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Studies about the relationship between knowledge and adoption level of opium poppy growers

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Abstract

This studies knowledge level of opium growers 48.33 per cent were found to have medium level whereas 30 per cent has high level of knowledge and 21.67 per cent has low level of knowledge level about opium poppy production and Adoption level of opium growers 50. per cent were found to have medium level whereas 30.33 per cent has high level of adoption and 19.67 per cent has low level of Adoption level about opium poppy production.

Keywords: Knowledge, adoption and opium poppy and growers

Introduction

Opium poppy (*P. somniferum* L.) belongs to family papaveraceae and one of the few medicinal plants grown over centuries for its opium alkaloid (Neligan 1927) which are being widely used in modern medicine because of their strong analgesic antitussive and antispasmodics properties, it is grown as a source's seeds and soil in European countries. In India it is dual purpose crop grown for seeds and opium. A comparatively small amount of *Papaver somniferum* is also produced commercially for ornamental purposes. The poppy is grown as an agricultural crop on large scale. For one of three primary purpose. The first is to produce seeds that are eaten by humans commonly known as poppy seed second one is to produce opium for use mainly by the pharmaceutical industry and third is to produce other alkaloids. Mainly the baine and opripavine that are the processed by the pharmaceutical industry into drugs such as hydrocodone and oxycodone. Each of those goals has special breeds that are targeted as one of these businesses. And breeding efforts (including biotechnological ones) are continually under way. Currently in India opium poppy cultivation is regulated by narcotics department, government of India since 1973 and is in pursuant to the opium Act, 1857 and 1878 and dangerous drugs Act, 1930 to protect illicit transaction of opium. The major opium poppy producing state are the Uttar Pradesh, Madhya Pradesh and Rajasthan. The illegal cultivation in many others parts of the world of illicit trade of opium is being carried out in many countries such as "golden triangle" (Thailand Myanmar and loose) and golden crescent (Afghanistan Pakistan and Iran). The earliest reference to opium growth and use is in 3,400 B.C. when the opium poppy was cultivated in lower Mesopotamia (Southwest Asia). The Sumerians referred to it as *Hull Gil*, the "Joy Plant." The Sumerians soon passed it on to the Assyrians, who in turn passed it on to the Egyptians. As people learned of the power of opium, demand for it increased. Many countries began to grow and process opium to expand its availability and to decrease its cost. Its cultivation spread along the Silk Road, from the Mediterranean through Asia and finally to China where it was the catalyst for the Opium Wars of the mid-1800s. The First and Second Opium Wars between China, and the British Empire and France took place in the late 1830s to the early 1860s, when the Chinese attempted to stop western traders from selling and later smuggling opium into their country from the large crops grown in India.

The fertility of the soil can be improved just by effective drainage. In sufficient tillage, root injuries of young crops, insufficient supply of sap and the surcharging of the plant with an over-diluted food due to water logging have a most deleterious effect on the poppy. The plants become poor and stunted; the leaves are narrow of a polish green colour. The stalks are spare and simple and tend to flower prematurely giving a low number of capsules. To the opium poppy cultivator, the weather is a very important element. A hailstorm, for example, and by no means a severe one, will ruin his crop while a heavy rainfall between the period of scarification of the capsules and the collection of the latex will leave little or none for

collection. High or gusty winds are also detrimental during the opium season because they dry up the plant and thus check the exudation of latex. Whatever latex flows dries quickly so that when the capsules rub together, the opium is lost. Dull, cloudy or rainy weather tends to reduce, not only the quantity, but the quality of the drug exudations. The knowledge system involves the producers, not merely as the targets of advisory exhortation as pupils at forming training centre's, or as the passive victims of development they have much to tell about soils, weather crop, animals, disease and pest as well as about their purpose and difficulties (Bunting, 1985).

Research and Methodology

The parallels of latitude 23° 45' 50" North and 25° 2' 55" North, and between the meridians of longitude 74° 42' 30" East and 75° 50' 20" East. Mandasaur extends for about 142 km from north to south and 124 km from east to west. The total area is 5521 km² with a population of 116483 in 2001. The total area is 5521 km² with a population of 116483 in 2001.

