

Existing status and agribusiness potential of *Acacia catechu* based entrepreneurship in Una and Kangra districts of Himachal Pradesh.

ABSTRACT: The current research is focused on "The existing status and agribusiness potential of *Acacia catechu* based entrepreneurship in Una and Kangra districts of Himachal Pradesh." by using 25 entrepreneurs. In Una districts, there were 17 kattha entrepreneurs, while in Kangra districts, there were 8 kattha entrepreneurs. There are a lot of kattha entrepreneurs in one district, which suggests that khair-based entrepreneurship has a lot of potential for the agro industry. 44% of business owners who responded to the survey believed that the earnings from kattha are promising, demonstrating the high potential of kattha production for generating money. There were several issues that the kattha entrepreneurs were dealing with, including the lack of highly skilled labour locally, the high cost of raw materials, diverse government laws, the growth of large-scale enterprises, high capital requirements, distant markets, and the need for highly trained labour. Government should enact such laws that encourage local labour to participate in this kattha-based entrepreneurship and proper cutch management should be carried out at the manufacturing site.

Index Terms: Agribusiness, *Acacia catechu*, Kattha, Production, Skilled labour, Manufacturing site

I. INTRODUCTION

There are several commercial plants in Himachal Pradesh, and *Acacia catechu* is one of the most important ones. *Acacia catechu* belongs to Fabaceae family and subfamily is Mimosoideae. *Acacia catechu* willd is angiosperm and is a common species found throughout central Asia, particularly in Pakistan, India, and Bangladesh (Hashmat and Hussain, 2013). Cutch tree, Terra Japonica, and Black Catechu are further names for *Acacia catechu*. Additionally, it is known as Khadira in Sanskrit and Khair in Hindi. Earlier, this plant was referred to as Kat or Cacho. *Acacia catechu* is a tree that may be found across India. The eastern slopes of the Western Ghats and the Himalayan regions serve as its primary habitats in this nation (Hemashree and Thangavelu, 2018). *Acacia catechu* (Khair) trees grow at an elevation of 1300 metres above sea level. It is found in Mandi, Hamirpur, Kangra, Solan, Sirmaur, Una, Chamba, Shimla, and Bilaspur (Kishor *et al.*, 2018).

1.1 Uses of Khair Tree:

There are various uses of khair tree. The tree's heartwood is primarily utilised to make the marketable decoctions Kattha and Cutch (obtained after filtering). In ayurvedic remedies, kattha is frequently utilised. Additionally, it is an important part of the masticatory process in India, which involves chewing betel leaf (pan) (Singh and Lal, 2006). *Acacia catechu* is one of the most significant medicinal plants in ayurveda which is frequently utilised for mother-and-child healthcare. A number of common diseases including diabetes, ulcers, and skin conditions are treated using a medicine made from khair's heartwood. Their antioxidant qualities could be the cause of these therapeutic effects (Devi *et al.*, 2011).

Along with its economic significance, it is also significant for people, especially rural areas living near catechu forests, as it provides a secondary source of income for them. As a result the people who live in the Shivalik range have incorporated catechu into both their socioeconomic and cultural lives (Singh and Lal, 2006).

It has a variety of pharmacological effects, including antibacterial, antimycotic, antioxidant, immune-modulating, antipyretic, anti-diarrhoeal, antisecretory, and antiulcer action. Because of these qualities, kattha has been used therapeutically to treat conditions including Spongy Gums, Bleeding Gums, Stomatitis, Leucoderma, Urinary Disorder, Diabetes, Leprosy, Psoriasis, Syphilis, and more (Rashid *et al.*, 2015).

1.2 Processing of Khair:

15-year-old trees are typically harvested. The entire tree is uprooted as deeply as possible in order to harvest it. After the tree has been felled, all twigs and small branches are removed, and logs are prepared by bucking. The log is then entirely debarked, including the sap wood. The remainder of the heartwood is then chopped into

small chips. Two thirty-minute-long boils are given to the chips. To obtain more concentrated lali or kattha, the juice is moved to a pan after each boiling operation and further boiled for two hours, on average. When making kattha, the weight and concentration can be increased by mixing china clay or wheat flour. The kattha (Lali) is brought to the market for sale when it is further thickened and completely concentrated after being stored in a large clay pot for evaporation (Kabir *et al.*, 2016).

