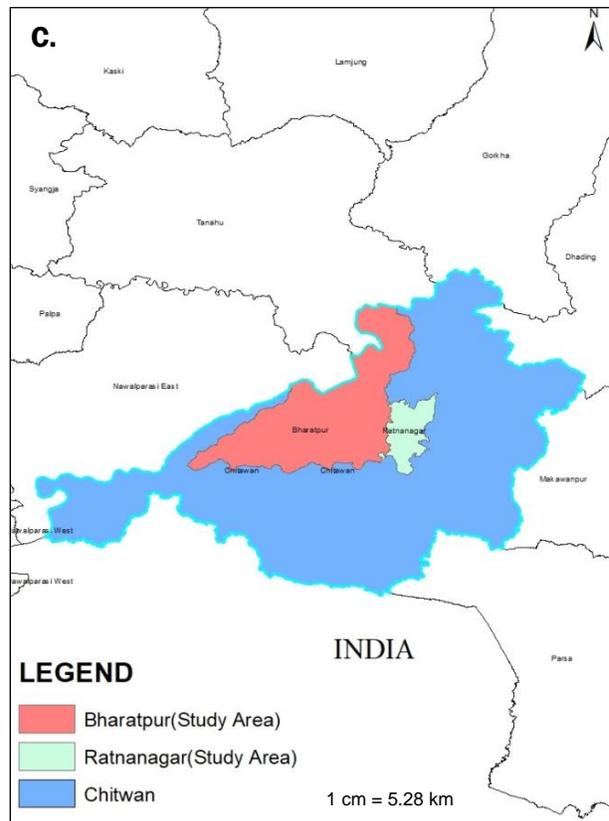
**Figure 1. Youth Unemployment Rate in Nepal, 1999–2019**



Source: Statistica, 2020.

**Figure 2. Study Areas**

- A. Study Areas in Nepal (Map prepared by Subodh Gyawali.)**
- B. Study Areas in Nawalparisi West and Nawalparisi East, Nepal**
- C. Study Areas in Chitwan District, Nepal**



beliefs, opinions, and ideas. Secondary data was collected through the Youth Development Committee (YDC), Ministry of Youth and Sports (MYAS), Central Bureau of Statistics (CBS), annual reports, journals, etc. Information about the work of youth agencies and agricultural organizations in empowering youth were collected through YDC and MYAS, and the unemployment status of the youth population was assessed from CBS. Other related data was collected through reports, web pages, journals, and documents.

## Results and Discussion

### *Socioeconomic Characteristics of the Respondents*

The majority (81%) of the respondents were male (Table 2), which suggests that women's historic lack of rights to land ownership has hindered their

engagement in agriculture. As in many traditional societies, women's rights to land and property have been unrecognized, and thus many women have been vulnerable by being almost entirely dependent on the men in their lives for basic economic survival. However, the Nepal government has been introducing several proactive measures to promote women's access, ownership, and control over land and property (International Organization for Migration, 2016).

About 64% of the respondents were in the age group 18–28. Most (78%) of the individuals interviewed had received at least some secondary or postsecondary education; they were more educated than the average young Nepali. The nuclear family is dominant (82%) and about 93% of the families have a male as the household head. The average monthly income of respondents was US\$220–

**Table 1. Sample Distribution in the Study Area**

District	Area	Male [# (%)]	Female [# (%)]	Total [# (%)]
Nawalparasi West	Bardaghat	97 (30.31)	21 (6.56)	118 (36.88)
Nawalparasi East	Binayee Tribeni	76 (23.75)	18 (5.63)	94 (29.38)
Chitwan	Ratnanagar (Tandi)	53 (16.57)	12 (3.75)	65 (20.31)
	Bharatpur (Baseni)	34 (10.63)	9 (2.81)	43 (13.44)
Total		260 (81.26)	60 (18.74)	320 (100)

Source: Field survey, December 2019.