1. Assessment knowledge level of opium growers

All questions were included in the schedule to test the knowledge of respondents. Knowledge as defined is body of understood information possessed by individual opium poppy growers. Level of knowledge of opium poppy growers regarding opium production technology was measured with the help of structural schedule. Equal weight age was given to all the items assuming that all the items included were equal in difficulty to understand, apply and recall. One mark was given to every right answer and zero for wrong answer. On the basis of knowledge scores, all the respondents were categorized into three groups, as under:

$$\text{Knowledge index} = \frac{\text{Sum of knowledge score actually obtained by the farmers}}{\text{Maximum possible obtainable knowledge}} \times 100$$

Table 1: Assessment knowledge level of opium growers

S. No.	Categories	Scores
1	Low (Up to 24)	Mean-SD
2	Medium(25 to 30)	Mean ±SD
3	High (Above 30)	Mean + SD

2. Extent of adoption

Rogers and Shoemaker defined adoption as a decision to make full use of an innovation as the best course of action available in the present study. Adoption refers to the actual use of new technologies regarding improved practices of opium poppy. The level of adoption was considered full knowledge, partial knowledge and least knowledge. It was measured in terms of score value of weightage given to individual practice. Overall adoption level was calculated on the basis of scores obtained by the opium poppy grower's farmers. Finally, this raw adoption score obtained by individual opium growers was converted into adoption index as below:

$$\text{Adoption index} = \frac{\text{Sum of knowledge score actually obtained by the farmers}}{\text{Sum of obtainable adoption}} \times 100$$

Table 2: The farmers were categorized into the following categories

S. No.	Categories	Scores
1	Low (Up to 24)	Mean -S.D.
2	Medium (25 to 30)	Mean ±S.D.
3	High (Above 30)	Mean +S.D.

Results and Discussion

Results of the researcher problem, which has been organized according to the title of the study.

1. Knowledge level regarding the recommendation opium poppy production: Knowledge is a body of understood information possessed by individual opium growers. Knowledge level of opium growers was assessed related to improved practices of opium poppy cultivation and presented in Table 1.

Table 3: Distribution of opium growers according to their level of knowledge regarding the recommendation opium poppy production

Sn.	Component of package of practices	Level of knowledge			Mean Score
		Least	partial	Full	
1.	Field preparation (a)Time & number of ploughing	48 (40)	38 (31.67)	34 (28.33)	0.85
2.	Method of sowing (a) Broadcasting	36 (30)	59 (49.67)	25 (20.33)	1.88
3.	Sowing time (a) October end/ first fortnight of Nov.	38 (31.67)	36 (30)	46 (38.33)	2.06
4.	Proper Variety (Jawahar opium 539, Jawahar opium 540)	25 (20.83)	62 (51.67)	33 (27.50)	2.055
5.	Seed rate (1.2kg/ha)	21 (17.50)	57 (47.50)	42 (35)	2.17
6.	Seed treatment (Diathen M-45, 4g per kg.)	74 (61.67)	30 (25)	16 (13.33)	1.51
7.	Use of FYM (Farm yard manure 10 quintal/ha)	53 (44.67)	43 (35.33)	24 (20)	1.75
8.	Fertilizers dose (N:P:K) 12:32:16	49 (40.83)	50 (41.67)	21 (17.5)	1.75
9.	Intercultural operations hand weeding	36 (30)	60 (50)	24 (20)	1.9
10.	Irrigation	48 (40)	39 (32.50)	33 (27.50)	1.8
11.	Plant protection Measures -Mencozab	25 (20.33)	59 (49.67)	36 (30)	2.08
12.	Proper method of latex Collection of	20 (16.67)	58 (48.33)	42 (35)	1.88
13.	Proper method of harvesting	24 (20.00)	54 (45.00)	42 (35.00)	2.15
14.	Realization of optimum yield	37 (30.33)	59 (49.67)	24 (20)	1.88

Table 4: Distribution of opium growers according to their overall knowledge about opium poppy production technology

Sn.	Knowledge level	Frequency	Percentage
1	Low	26	21.67
2	Medium	58	48.33
3	High	36	30
	Total	120	100

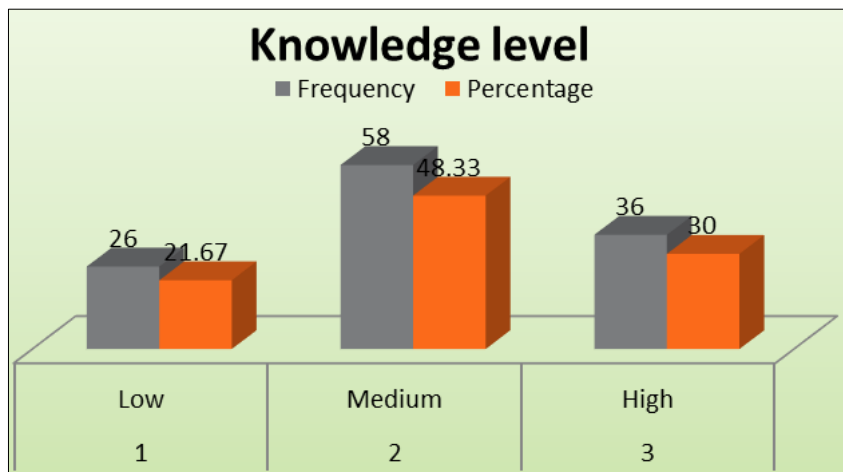


Fig 1: Distribution of opium growers according to their overall knowledge about opium poppy production technology

2. Distribution of opium growers according to their overall knowledge about opium poppy production technology: The result presented in Table 3 showed that out of the total opium growers, the highest proportion of opium

growers 48.33 per cent were found to have medium level followed by high level of knowledge about opium poppy production 30 per cent and low level of knowledge 21.67 per cent respectively.