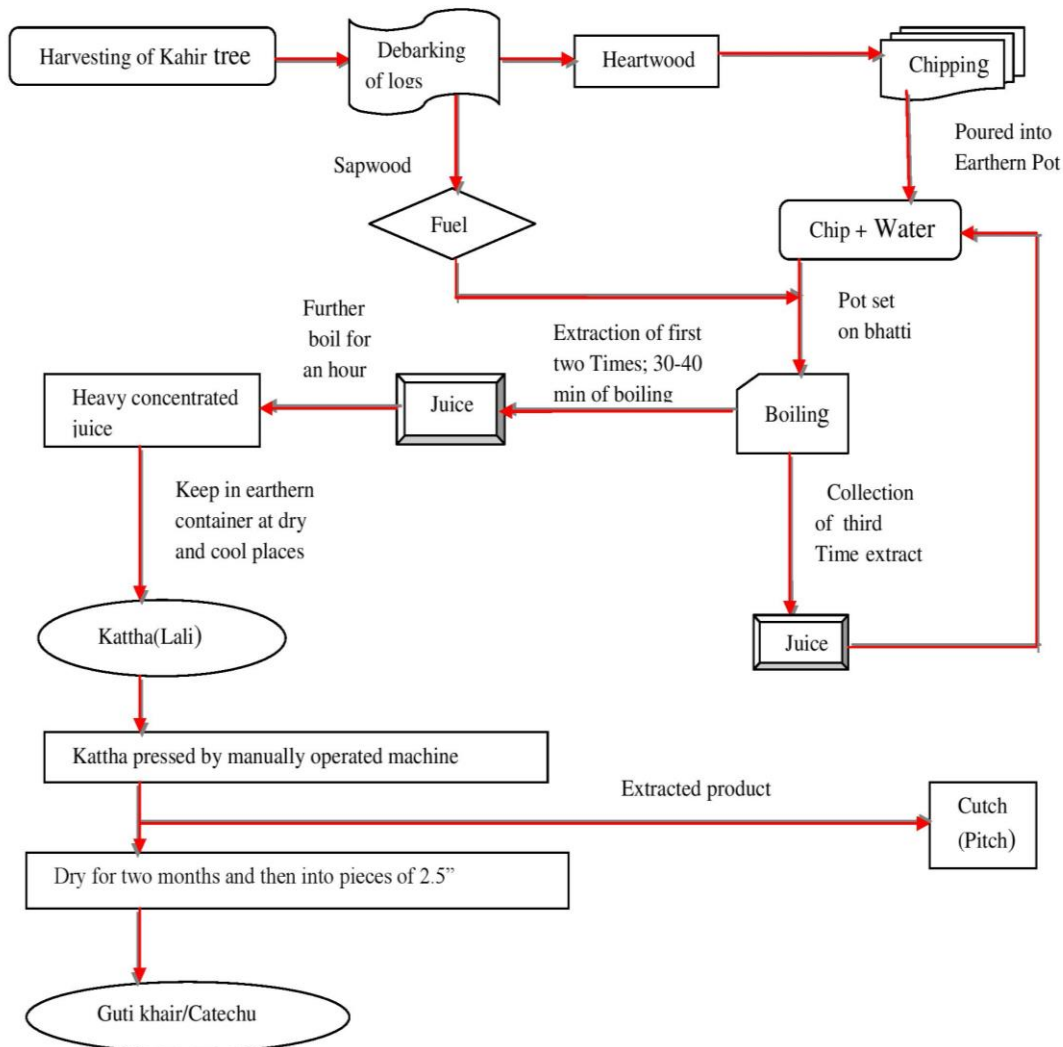


Figure 1: Flow chart of processing of Khair for kattha/cutch production by country method given by Kabir *et al.*, 2016

1.3 Yield of Kattha:

20 to 30 year old khair trees generate the highest yields of khair, and the rate of maximum khair output was 0.14 kg per kilogramme of heartwood. As tree girth diameter increased so does the price of khair trees and their production (Ferdousee *et al.*, 2009).

II. NEED OF STUDY

An important traditional industry in India that relies on forests is the production of kattha. Kattha has a wide range of uses. It has numerous applications outside of the pharmaceutical industry. It demonstrates the scope of the kattha and cutch industries. The product is expensive. The *Acacia catechu* plant can thrive in the climate of Himachal Pradesh's Una and Kangra districts, and as a result, there is a significant khair plantation in these regions' forests. There are numerous kattha manufacturing plants in these districts, and this industry has a lot of potential. Prior to this, no research has been done to determine the agricultural potential of kattha-based entrepreneurs. Therefore, in order to identify the problems experienced by the entrepreneur and to recommend

various remedies and policy issues to boost the kattha based entrepreneur's profits, there needs to be adequate study in this area.