**Table 2. Socioeconomic Characteristics of the Study Respondents**

Variable code	Variable name and description	Mean	Mode category
GEN	Gender (Male=1)	0.81	Male
AGE	Age (18–28=1)	0.64	22–26
HHS	Household size (3–6=1)	0.62	4
FMT	Family type (Joint=1)	0.18	Nuclear
HHH	Household head (Male=1)	0.93	Male
MAR	Marital status (Married=1)	0.23	Arranged marriage
EDU	Educational level (Secondary/ Post-secondary=1)	0.78	Secondary education
INC	Income per month (\$180–\$250)	0.73	US\$220–US\$230
EMP	Employment status (Employed=1)	0.63	Studying + working
MAP	Membership in any programs (Member=1)	0.36	Nonmember
FBG	Family background (Agricultural=1)	0.83	Agricultural
FEN	Farming experience (5–10 years=1)	0.45	5–10 years
FOI	Field of interest (Animal husbandry=1)	0.36	Plant science
ABR	Respondent returned from abroad (Returned=1)	0.23	Non-gone abroad

US\$230. Less than three-fourths (73%) had monthly earnings in the range of US\$180–US\$250. More than three-fourths (77%) of the youths are single, indicating that agriculture employs a many single youths, especially when farming is the major source of self-reliance and income. The results showed that 64% of the respondents do not belong to any agricultural program, while 36% are program members. Nearly two-thirds (63%) were employed. Most family backgrounds of the respondents were agriculture (83%). The study area was an agrarian community, so nearly half of the people already engaged in farming had a farming experience level of 5–10 years (45%). About 64% of the respondents were interested in crop production and 36% were interested in animal husbandry. Nearly one-fourth (23%) of the respondents had traveled outside Nepal, while the remainder had never been abroad for work or study purposes.

#### *Agencies Involved in Empowering Youth in the Study Area*

Farming is not always an easy or appealing career option, but an increasing number of youths are reorienting to farming as an entrepreneurial enter-

prise through creative efforts (Young Professionals for Agricultural Development [YPARD] Nepal, 2019). Considering agriculture as a platform from which youths can be inspired to build professional paths, a number of government organizations (GOs), nongovernmental organizations (NGOs), and private agencies have implemented agricultural programs to increase youth engagement in agricultural work in Nepal. As noted above, 36% of the respondents belonged to such efforts. In the study area, youths are very active and have formed many organizations among themselves that work for common objectives. Milijuli (Together) is an agricultural organization formed by more educated youth with the intent to revolutionize agriculture with their skill and knowledge. YUWA is a specialized group of young farmers formed in the study area to solve agricultural problems jointly. The GOs in the study area that are providing support are governed by the Association of Youth Organizations Nepal (AYON), which acts as an umbrella organization for youth organizations to encourage cooperation, dialogue, networking, and collaboration. Some of the organizations are described in Table 3.

**Table 3. Agencies Involved in Empowering Youth in the Study Area**

Agency	Date Established	Role
We Inspire Nepal (WIN)	2012	Inspire personal development; conduct motivational seminars and trainings
Change Fusion Nepal	2008	Help youth direct their vision and skills through social entrepreneurship with four components: Mentorship, Knowledge, Funding, and Networking
YUWA	2009	Promote youth participation through empowerment and advocacy, work actively to develop youth-adult partnership in several areas
Open Space Nepal	1997	Unite youths and provide them with a platform to interact with others, develop skills and take leadership; work to activate youth through three areas of advocacy: media, education, and innovation
Youth Initiative	2001	Develop youth potential, encourage positive change in society
4-H club	2014	Promote youth-related awareness programs for self-employment and -reliance at the community level in agriculture and economic efforts
Forum for Rural Welfare and Agricultural Reform for Development (FORWARD)	1997	Improve food and nutrition security, household income and resource conservation, integrate social mobilization, agriculture, livestock, fisheries and aquaculture
Local Initiatives for Biodiversity, Research and Development (LI-BIRD)	1995	Capitalize on local resources, innovations, and institutions for sustainable management of natural resources for improving livelihood of smallholder farmers

Source: Focus group discussion, 2019.

