

Status of bodichitta (*Ziziphus buddhensis*) cultivation and its prospects in Nepal

Abstract

Bodichitta (*Ziziphus buddhensis*) is a religious plant, the seeds of which are used for meditation purpose. It is different from *Ziziphus* species found in other countries in context of physical characteristics or its habitat requirement however there is some resemblance in physical characteristics with *Ziziphus montana* found in China. This plant species has changed the life of people in the villages namely Timal, Kirtas, Salleni, Pepta, Kharpachowk of Kavre district of Nepal. This plant is gaining not only popularity but is also a good source of income for the people there. The study aims to investigate the status of Bodichitta cultivation in Nepal and its prospects for future along with the perception and satisfaction of farmers towards its cultivation. Questionnaire survey was carried out in purposively selected sites near the Timal village where cultivation of Bodichitta was done. Questionnaire interview was performed on 62 farmers along with the key informants' interview. The key informants included traders, local leaders and development workers of the region. A transect walk was made across the village to assess the physical situation. Since there are few formal studies done in this area, there is not sufficient literature for comparison. The rise in value of Bodichitta increased the income of the farmers. Regression analysis shows that factors affecting log of average income include number of female members of the family, type of cultivation and number of fruiting plants. The farmers seem to be satisfied with the income and suggest the youth to be involved in the cultivation and business related to Bodichitta however farmers report about the lack of trainings and support from government or non-government offices. Bodichitta has a high religious value for Buddhists and moreover being cultivated

in the particular region, expansion of cultivation of Bodichitta will provide employment to the females of the region and also increase income of the household. Training and information access to the farmers along with technical interventions regarding production and marketing of Bodichitta is essential for its sustainable production.

Keywords: Bodichitta, Buddhists, Religious value, Market expansion.

Introduction

Kavrepalanchowk is one of the districts of Bagmati zone of central development region covering an area of 1396 km². The region is situated about 30 kms from Kathmandu on BP highway and Araniko highway and 74 kms from Kodari. The place is well known for its natural diversity and many heritages. Beautiful Rivers like Indrawati, Bhotekoshi and Sunkoshi flow within the territory of this district. This district lies in the frontline for vegetable cultivation. Kavrepalanchowk is a district of huge diversity, diversity in terms of physical environment. The district varies in the development aspect of physical infrastructure. Some parts of Kavre are booming in development whereas some parts are facing the problems of hunger. The study concentrates for some villages like Timal, Kirtas, Salleni, Pepta, Kharpachowk of this district located almost 50 kilometers from Kathmandu where People demonstrate a distinct lifestyle with the devotion for Buddhism [1]. These places are still in primary phase of the development as they are completely surrounded by rugged topography. Many places of these regions are still devoid of appropriate access of education. Most of the people here practice traditional form of agriculture which does not produce enough for them to sustain their livelihood in easy way. The rural farming is dominated by subsistence nature especially for the areas that are 20-30 kilometers (km) away from the Kathmandu Valley. Many resource-poor farmers in the rural hills are continuing traditional farming systems for subsistence production[2]. This subsistence farming has caused low

49 economic development which needs to be addressed through identification of site specific
50 and situation demanding production system. Agriculture in the form of high value crop
51 cultivation is gaining momentum due to tremendous demand in market and allied fields to
52 derive benefits from more than one method of farming practices but the concern for natural
53 resources depletion, labor shortages, fallow land, gender-based conflicts and institutional
54 limitations cannot be ignored. Nepal, having an advantage due to topography and climatic
55 variation, maximization of returns from land is best ensured by identifying and exploring
56 those resource in terms of high value crops, adopting commercial cultivation and their
57 efficient market practices but still there is lack of identification and exploration of scope of
58 many of such crops.

59 A drastic change in the people in the study area was due to the knowledge about cultivation
60 of Boddhichitta, a plant with high religious value whose seeds are highly recognized for
61 meditation [3]. All that changed in the late 1990s, when Buddhists began to use the beads for
62 chanting and they became a fashionable way to show off wealth, he says. In some cases, the
63 beads are used in necklaces, bangles or bracelets [3].