2.1 Objectives of the study:

- a. To study the existing status of *Acacia catechu* based entrepreneurship in Kangra and Una Districts of Himachal Pradesh.
- b. To assess the potential of the entrepreneurship in employment and income generation and to suggest policy issues.

III. RESEARCH METHODOLOGY

The present study has been conducted in Kangra and Una districts of Himachal Pradesh. The following methodology has been adopted to meet out the specified objectives:

3.1 Research Design

A research design is regarded as the framework or plan for the study that aids in data collecting and analysis as well as serving as a guide. For the concerned research study, a descriptive research design was chosen.

3.2 Population and Research Area

Out of 12 districts of Himachal Pradesh maximum number of kattha bhattis and boilers are registered in Una districts. Entrepreneurs of kattha of Kangra and Una districts of Himachal Pradesh comprised of population for the present study.

3.3 Sampling technique

Sampling is a strategy for choosing specific individuals or a subset of the population in order to draw conclusions from them statistically and estimate the characteristics of the entire population. A sample unit is the number of people in a sample. Convenience sampling was used to choose the respondents based on their availability.

3.4 Sample size

The number of individuals in a sample is called a sample size. A sample size of 25 kattha entrepreneurs has been selected for the present study.

3.5 Data collection

Both primary and secondary data were collected from the study area.

3.5.1 Primary data

Primary data was collected through personal interview method using structured questionnaire and by interacting with the kattha entrepreneurs in the study area.

3.5.2 Secondary data

The secondary data is the kind that has been gathered by another party. Secondary data was collected from government and other published sources.

3.6 Applied analytical tools

The analytical tools are used for data specific applications and data visualizations. Simple mathematical tools have been used in order to satisfy the objectives with a view of keeping the analysis simple and easy to understand.

3.6.1 Percentage method

To find out the percentage, individual frequency was divided by total frequency and multiplied by 100. Formula used for the percentage method is:

$$P = \frac{X}{Y} \times 100$$

Where,

P = Percentage

X = Number of respondents falling in specific category to be measured.

Y = Total number of respondents.

3.6.2 Arithmetic Mean:

The arithmetic mean has been applied to study the option of the sample respondents on 5 scales Likert Scale for different statements. The arithmetic mean has been calculated by assigning numerical value to the quantitative statements. These values has been assigned for the qualitative responses as one for strongly disagree, two for disagree, three for neutral, four for agree and five for strongly agree, and one for highly dissatisfied, two for dissatisfied, three for neutral, four for satisfied and five for highly satisfied. The formula used for Arithmetic Mean is:

$$X = \frac{\sum X_i}{n}$$

Where,

X = Arithmetic Mean

$\sum X_i$ = Sum of the value of observations on the variables

N = Number of observations

3.6.3 Total Weighted Square Method

The Total Weighted Score technique requires us to multiply the values of the elements (X) by the specified weights (w), which vary depending on their relevance. The total weights of all the things are then added, and the item with the highest score will be ranked first, while the one with the lowest value will be ranked last.

IV. RESULT AND DISCUSSION

4.1 Number of employees employed in the business

Table 1: Number of people employed in business

Number of employees	Frequency	Percent
1. Less than 25	05	20.00
2. 25 – 50	11	44.00
3. 50-100	09	36.00
4. More than 100	00	00.00

From table 1 it is concluded that 44.00 percent respondents gave employment to 25-50 number of people, 36.00 percent respondents gave employment to 50-100 number of people and only 20.00 percent respondents gave employment to less than 25 people.

4.2 Status of attitude of respondents of Kangra and Una Districts of Himachal Pradesh towards various statements regarding raw material.

Table 2: TWS of various statements regarding raw material

Statements		Responses (weightage)						TWS	Rank
Sr. no.	Particulars	Strongly Agreed (5)	Agreed (4)	Neither Agreed nor disagreed (3)	Disagreed (2)	Strongly Disagreed (1)			
1.	There is unavailability of raw material.	00	02	01	04	18	37	5	
2.	Raw material is timely available.	20	03	02	00	00	118	1	
3.	Sufficient amount of raw material is available.	00	15	06	03	01	85	3	
4.	Raw material is available at optimum cost.	02	05	02	06	10	58	4	
5.	Raw material is very costly.	18	04	00	01	02	110	2	

Table 2 represents the different parameters regarding raw material that tells about the raw material in the form of the total weighted score(TWS) and their respective ranks.It can be observed that most of the respondents placed with the highest TWS i.e 118 which shows the strongly agreeeness among the respondents regarding raw material is timely available .It can also be observed that least of the respondents with the lowest TWS i.e 37 given the 5thrank which shows the strongly disagreeableness to that there is unavailability of raw material.

