INDIGENOUS KNOWLEDGE OF FARMERS ABOUT USES OF NEEM

Pankaj Barotia*, S.S. Sisodia** and B. Upadhyay***

ABSTRACT

The neem is (*Azadirachta indica A Juss.*) belonging to the family Meliaceae is known for thousands of years in the Indian sub-continent by different names such as Indian lilac or Margosa tree. Ayurveda have mentioned the wide range of uses of neem for treating wide range of diseases and symptoms. The present study was conducted in Udaipur district of Rajasthan. There are total nine tehsil in Udaipur district of Rajasthan, out of which one tehsil namely Girwa has been selected on the basis of maximum area under neem tree. Ten villages from identified tehsil were selected on the basis of maximum area under neem tree. For selection of respondents, 100 respondents were randomly selected from identified villages for data collection. Data were collected with the help of interview schedule developed for the study purpose through face to face contact method. Different statistical test like mean, mean percent score, rank and standard deviation were used in the analysis of data. It was found that among uses of neem, the respondents had maximum knowledge about making farm implements under general uses of neem. It was also found that respondents had more awareness about aspects of dermal disease and putting leaves on the bed of child. It was further observed that among general uses, traditional uses, health related uses and cultural uses, the respondents had more knowledge about general uses of neem and had less awareness about cultural uses.

INTRODUCTION

The neem (*Azadirachta indica* A Juss.) belonging to the family Meliaceae is known for thousands of years in the Indian sub-continent by different names such as Indian lilac or Margosa tree. Ayurveda, have mentioned the wide range of uses of neem for treating wide range of diseases and symptoms. The leaves are known to be effective against seasonal fever, dermatological diseases and worms. They are burnt to repel the mosquitoes. The twigs are used as toothbrush (*Daatun*). Oil has spermicidal effect and can prove as a good contraceptive. It is also used for the treatment of head louse. When the oil is applied to the chronic wounds and ulcers on the body, it quickens the cure. Neem is also used in toothpaste, cosmetics and aromatic preparations. Thus, every part of this tree is found useful.

Moreover, neem is used in various ways in agriculture also. Plantation of neem trees on field bunds can prove as an effective windbreak. The leaves are used as good fertilizer. Apart from leaves, seed cake is also a very good fertilizer. In addition, it helps in controlling the nematode problem. It also enriches the soil health, increases soil fertility, changes the soil structure and makes the land live for long period to produce good amount of produce. Thus, it is used as organic manure for soil.

Inspite of such versatility, the indigenous usages of this tree have not been utilized by the Indian people. Thus, we are sitting on a gold mine but have been unable to excavate. To dig out this god gifted, naturally available measure what else can be the source other than the farmers the true son of land and the treasurer of the cultural heritage. Moreover, to improve the productivity of neem and to popularize the cultivation, it is necessary to expand indigenous knowledge of this tree among the farmers and formulizations of a strategy to popularize neem by strong extension network to highlight the benefits of neem.

Keeping this fact in view, the present

*   P.G. Scholar, Department of Extension Education, RCA, Udaipur.
**   Assoc. Prof., Department of Extension Education, RCA, Udaipur.
***   Assoc. Prof. & Head, Department of Agricultural Statistics & Computer Application, RCA, Udaipur.

investigation was undertaken with an objective to assess the knowledge of farmers towards different uses of neem in Udaipur district of Rajasthan.

RESEARCH METHODOLOGY

The study was conducted in Udaipur district of Rajasthan. Udaipur is situated in southern part of Rajasthan. Udaipur district consists of nine tehsils in total, out of which Girwa Tehsil was selected purposively because in this tehsil maximum area or number of neem tree. For the selection of villages, a comprehensive list of all the villages with the total number of farm families was prepared with the help of personnel of Deputy Director's (Agril. Extn.) office as a secondary information sources. Out of this prepared list, 10 villages having highest number of farm families were identified for the present study. To fulfill the objective of the present investigation, the proposed study was consist 100 respondents. A comprehensive list of farmers was obtained from related village in consultation with the Patwari, agriculture supervisor and secretary of respective village. Therefore, 10 farmers were selected from the obtained list randomly. Hence, total 100 respondents (10 from each village) were selected for the present investigation. Thereafter, collected data were analyzed, tabulated and interpreted in the light of above objective.

RESULTS AND DISCUSSION

To get an overview of the knowledge level, the respondents were categorized into (i) low (< 11.8), (ii) medium (11.8 to 15) and high (> 15) knowledge level on the basis of calculated mean and standard deviation of the obtained score by the respondents.