64 ‘Bodhi’ is the Sanskrit word for ‘enlightenment’, and ‘chitta’ the word for ‘mind’; therefore
65 ‘Bodhichitta’ literally means ‘mind of enlightenment’ this is defined as a mind, motivated by
66 compassion for all living beings that spontaneously seeks enlightenment [4]. The name
67 Bodhichitta was chosen for the plants because the seeds of the plant were supposed to be used
68 by Lord Buddha and their disciples using beads of Boddhichitta as garland. It is believed that
69 the Shakyamuni, a sage of the Shakyas, left behind three plants in Lumbini, Namobudhha,
70 and the Timal region of Kavreplanchok, but only the plant in Timal region survived. Some
71 also say that Guru Rinpoche came to meditate in Kavre and left a tree behind looking the
72 devastating poverty in the villages of Timal. After completing his Retreat meditation at the
73 cave of Tongsum Kunda (Kavre District of Nepal), he thought of bringing peace, happiness

74 and prosperity of the people of Kavre District by introduction of Boddha Chitta tree. He
 75 thought for a material way of support for the local people of Timal, Kavre District as a return
 76 of their kindness and hospitality [5]. There is legend that the Shakyamuni, a sage of the
 77 Shakyas, left behind three plants in Lumbini, Namobudhha, and the Timal region of
 78 Kavreplanchok, but only the third in Timal survived. Another story tells of Padmasambhava,
 79 the lotus-born Guru Rinpoche, who promoted Buddhism in Tibet during 8th century, came to
 80 meditate in Kavre and left a tree behind [5].

81 According to [6] This Bodichitta is a botanically names as Ziziphus budhensis which is
 82 clearly different from other species of Ziziphus. It did not match with the Ziziphus species
 83 reported from India, Pakistan, Bhutan, Bangladesh in either physical characteristics or its
 84 habitat requirement [7],however there is some resemblance in physical characteristics with
 85 Ziziphus montana found in China [8]. The fruits of Bodhichitta are edible and are preferred
 86 by the people of Kavre district. The leaves of the tree are also highly nutritious and used as
 87 fodder for cattle. It is reported that the value rise of Boddhichitta has been a source of people
 88 for earning livelihood. It has dramatically improved the livelihood of villagers in Singata and
 89 the rest of the Timal area since 2011, when traders from Kathmandu, as well as India and
 90 China, visited there to buy the seeds of Bodichitta [1].



91 **Figure 1 plant, seed and plant with seed of bodichitta**

92 Bodichitta, being a perennial plant preferred by the farmers of study area, it establishes a
 93 good example for agroforestry system. The farmers of Nepal have been involved in
 94 agroforestry systems which involve agricultural crops, trees, and livestock, with some
 95 variations across geographic belts [9]. In this context, Farmers of Kavrepalanchowk district
 96 have been practicing the plantation of Bodichitta plants in their farms which is important not
 97 only for livestock and human edible parts but also pertains a great influence in the religion
 98 believe. The fruits of *Ziziphus budhensis* are edible and prefer by the people living in Kavre
 99 district. The leaves of the tree are highly nutritious and used as fodder for cattle [10]

100 The plantation of trees is also in harmony with the ecosystem and hence sustainable. An
 101 integrated approach involving plantation of high value crops is required to ensure the
 102 sustainability of farming, exemplified in the Kavrepalanchowk district. As Bodhichitta is
 103 reported to be providing a good source of income for the farmers, there is ample scope and
 104 opportunity for sector to be improved and sustained in collaboration with government
 105 agencies, non-government organizations (NGOs) and community based organizations (CBOs)
 106 to initiate or support local participatory development, research or training program in areas
 107 related to Boddhichitta cultivation. Thus the present study was conducted to develop
 108 Boddhichitta cultivation in that particular area by making proper assessment of the factors
 109 affecting and the different aspects that are being affected by this so that better livelihood of
 110 people could be ensured. The study was carried with the purpose to find the effect of its
 111 farming on the socioeconomic status of the region and probe the probability of its future
 112 expansion of its cultivation..