4.3 Status of attitude of respondents of Kangra and Una Districts of Himachal Pradesh towards various attributes regarding labour.

Table 3 represents the different parameters reagrding labour that tells about the labour in the form of the total weighted score(TWS) and their respective ranks.It can be observed that most of the respondents placed with the highest TWS i.e 125 which shows the strongly agreeeness among the respondents regarding highly skilled labour is required .It can also be observed that least of the respondent with the lowest TWS i.e 33 given the 5th rank which shows the strongly disagreeableness to that there is unavailability of skilled labour.

Table 3: TWS of various statements regarding labour

Statements		Responses (weightage)						
Sr. no.	Particulars	Strongly Agreed (5)	Agreed (4)	Neither Agreed nor disagreed (3)	Disagreed (2)	Strongly Disagreed (1)	TWS	Rank
1.	There is unavailability of skilled labour	00	00	01	06	18	33	5
2.	labour is easily available.	22	03	00	00	00	122	2
3.	There are strict labour laws	07	15	00	03	00	101	3
4.	Highly skilled labour is required	25	00	00	00	00	125	1
5.	Skilled labour is available locally	00	00	00	05	25	35	4

4.4 Status of responses of respondents of Kangra and Una Districts of Himachal Pradesh towards various statements regarding *Acacia catechu* based entrepreneurship.

Table 4: TWS of various statements regarding *Acacia catechu* based entrepreneurship

Statements		Responses (weightage)						
Particulars	Strongly Agreed (5)	Agreed (4)	Neither Agreed nor disagreed (3)	Disagreed (2)	Strongly Disagreed (1)	TWS	Rank	
1. Problems are created by government policies.	18	04	00	02	01	111	2	
2. Government policies highly affected your business	16	05	00	03	01	107	3	
3. Government support is needed	12	13	00	00	00	112	1	
4. Technology is not updated	1	4	3	9	8	56	10	
5. Unavailability of modern technology	3	1	2	7	12	51	11	

6. Modern technology is expensive	9	8	2	4	2	93	6
7. Large scale industries affect your business activity	18	1	1	3	2	105	5
8. Competition in the market affects the price of the output	00	00	3	8	14	39	12
9. Bank support is available for finances	13	9	00	3	00	107	4
10. Easy availability of finances	11	6	1	3	4	92	7
11. Profits are sufficient	8	3	1	3	10	71	9
12. Profits are encouraging	11	5	2	6	1	91	8