Table 5: Distribution of opium growers according to their level of adoption regarding the recommendation opium poppy production

Sn.	Component of package of practices	Level of adoption			Mean Score
		least	Partial	Full	
1.	Field preparation (a)Time & number of ploughing	30 (25)	55 (45.33)	35 (29.67)	2.03
2.	Method of sowing (a)Broadcasting	32 (26.67)	58 (48.33)	30 (25)	1.97
3.	Sowing time (a) October end/ first tonight of November	21 (17.50)	49 (40.83)	50 (41.67)	2.23
4.	Proper Variety (Jawahar opium 539, Jawahar opium 540)	26 (21.67)	60 (50)	34 (28.33)	2.06
5.	Seed rate (1.2kg/ha)	26 (21.67)	54 (45)	40 (33.33)	2.11
6.	Seed treatment (Diathen M-45, 4g per kg.)	40 (33.33)	56 (46.67)	24 (20)	1.86
7.	Use of FYM (Farm yard manure 10 quintal/ha)	28 (23.33)	53 (44.67)	39 (32)	2.08
8.	Fertilizers dose (N:P:K) 12:32:16	26 (21.67)	52 (43.33)	42 (35)	2.12
9.	Intercultural operations hand weeding	28 (23.33)	57 (47.50)	35 (29.16)	2.05
10.	Irrigation	21 (17.5)	54 (45)	45 (37.5)	2.19
11.	Plant protection Measures -Mencozab	27 (22.5)	60 (50)	33 (27.5)	0.82
12.	Proper method of latex Collection of	24 (20)	53 (44.67)	43 (35.33)	1.07
13.	Proper method of harvesting	25 (20.33)	42 (35)	53 (44.67)	1.32
14.	Realization of optimum yield	34 (28.33)	56 (46.67)	30 (25)	0.75

Table 6: Distribution of opium growers according to their overall adoption level about opium poppy production technology

Sn.	Adoption level	Frequency	Percentage
1	Low	23	19.67
2	Medium	60	50
3	High	37	30.33
	Total	120	100

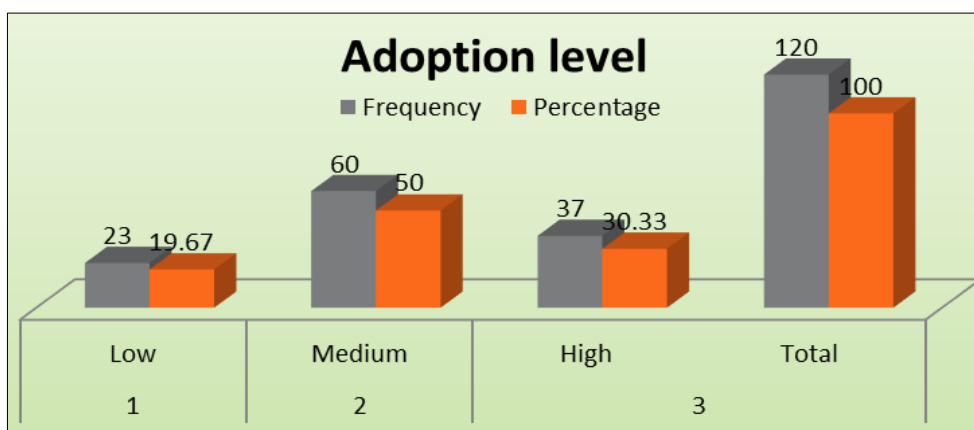


Fig 1: Distribution of opium growers according to their overall adoption level about opium poppy production technology.

The result presented in Table 5 showed that out of the total opium growers, the highest proportion of opium growers 50 per cent were found to have medium level followed by high level of adoption about opium poppy production 30.33 per cent and low level of adoption 19.67 per cent respectively.

Summary

Knowledge level and adaptation regarding the recommendation opium poppy production: Knowledge level of opium growers 48.33 per cent were found to have medium level whereas 30 per cent has high level of knowledge and 21.67 per cent has low level of knowledge level about opium poppy production and Adoption level of opium growers 50. per cent were found to have medium level whereas 30.33 per cent has high level of adoption and 19.67 per cent has low level of Adoption level about opium poppy production.

Conclusion

In the case of relation to knowledge level of opium growers it was found that majority medium level of knowledge followed by high and low level of knowledge level. And adoption level of opium growers it was found that majority medium level of knowledge followed by high and low adoption level.

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