113 **Materials and Methods**

114 The study aims to find the status of Bodichitta farming, its effect on the farmers and its
 115 prospects for future expansion of cultivation and marketing.

Study area: The site was purposively selected as the Timal village and other peripheral villages where Bodhichitta is cultivated both in sustainable and commercial scale. The villages we surveyed during our survey were Timal, Kirtas, Bhakundebesi, Narke, pepta salleni and Mangaltar. Mainly we selected the respondents from the timal as the place is the centre of origin of Bodhichitta and more farmers of that place were involved in the cultivation of the Bodhichitta cultivation. Other villages were selected on the basis of the recommendation of the District agriculture development office (DADO) Kavrepalanchowk.

Source of data : Household interview was performed 62 farmers where data was collected through a designed questionnaire where information regarding the socio-economic characters of respondents and farming experiences of Bodichitta was collected. Key informant interview (KII) was performed by using a check list. Key informants were selected from almost all the villages based on the view of local people including the traders. We also interviewed some monks to know the religious values of Bodhichitta and also to figure out the history behind Bodhichitta. A transect walk was made with the help of a local guide across the villages to assess the real scenario of those villages. During transect walk we made informal information collection via informal talks with the farmers, owner of nursery, non-cultivating farmers and other required persons related to the Bodhichitta business.

Because of lack of sufficient study on this aspect, the secondary data are mainly comprised of documentaries, newspaper articles and reports/records of Village Development Committee (VDC).

Data analysis: For data entry and analysis SPSS (Statistical Package for Social Science) and MS Excel were used. The socio-demographic and farm characteristics like family size, sex, age, occupation, education level, size of land holding, earning from agriculture and Bodhichitta, etc were assessed. Status of farming of Bodichitta is described on various bases.

140 Hierarchical multiple regression was performed to access the factors effecting income from
141 Bodichitta.

142 **Result**

143 **Socio-demographic characteristics:** The sociodemographic characters of the population as
144 shown in table constitute of mostly the male members as household head. All the families
145 were Buddhists as per their religion and primary occupation of all of them was agriculture
146 and majority of them had no other source of income however 19.4 percent were involved in
147 business and rest in other sectors like government and nongovernment organizations. Very
148 few of the household proportion had higher education while similar percentage of illiterate
149 and secondary level education. The highest level of education of family members was
150 however higher education in more than half of the population.

151

152 Table:1: :Sociodemographic characters of respondents

Characteristics	Frequency	Percentage
Gender of Household Head		
Male	54	87.1
Female	8	12.9
Age category of Household Head		
Below 30 years	9	14.5
30 to 60 years	35	56.5
Above 60 years	18	29.0
Primary Occupation of the family		
Agriculture	62	100.0
secondary occupation of the family		
Abroad	12	19.4
None	26	41.9
Others	24	38.7

Education of household head		
Illiterate	27	43.5
upto secondary level	27	43.5
Higher education	8	12.9
highest education in the family		
Illiterate	5	8.1
upto secondary	11	17.7
SLC	13	21.0
Higher education	33	53.2
involvement in farmers group		
Yes	22	35.5
No	40	64.5

153 Among the surveyed sample only 35.5 percent were involved in farmer's group. Almost all
 154 the respondents belong to Janjati caste and were Buddhists by religion.