Several other organizations and clubs were noted in the study areas, such as Baal Samaj Nepal (Children Society Nepal) in Tandi, Creative Youth Society (CYS) in Bardaghat, Friendship Youth Society (FYS) in Baseni, Deurali Youba Club (DYC) in Binayee Tribeni, Ideal Youth Group (IYG) in Bardaghat, and Buddha Youth Club (BYC) in Binayee Tribeni. In the Chitwan district, youth generally are getting the infrastructure that is needed for development. The multidisciplinary agencies have long been used by agriculture extension as a means to engage youth in economic, social, and agricultural development. Extension agents help in building relationships with potential collaborators, identifying shared interests of youth, and creating new opportunities to extend their work in ways that benefit community farmers. Among the study areas, Bardaghat in Nawalparasi West has the highest number of youth engaged in farming, likely due to the active role of youth organizations, extension services, and the interest of youth. While some youths are members of at least one agency in the study areas, most of them have not been a part of actual agricultural enterprise and programming.

#### *Level of Youth Involvement in Agro-Enterprises*

Although the youth population of the world is anticipated to increase substantially, employment and entrepreneurial opportunities for young people remain limited, especially in economically stagnant developing countries (Technical Centre for Agricultural and Rural Cooperation [CTA], 2017). Engaging rural youth in agribusiness has become an important strategy to create employment opportunities in Nepal. Not all young people are inspired by the notion that farming provides a productive career and profitable returns. The level of youth involvement in agro-enterprises varies with factors such as the opportunities available, their beliefs and attitudes, and location. Nevertheless, several studies have shown that the increasing profitability of agribusiness has attracted youth to agro-enterprises in many developing countries including Ghana (Banson, Nguyen, Bosch, & Nguyen, 2015; Yeboah, Sumberg, Flynn, & Anyidoho, 2017), Ethiopia (Bezu & Holden, 2014; Tadele & Gella, 2012), and Nigeria (Baumüller, 2018; Fawole &

Olajide, 2012). The level of youth involvement in agro-enterprises in this study is shown in Table 4 and Figure 3.

Most youth are involved in crop production (33.13%), horticulture (15.31%), and cattle or buffalo rearing for meat and milk production (10.00%) to sell in nearby markets. A notable share, about 9%, were engaged in farming business: dealing with the entrepreneurship of their own firms, or agro-marketing (trading in agricultural goods). A relative few are involved in work such as farm labor, farm maintenance, and feed-processing industries. While it was found that the plurality of the youths in the study area is actively involved in crop production, their involvement in other sectors of agricultural enterprise needs to be encouraged.

#### *Economic and Personal Attitudes of Youth toward Farming*

Although agribusiness could be well-positioned to absorb youth and thus reduce unemployment, this has not been the case, as only one-third of the youth population is engaged in agriculture in Nepal (Central Bureau of Statistics Nepal, 2019). Perceptions and behavioral attitudes play an important role in influencing enthusiasm of youth for farming. A youth decides to commence any sort of business activity primarily if it is perceived

**Table 4. Level of Youth Involvement in Agro-Enterprises**

Agro-enterprise Practice	Frequency	Percentage	Rank
Crop production	106	33.13	1
Horticulture	49	15.31	2
Cattle or buffalo rearing	32	10.00	3
Farming business	29	9.06	4
Agro-marketing	21	6.56	5
Farm labor	19	5.94	6
Poultry	15	4.69	7
Goat rearing	13	4.06	8
Farm maintenance	12	3.75	9
Feed processing	9	2.81	10
Aquaculture	7	2.19	11
Piggery	4	1.25	12
Apiculture	4	1.25	13
Total	320	100	

to be more profitable and feasible than alternatives (Liñán, Santos, & Fernández, 2011).

A five-point Likert scale (1=Strongly disagree [SDA], 2=Disagree [DA], 3=Undecided [UD], 4=Agree [A], 5=Strongly agree [SA]) was used to assess significant differences. Respondents were asked to choose different categories signifying different strengths of agreement and disagreement. This category was scored and the sum of the scores measures youth attitudes toward agriculture. The personal and economic attitudes toward farming of the study subjects are tabulated in Table 5.