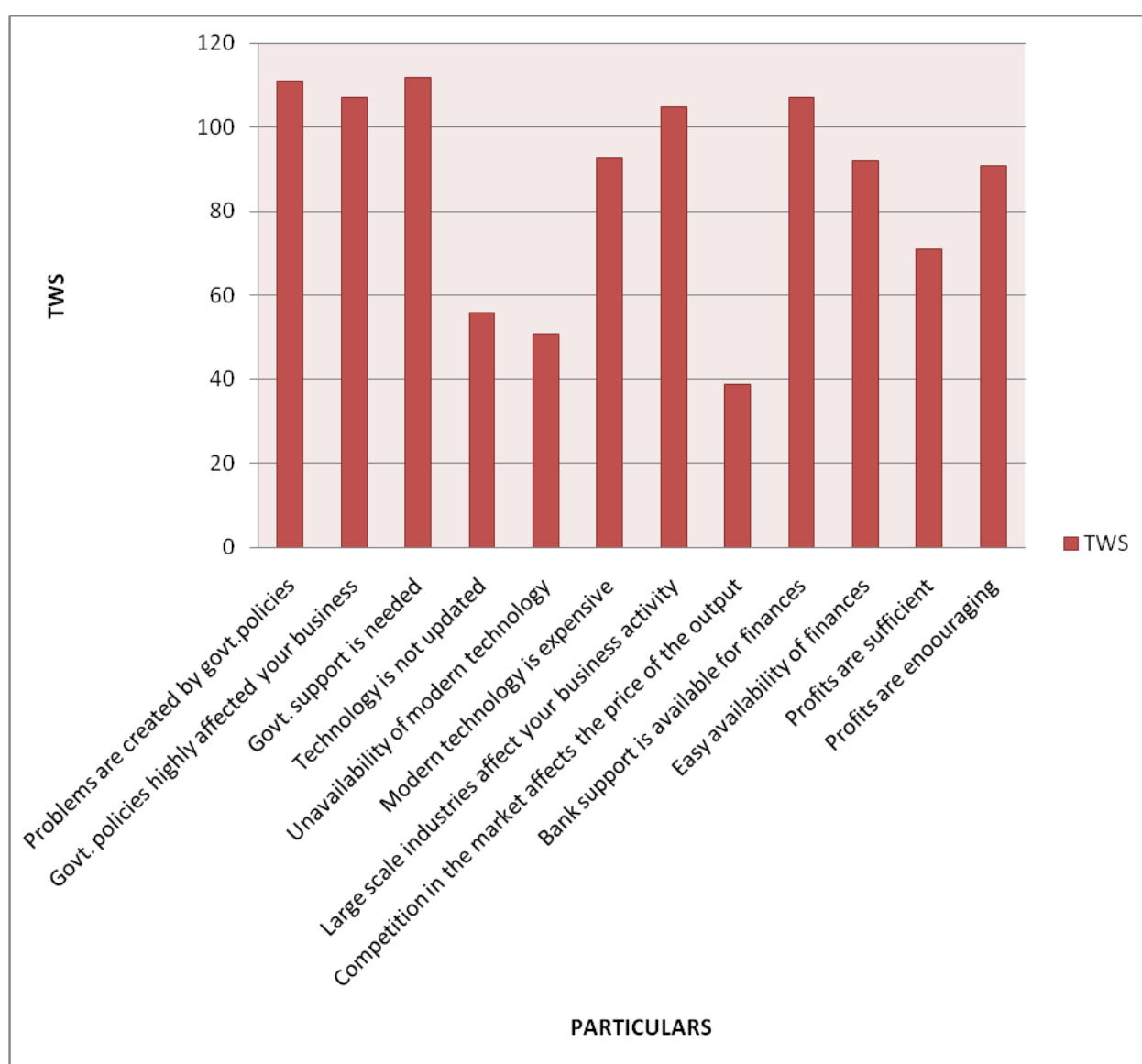


Figure 2: TWS of particulars regarding technology and role of government

Table 4 and figure 2 represent the different parameters regarding *Acacia catechu* based entrepreneurship in the form of the total weighted score (TWS) and their respective ranks. It can be observed that most of the respondents placed with the highest TWS i.e. 125 which shows the strong agreement among the respondents regarding government support is needed. It can also be observed that least of the respondent with the lowest TWS i.e. 33 given the 12th rank which shows the strong disagreement to that competition in the market affects the price of the output.

V. CONCLUSION

Khair based entrepreneurship involves a large amount of annual investment and it was observed that this is mainly due to the high cost of raw material and expensive labour. Most of them raise capital through the bank loan as the amount is big and raising such high capital on their own and from friends is quite difficult. Biggest risk entrepreneurs face in the market or industry is financial related risk as large amount of money is involved and there is instability of prices of output. Financial risk is followed by technology related risk. Technology related risk is also high because production of cutch and kattha mostly depends upon the technology. Any small mistake in technology during production will lead to a great loss. When any Kattha entrepreneur wants to go for expansion of the business they mostly face the problem of space availability and financial issues. This is because any production unit of kattha requires a large space for establishment and it also requires a large amount of finances which are quite difficult to arrange.

It was observed that most of the labour was called from other states of the country and there is unavailability of local skilled labour. This is because local labour is not interested in working in these bhattis and kattha factories due to heavy work load during the collection of heartwood of khair. Government policies and large scale industries highly affected the khair based entrepreneurship. This business involves the cutting of khair tree so there are so many government policies that affect this business and one of them is high taxes on this business in different stages of production, transportation and marketing of kattha and cutch.

VI. SUGGESTIONS

The study has brought into focus many problems incurred by entrepreneurs of khair based entrepreneurship in the study area. The findings of the present study have resulted into a number of policy implications for these entrepreneurs. There should be the proper management of cutch that is wasted in large amount in Kattha Bhattis and factories. Proper packing of kattha should be done before transportation as it becomes more dry if not packed properly. The government should have proper check on these Kattha Bhattis and factories as this business involves felling of khair trees. The government should ensure that these bhattis and factories use only heartwood of dry khair trees to avoid the over exploitation of green khair trees. Marketing facilities should be provided for the small entrepreneurs as they lack infrastructural facilities and government should reduce the tax rate on the transportation of kattha.

CONFLICT OF INTEREST

None

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