155 **Status of Farming:**

156 Most of the farmers were cultivating in upland (95.2%) while only few (3.2) were cultivating
 157 in lowland and only 1.6 percent in both upland and lowland. Source of sapling for 77.4
 158 percent of respondents was market while rest prepared their sapling themselves. Most of the
 159 respondents (83.9%) reported the incidence of insects and disease in Bodichitta. Majority of
 160 farmers (91.9%) thought that it could be a good occupation for the youth to earn better
 161 livelihood. All the respondents reported the involvement of female members of the family
 162 while in only 50 percent of the household's male members were involved actively in
 163 Bodichitta farming. More than half of the respondents said that there was no change in
 164 migration of youth after exploration of scope of Bodichitta while less than one fourth
 165 reported that the migration was decreased and rest reported the increased migration (figure 2).

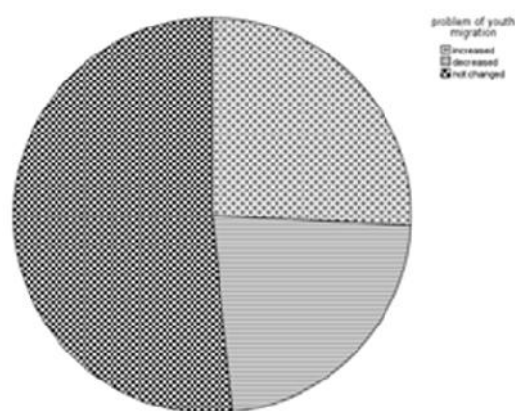


Figure 2: Effect of Bodichitta farming on migration

166

167 All the farmers realize that their economic standard has been improved since they have
 168 started to sell the seeds of Bodichitta. The mean average income from per plant income from
 169 Bodichitta before the rise of value was NRs. 21752.1260 While after rise it was NRs.
 170 291480.9071. The mean of difference between average incomes per plant was found to be
 171 NRs. 269728.7811. Farmers state that there is no trainings and support regarding Bodichitta
 172 cultivation and its improvement. Key informants report that farmers have to pay tax for
 173 selling their product but there is no programs by government for improvement of cultivation
 174 and appropriate market access of the farmers as a large share of market margin is still enjoyed
 175 by the traders/middlemen. The traders responded that there is enough scope for export of
 176 beads of Bodichitta to China, Srilanka, Thailand and Vietnam and the demand is too large
 177 than the current supply. The traders further explained that the rosaries are either used for
 178 meditation or decorating walls of monasteries and statues. The seeds, which are 7mm to
 179 12mm in size, are sold as prayer beads, those larger than 15mm are used for decorative
 180 purposes.

181 **Hierarchical multiple regression for factors effecting income from Bodichitta**

182 Hierarchical Multiple Regression model was used to find the appropriate model form
 183 altogether 62 sample size with 4 variables. The sample size of 62 was deemed adequate for

the number of independent variables subjected to the test [11]. The ratio of sample size and independent variable fulfills the requirement of 15 samples for each variable [11]. The assumption of individuality was also met, the value of R shows that none of the independent variables (number of male members, number of the female member in the family, method of cultivation, number of fruiting plants) highly correlated with each other. The value of variance inflation factor (VIF) is less than 10 and even less than 3 for all the variables which shows that there is no multicollinearity [12].

A four stage Hierarchical Multiple Regression was conducted to examine the relationship between the set of independent variables. Collinearity statistics (i.e., Tolerance and VIF) were all within accepted limits, the assumption of multicollinearity was deemed to have been met [13]. Residual and scatter plots indicated the assumptions of normality, linearity and homoscedasticity were all satisfied [13] [14]

In Model 1 with years of cultivation of bodichitta as predictors of income generated from it, the R value was 0.099, thus, a positive relationship existed between the predictor variable and income, the relation however is very weak. This variable included in model 1 explains only 1 percent of variation in income which is insignificant at $F(1, 60) = .596$, $p > 0.05$. Model 2, with two predictor variables (number of male members and number of the female member), was an improvement over the earlier model, with an R of 0.269 and an R^2 value of 0.072, thus 7% of the variance had explained by these variables. The change in R^2 was however not significant $F(1, 59) = 2.301$, $p > 0.05$; this shows that the second set of predictors could not predict income. Model 3, with three predictor variables (number of male members, number of the female member and type of cultivation) gave a better value for $R = 0.426$, with an R^2 of 0.181, which was significant $F(1, 58) = .4.283$, $p < 0.05$, thus cultivation type was a predictor of income. Model 4, with four predictor variables (number of male members, number of the female member, type of cultivation and number of fruiting plants), was quite better, with an R