The average scale value is the index which determines the overall attitudes of youth toward farming, calculated by the following formula:

$$AVS = \frac{\sum (S_i * f_i)}{N} / 5$$

AVS=average value scale

$\sum$ =summation

$S_i$ =scale value

$f_i$ =frequency of importance given by farmers

$N$ =total number of interviewed youth (320)

Most respondents strongly agree with the idea of a positive role for agriculture in the development of society. At the same time, however, farming is perceived as a burdensome occupation to be

engaged in. The majority agreed that farming is an acceptable way of life to them, disagreeing with the statement “Farming reduces one’s prestige in society.” Farming is considered not only for the aged, less privileged, and uneducated, but also as appropriate for educated youths. Most youths agreed that farming creates employment and is a successful enterprise. Yet, most of them do not perceive farming as a beneficial venture. To them, returns from farming are unattractive; they view farming as a low-income profession.

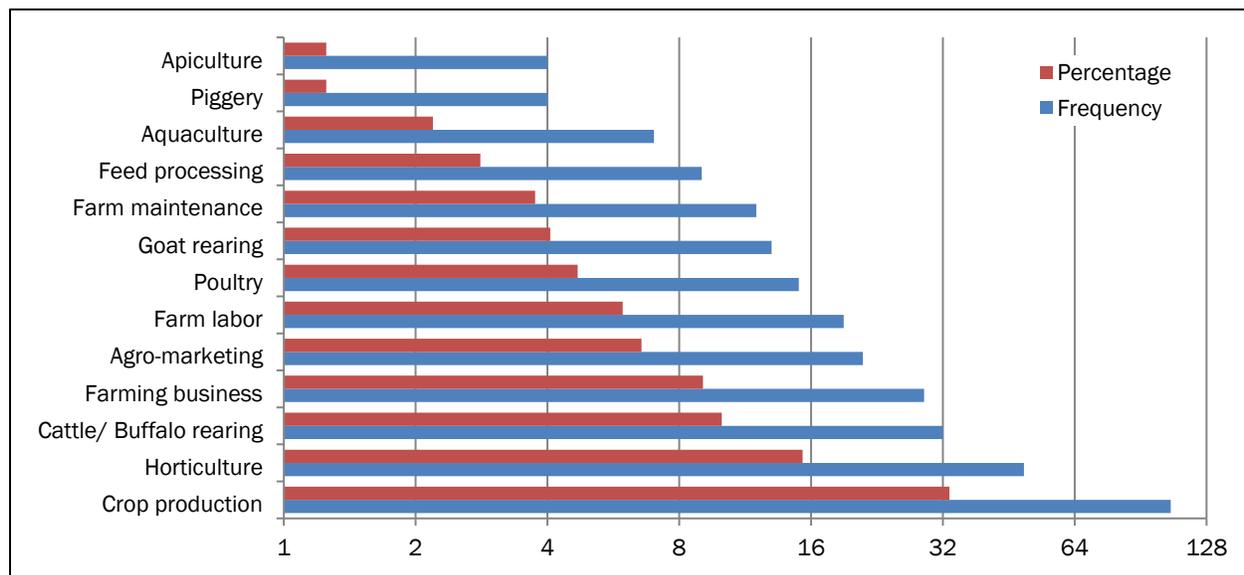
#### *What Attracts Youth to Agriculture?*

Agriculture tends to attract young people when it is perceived as “profitable, competitive, and dynamic” (Kaini, 2019, para. 3). The factors determined in this study that attract youth to agriculture are shown in Table 6.