of 0.506 and an R^2 of 0.256, thus 25.6 % of the variance had been accounted for, the change in R^2 was highly significant $F(1,57) = 4.903$, $p < 0.001$, consequently log of average income from bodichitta has been found to number of fruiting plants.

The result form ANOVA shows that third and fourth models are significant at $P < 0.05$ and F value is increasing in each step from first to last models plants (3.290 and 3.726 respectively).

The table below reveals that there is significant effect of type of cultivation and number of fruiting plants on the log of average income generated from bodhichitta where effect of male and female members in the family did not seem to be significant. The effective model to describe the log of average income is therefore:

Table 2: Hierarchical regression on log of average income per plant

	Variable	Unstandardized Coeff.	B	t	Sig. of t	R	R ²	ΔR^2	F	Sig. of F	VIF
Model 1		B (SE)				.099	.010	.010	.596	.443	
	Constant	24449.980 (4050.015)		6.037	.000						
	No. of male members	-653.387 (846.269)	-.099	-.772	.443						1.000
Model 2						.269	.072	.063		.109	
	Constant	27672.195 (4270.754)		6.479	.000						
	No. of male members	618.907 (1043.799)	.094	.593	.555						1.597
	number of the female member	-2060.723 (1033.539)	-.316	-1.994	.051						1.597
Model 3						.426	.181	.109	4.283	.008	
	Constant	42444.11		6.35	.00						

		2 (6680.39 4)		4	0						
	Number of male members	363.831 (993.222)	.05 5	.366	.71 5						1.61 1
	number of the female member	- 1710.935 (987.307)	- .26 2	- 1.73 3	.08 8						1.62 3
	Type of farming	- 11895.63 7 (4280.47 2)	- .33 3	- 2.77 9	.00 7						1.01 7
Model 4						.50 6	.25 6	.07 5	2.3 01	.00 2	
	Constant	40822.31 0 (6459.85 3)		6.31 9	.00 0						
	Number of male members	179.683 (958.224)	.02 7	.188	.85 2						1.62 1
	number of the female member	- 1667.054 (949.614)	- .25 6	- 1.75 6	.08 5						1.62 4
	Type of farming	- 8475.494 (4357.65 3)	- .23 7	- 1.94 5	.05 7						1.14 0
	Number of fruiting plants	-362.297 (151.496)	- .29 1	- 2.39 1	.02 0						1.13 4 ^a

^a Dependent variable ln of average income per plant, dummy variable for type of cultivation where 0 for subsistence farming and 1 for commercial cultivation.

219 The Model:

220 $\ln Y$ (log of average income form bodichitta) = $\beta_0 + \beta_1$ (number of male members) + β_2

221 (number of female members) + β_3 (type of farming) + β_4 (number of fruiting plants).

222 Where, β_0 , β_1 , β_2 , β_3 and β_4 are respectively 40822.310, -1667.054, -8475.494 and -362.297

223 respectively.

Future Scope: According to the traders, the demand of Bodichitta is increasing and has sufficient scope of export to China, Vietnam, Srilanka and Thailand. Since the cultivation of this species has been found to be successful in these few regions, there is enough scope for the farmers to extend their cultivation.

Farmer's plan to expand for future: A Cross tab for cultivation type and future plan in future shows that most of the respondents who were doing subsistence farming were interested to expand their cultivation in future whereas fewer of the commercial cultivators were interested to expand. This reveals that the subsistence growers find the cultivation to be profitable whereas the most of the commercial cultivators might not be able to handle extended cultivation.

Table 3: Farmer's plan to extend in future

Farming type	Plan to extend in Future		P value	Total n (%)
	yes n (%)	N0 n (%)		
Subsistence	13 (50.0)	32 (88.9)	.001	45 (72.6)
Commercial	13 (50)	4(11.1)		17(27.4)

Discussion

The result shows that there are many households whose source of income is only agriculture including Bodichitta which signifies that Bodichitta is providing enough income for the farmers to sustain their livelihood. Moreover all the respondents reported the involvement of female members in cultivation of Bodichitta while there were only half of them who reported the involvement of males. This shows that Bodichitta can be a good source of employment for the females of the area. The findings reveal that there is no trainings and support of any

243 organizations for cultivation which needs to be addressed soon so that the farmers can reap
244 additional profit from the cultivation.

245 Literatures show that Bodhichitta cultivation is like a lottery for the farmers where lower
246 investment gives a very high earning. Sonam Lama, a farmer explains that here is legend
247 that Buddha lost two Bodhichitta beads out of 109 while he was counting prayers. Later,
248 Buddha found one of the beads that he had lost, but the chain was again snapped again and
249 beads were scattered around which grew in as the Bodhichitta trees. The plants were spread
250 over the village in the form of blessings. The farmers were not aware of the value of the
251 Bodhichitta fruit, which is used by Buddhists for religious purposes, when they first planted
252 some trees about 30 years ago [15]. This is more like effortless farming where both
253 subsistence and commercial farmers earned a lot. Farmers have been able to earn NRs2.9
254 million by selling half a sack of Bodhichitta fruits [15]. The advantage of the Bodichitta
255 cultivation was mostly taken by the early adopters rather than others because soon after the
256 identification of its utility the high demand and limited supply led to higher price. As prices
257 of the beads grew, locals from Timal village took samples of this tree species to the
258 Kathmandu-based government herbarium centre in 2013. A team led by botanist Khem Raj
259 Bhattarai visited the site multiple times and found that this species of the ziziphus did not
260 match those found in India, Bhutan, Bangladesh, China or any other part of Nepal. The new
261 species has now been named Ziziphus budhensis, and its discovery was published in
262 the Indian Journal of Plant Sciences [1].

263 A local farmers have been earning millions of rupees from the fruit annually and its demand
264 has been growing rapidly [15]. The price of the Bodhichitta plant varies from one trader to
265 another. Natural Bodhichitta has priced one-year-old plant at Rs 1, 250 and six-month-old
266 plant at NRs 950 [5]. The characteristics of beads are also the reason for price differences.
267 According to farmers, many of the fruits have six facet and fruit with six facets is considered

valuable and costs up to Rs1, 00,000 apiece [15]. Smaller seeds are more highly prized than larger ones. A pathi (3.2 – 3.6 Kgs) of Bodhichitta growing in Kavre costs 25 lakhs. The rate of 3- 7 faced beads ranges from Rs. 400 – 6, 00,000. Similarly the rate of 2 faced beads depends upon its size; 7 mm size mala made up of 108 beads cost Rs. 6 lakhs and the price reduces at its increasing size [10]. The cultivation of this particular species in only specific areas creates scope for the earnings for the farmers of that region. In the Timal region of Kavrepalanchowk, the trade in Bodhichitta is worth Rs1 billion a year, and farmers can earn hundreds of thousands of rupees from a single tree [16].