Most youths are actively engaged in agriculture due to the absence of other desirable job opportunities or because they originate from agricultural family backgrounds. The personal reasons that guide youth toward agriculture include the high value placed on family land ownership and the value placed on being self-employed; only a few are involved in agriculture with the aim of providing jobs for others. Some (about 4%) intentionally

### Figure 3. Level of Youth Involvement in Agro-Enterprises

The red bar represents the percentage of each category of engagement field; the blue bar represents the number of respondents ( $N=320$ ).



want to get involved due to a heart-felt “passion.” Very few (1.25%) are motivated through being agricultural graduates; for this reason, they choose farming over other careers. Some youths are engaged in agribusiness due to perceiving a good deal of opportunity for young entrepreneurs: 8.75% and 7.19% are involved due to opportunities for various forms of agribusiness.

*Constraints Faced by Youth in Transforming the Economy Through Agriculture*

Various constraints hold back the development of youth engagement in agriculture in many developing countries, including Nepal. Social, economic, and technological constraints faced by youth in farming are ranked and shown in Table 7.

Major social constraints to active participation in agriculture are society’s overall perception of farmers, followed by lack of support from the government, poor basic farming knowledge and inadequate access to extension facilities, and less respect for

young farmers. The most severe economic constraint for most of the respondents is inadequate credit provision, followed by high costs of transportation, heavy insurance and taxation burdens, low prices of products, inadequate access to mar-

**Table 6. Factors that Attract Youth to Agriculture**

S. N	Statements of Reasons	Frequency	Percentage
<b>I. Psychological reasons</b>			
1	Absence of other desirable job opportunities	54	16.88
2	Agricultural family background	48	15.00
3	High value of land ownership	32	10.00
4	Self-employment	29	9.06
5	To provide jobs to others	9	2.81
6	Feel passion for agriculture	13	4.06
7	Farming is not a risky practice	11	3.44
8	Agricultural graduate	4	1.25
<b>II. Economic reasons</b>			
1	Many opportunities for young entrepreneurs	28	8.75
2	Opportunities for business in agriculture	23	7.19
3	Credit acquisition opportunities	10	3.13
4	Poverty alleviation	16	5.00
5	As a profession for side-earning	32	10.00
6	Offers profitable returns	11	3.44
Total		320	100

**Table 5. Attitude of Youth Toward Agriculture (N=320)**

Statements	SA 5	A 4	UD 3	DA 2	SDA 1	Average scale value	Rank
<b>I. Personal attitudes</b>							
Agriculture contributes to rural development	220	96	4	—	—	0.83	1
Farming is burdensome	98	84	48	42	48	0.61	2
Farming is the acceptable way of life to me	65	84	70	57	44	0.57	3
Farming reduces one's prestige in society	63	48	16	144	49	0.50	4
Farming is for aged people	45	48	19	153	55	0.46	5
Farming is for the less privileged	38	42	26	166	48	0.45	6
Farming is for uneducated people	13	28	68	96	115	0.38	7
<b>II. Economic attitudes</b>							
Farming creates employment	148	84	23	30	35	0.69	1
Farming is a successful enterprise	67	62	48	70	73	0.52	2
Farming is a beneficial venture	63	58	26	107	66	0.50	3
Farming return is attractive	48	56	21	121	74	0.47	4
Farming generates low income	45	48	13	150	64	0.46	5

**Table 7. Constraints Faced by Youth in Transforming the Economy Through Agriculture**

Statement of Problems	SA 5	A 4	UD 3	DA 2	SDA 1	Average scale value	Rank
<b>I Social constraints</b>							
People's perception of farmers	123	86	20	52	39	0.73	1
Lack of incentives from government	98	86	16	64	56	0.67	2
Poor basic farming knowledge	98	73	14	80	55	0.65	3
Access to extension facilities	56	83	31	81	69	0.59	4
Young farmers are less respected in society	70	57	26	78	89	0.56	5
<b>II Economic constraints</b>							
Inadequate credit provision	124	98	28	40	30	0.76	1
High cost of transportation	92	106	18	64	40	0.69	2
Inappropriate insurance and taxation policies	88	93	23	69	47	0.67	3
Low prices of products	83	93	9	75	60	0.64	4
Access to markets	63	93	24	82	58	0.61	5
Poor returns on investment	59	71	16	92	82	0.59	6
<b>III Technological constraints</b>							
Poor access to advanced ICT innovations	92	117	19	65	27	0.71	1
Storage facilities	86	104	28	63	39	0.68	2
Unavailability of modern machinery	84	102	23	64	47	0.67	3
Lack of input processing units	70	97	34	64	55	0.64	4
Irrigation deficits	68	79	12	96	65	0.59	5