The beads originating in this region of Nepal are in high demand because they are considered to have high quality. “The demand for Bodhichitta has swelled substantially and so have the prices,” said Lapsang Lama, owner of Natural Budhha Chitta, manufacturer and exporter. “The market has grown by 25 percent and the annual revenue has increased from Rs20 million to Rs30 million this year”[5]. Dalai Lama identified the beads of Bodichitta from Nepal to be of best quality [17]. It is reported that beads from this region became popular in 2011 after the Dalai Lama, the spiritual leader of the Tibetan people, praised their quality and encouraged people to use the bead chains in meditation[3]. In the Timal region of Kavrepalanchowk, the trade in Bodhichitta is worth Rs1 billion a year, and farmers can earn hundreds of thousands of rupees from a single tree [16]. There is enough scope for increased production because of its export possibilities. Chinese online marketplace Alibaba has enlisted 15 prominent suppliers from Nepal who export Bodhichitta beads to major markets of Taiwan, China, South Korea, Japan, Sri Lanka and the US, among other countries, where Buddhism has flourished as a way of life. The beads, depending on the purpose, have been priced from \$5 to as high as \$4500 on alibaba.com. “Moreover, even exporters from China have set up offices in Thamel to transport the seeds to China. They are purchasing the seeds directly from farmers based in Timal, Kavre [5].

293 The study shows that that there is significant effect of years of cultivation, source of sapling
 294 and manuring practice on the income generated from bodhichitta where effect of female
 295 involvement does not seem to be significant. Many farmers were found to be associated with
 296 the farmer's group but no significant change was seen either in case of Bodhichitta or in case
 297 of agriculture. If the proper marketing link is connected with the foreign Buddhist
 298 communities the business seems to have possibility to expand in future market. Buddhist
 299 prayer beads are a customary tool used to count the number of times a mantra/ Buddha quotes
 300 [18] Although there was good participation of females in the cultivation, the effect on
 301 average income was not found to be significant. Therefore, trainings and skill development
 302 seems to be important for the female of the area. The average income per plant for the
 303 commercial farmer was found to be lower than those of subsistence farmers, which might be
 304 because the commercial producers are either not able to manage farm well or they are selling
 305 at low price as they need to sell in bulk. It signifies the necessity of training package for
 306 production practices as well as appropriate market information for the farmers. Moreover
 307 since most of the subsistence farmers are interested to extend their farming they need to be
 308 supported in the form of financial as well as social capital. The regression shows that the
 309 average income per plant decreases with the increased number of fruiting plant which
 310 signifies that the farmers are not able to manage the larger number of plants. All these
 311 conditions shows that there is need of support for the Bodichitta growers.

312 Since there is no formal study for the market of Bodichitta, its demand needs to be assessed
 313 for creation of more market. It is reported that the beads are flown out to China, and then sent
 314 to areas like Tibet, or onto Japan or Malaysia. "Information regarding market demand is not
 315 well documented [1]. Farmers in Nepal have been earning millions of rupees annually from
 316 the fruit of the tree, which blooms in April and is harvested in August. The farmers can sell a

rosary of Bodhichitta for up to Rs5,000 (US\$48), while the same rosary can sell in Tibet for NRs100,000–150,000 [16].

Market exploration in parallel to increased production is important for its continuous scope. If the exports fall because of higher production, the price of the beads will go down instantly [3].

Conclusion

This study assess the status of Bodhichitta farming in Sindhupalchowk and perception of farmers regarding its cultivation scope. *Ziziphus budhensis* (Boddhichitta) is not only a religiously important but is also important for its significantly difference with all other species and moreover it is a plant of *Zizipus* which clearly different those found in India, Pakistan, Bhutan, Bangladesh. It is grown in some villages of Kavrepalanchowk (Kavre) district of Nepal and people cultivation this plant has been able to reap a good profit. Inspite of this scope, there is lack of study and support on its cultivation. A household survey on the Bodichitta farmers shows its contribution on their income and a way of inclusion of the female members of the household. In spite of lack of any support from government or non-government organizations, the farmers are able to reap a good profit and are remarkable tax payer for the government. Incidence of disease and pest in the plants alarms for their management in time. Moreover, training for farmers and their exposure to the market might be a great step to motivate the farmers to cultivate it in more scientific and commercial way

Suggestions for policy implications

- For creating more momentum in the field of Bodhichitta the cultivation should be participatory in terms of gender.
- Effective co-operatives for Bodhichitta should be started rather than inefficient farmer's group existing in the villages.