**Table 8. Youth Contribution to Agro-Economic Transformation**

Overall contribution level of youth	Frequency (N=320)	Percentage
High	109	34
Medium	67	21
Low	144	45
Total	320	100

kets, and poor returns on investment. Difficulty with obtaining credit is due mainly to high interest rates, which reflect both transitional issues of economic transformation and structural problems with agriculture. Lack of side-business support (e.g., lack of financial support from non-agricultural business, low profitability, and macroeconomic uncertainty) makes banks view the agricultural sector as a high risk for loans. (Open Space Nepal and Change Fusion Nepal are working to make credit more accessible to young farmers.) Inadequate access to advanced information and communication technology (ICT) ranked first among the technological

constraints, followed by unavailability of storage facilities and modern machinery, lack of input processing units, and irrigation deficits.

#### *Youth Contribution to Agro-Economic Transformation*

The level of personal contribution to economic transformation was self-

determined by the respondents, taking into account problems and strengths. Economic transformation, as used in this study, means a higher average income, broader diversity of economic enterprises, and greater contribution to GDP through agriculture. Table 8 shows the self-perceived levels of the contribution of respondents to building the economy through transforming the agricultural system.

Nearly half of the respondents (45%) were found to have a low level of contribution to economic transformation through farm involvement, and 34% and 21% of the respondents had a high and a medium level of contribution, respectively.

## Conclusions and Suggestions

There are many psychological, economic, and social factors that attract youth to farming, and most youth have a positive perception of farming; thus, the number of youth engaged in agriculture is increasing. Due to the absence of alternative desirable job opportunities in the country and/or to having originated from an agricultural family, a large number of youths are willingly or unwillingly engaged in agricultural profession. The majority are primarily involved in horticultural crop production and animal rearing, which generates direct, attractive returns and thus increases youth enthusiasm toward agriculture. This positive attitude makes youth more engaged in agricultural enterprises that contribute to the economic development of Nepal.

Nevertheless, their contribution to economic growth remains well below its potential. Several constraints limit youth participation in the agriculture sector. Major challenges include inadequate access to credit, a low social perception of farmers, limited access to advanced ICT innovations, and high costs of transportation. GOs, NGOs, youth development agencies, United Nations organizations concerned with agriculture (e.g., the Food and Agriculture Organization [FAO], International Fund for Agricultural Development [IFAD]), and youth organizations primarily operated by youth (e.g., YUWA, Open Space Nepal) should provide support and incentives such as banking and credit facilities, subsidized agricultural inputs such as seed, fertilizers, and pesticides, and extension services to nurture and sustain youth in agricultural professions.

There needs to be an augmentation of knowl-

edge of basic farming practices among youth by developing agricultural training programs and strengthening existing ones. Efforts are needed that focus on a broad variety of agricultural economic contributions: not only crop production, horticulture, and cattle rearing, but farming business and agro-marketing as well. Agricultural science and entrepreneurship programs should be made widely available and strongly encouraged among students. GOs and NGOs can play facilitating roles by developing programs such as pension plans, crop and livestock insurance, and managed market infrastructure. Youth who are currently in the agricultural professions should be motivated, encouraged, and honored so that others will take a stronger interest in farming, and promote agricultural and economic transformation in Nepal. Investment, training, and extension programs in Nepal have been limited in scope. Future work on youth empowerment and involvement in agriculture should be motivation-based. Initiatives such as networking and partnerships that encourage youth to enter farming professions should be developed. It is hoped that the findings of this paper present clear insights into efforts that will foster effective community transformation through agricultural development. 

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