- Government role should not be limited to collection of tax but the government should provide proper training and quality inputs for Bodhichitta cultivation.
- Government should connect probable tourist areas with at least road facilities to increase tourism in coming days.

References

1. **Nepal's million dollar trees bring hope and fear**
<https://www.thethirdpole.net/ne/2016/09/22/nepals-million-dollar-trees-bring-hope-and-fears/>
2. Scialabba N: **Opportunities and constraints of organic agriculture: A socioecological Analysis**. Rome: FAO 2000.
3. **Nepalese Farmers find livelihood in trees producing beads for Buddhist meditation**
[\[https://globalpressjournal.com/asia/nepal/nepalese-farmers-find-livelihood-trees-producing-beads-buddhist-meditation/\]](https://globalpressjournal.com/asia/nepal/nepalese-farmers-find-livelihood-trees-producing-beads-buddhist-meditation/)
4. **A falling leaf** [\[http://www.naturalbuddhachitta.com/buddhachittatree.php\]](http://www.naturalbuddhachitta.com/buddhachittatree.php)
5. Rijal P: **Bodhichitta biz booms amid rising demand**. In: *Kathmandu Post* Kathmandu, Nepal: ekantipur; 2016.
6. Bhattarai KR, Pathak ML: **A New Species of Ziziphus (Rhamnaceae) From Nepal Himalayas**. *Indian Journal of Plant Sciences* 2014, **4**(2):71-77.
7. Bhandari M, Bhansali A: **Flora of India (Oleaceae-Connaraceae)**, vol. . Calcutta, India Botanical Survey of India; 2000.
8. Zao S: **Flora of China: Ziziphus**: Royal Botanic Garden Edinburg 2007.
9. Garforth C, Malla Y, Neopane R, Pandit B: **Socioeconomic factors and agro-forestry improvements in the hills of Nepal**. *Mountain Research and Development* 1999, **19**(3):273-278.
10. **Nepalese Earn Millions Of Rupees By Growing Buddha Chitta plants**.
[\[http://www.thesocialmediatoday.com/nepalese-earn-millions-of-rupees-by-growing-buddha-chitta-plants/\]](http://www.thesocialmediatoday.com/nepalese-earn-millions-of-rupees-by-growing-buddha-chitta-plants/)
11. Tabachnick BG, Fidell LS: **Using Multivariate Statistics**, 4 edn. Boston: Allyn and Bacon; 2001.
12. Coakes SJ: **SPSS: Analysis without Anguish: Version 12.0 for Windows**, vol. . Australia: John Wiley & Son Australia, Ltd.; 2005.
13. Hair JFJ, Anderson RE, Tatham RL, Black WC: **Multivariate Data Analysis**, 3rd ed edn. New York:: Macmillan; 1995.
14. Pallant J: **Spss Survival Manual : A Step by Step Guide to Data Analysis Using Spss for Windows**, Version 10 edn. St Leonards, N.S.W: Allen & Unwin; 2001.
15. Bhatta TP: **Farmers earn millions growing Bodhichitta**. In: *The Kathmandu Post*. Kathmandu: ekantipur; 2015.
16. **Farmers in Nepal see earning from Bodhichitta beads soar**
[\[https://www.buddhistdoor.net/news/farmers-in-nepal-see-earnings-from-bodhichitta-beads-soar\]](https://www.buddhistdoor.net/news/farmers-in-nepal-see-earnings-from-bodhichitta-beads-soar)
17. **Buddha's Beads Fetch Millions for Farmers in Central Nepal**
[\[https://globalvoices.org/2015/08/06/buddhas-beads-fetch-millions-for-farmers-in-central-nepal/ \]](https://globalvoices.org/2015/08/06/buddhas-beads-fetch-millions-for-farmers-in-central-nepal/)

- 382 18. HimalayanNewsService: **Man held with Rs. 6.1 million, prayer beads.** In: *The Himalayan*
383 *Times*. Kathmandu: Himalayan Times; 2015.