Table 1. Distribution of respondents on the basis of their level of indigenous knowledge about uses of neem (n = 100)

S. No.	Category	Frequency	Per cent
1.	Low (< 11.8)	21	21
2.	Medium (11.8 - 15.00)	61	61
3.	High (> 15.00)	18	18
	Total	**100**	**100**

$\overline{X}$ = 13.40, SD = 1.6

Table 1 reveals that out of 100 respondents, majority of respondents (61.00 per cent) fell in medium level of knowledge group whereas, 21.00 per cent respondents were observed in low level of indigenous knowledge group and remaining 18.00 per cent respondents possessed high level of indigenous knowledge about uses of neem.

The finding are tune with the results of Jadeja (2008) who revealed that respondents were having high level of knowledge of uses of neem. About 73.00, 14.00 and 13.00 per cent respondents were having medium, low and high level of knowledge respectively.

Table 2 shows that first rank is given to the statement "making farm implements" with 91.00 MPS respectively. Further, this table reveals that "use for fellow land", "use for agro-forestry" and "use as

Table 2. Indigenous knowledge about general uses of neem (n=100)

S. No.	Major Aspects	MPS	Rank
1.	Use as wind break	82	4
2.	Use for fellow land	88	2
3.	Making doors and window	81	5
4.	Making farm implements	91	1
5.	Use for agro forestry	82	3

MPS = Mean Per cent Score

wind break" were given second, third and fourth rank respectively. Fifth rank is given to statement "making doors and window" with MPS 81.00. It is inferred that respondents had good amount of indigenous knowledge about making farm implements, use for fellow land followed by use for agro-forestry.

Table 3. Indigenous knowledge about health related usages of neem (n = 100)

S. No.	Major Aspects	MPS	Rank
1.	Use for mosquito incidence	87	2
2.	For dermal disease	88	1
3.	For relieve cough	84	3
4.	Use as a toot brush (datun)	81	4

MPS = Mean Per cent Score

Table 3 reveals that first rank is given to "use for dermal disease" with the MPS 88.00 followed by "use for mosquito incidence" with MPS 87.00 and "use for relive cough" with MPS 84.00, respectively. Last rank is given to statement "use as a toot brush" with MPS 81.00. It indicates that respondents know very well about neem uses for general disease. They also have fair knowledge about use of neem for mosquito incidence.

Table 4. Indigenous knowledge about traditional usages of neem   (n = 100)

S. No.	Major Aspects	MPS	Rank
1.	Neem leaves are put on the bed of child	88	1
2.	Neem paste for skin	85	2
3.	Leaves putting between cloths	81	3
4.	Use as a better drink	80	4

MPS = Mean Per cent Score

Table 4 reveals that first rank is given to the "Neem leaves are put on the bed of child" with MPS 88.00 followed by "Neem paste for skin" with MPS 85.00. Further, table reveals that they have good knowledge about "leaves putting between cloths" with MPS 81.00 and they have relatively less knowledge about "use as bitter drink" with MPS 80.00. It indicates that respondents were aware about the putting neem leaves on child bed and using neem paste for skin. They have comparatively less knowledge about using neem contents for a bitter drink.

Table 5. Indigenous knowledge about cultural usages of neem   (n=100)

S. No.	Major Aspects	MPS	Rank
1.	Passage to heaven	78	3
2.	Stunging leaves on main entrance	80	2
3.	Use as a protective aura	82	1

MPS = Mean Per cent Score

Table 5 shows that respondents have good knowledge about "use of neem as a protective aura" with MPS 82.00 followed by "stunging leaves on main entrance" with MPS 80.00. Last rank is given to the statement "passage to heaven" with MPS 78.00.

Table 6. Indigenous knowledge about usages of neem   (n = 100)

S. No.	Major Aspects	MPS	Rank
1.	General usages	85.4	1
2.	Health concerned usages	85.00	2
3.	Traditional usages	83.5	3
4.	Cultural usages	80.00	4

MPS = Mean Per cent Score

Table 6 shows that respondents' indigenous knowledge regarding various aspects of neem usages ranged from 80.00 to 85.40 MPS. First rank has given to general usages with MPS 85.40 followed by health concerned usages with MPS 85.00. Third rank is given to traditional usages with MPS 83.50 followed by cultural usages with MPS 80.00. Further it has been observed that respondents had better knowledge about general usages over others.

CONCLUSION

It was found that 61.00 per cent of the total respondents possessed medium level of indigenous knowledge while, 21.00 and 18.00 per cent respondents had low and high level of indigenous knowledge about uses of neem. It was observed that the extent of indigenous knowledge of respondents was 80.00 to 85.40 MPS. Further, it was found that respondents had more knowledge about indigenous aspects.

The findings of this study revealed that majority of neem growers were from the middle age group so they should be contacted and their knowledge should be increased about various indigenous uses of neem. There are many advantageous uses of neem in agriculture, health, industries and other purposes. It was observed that many areas are yet to be known by the farmers about neem. At the same time it was also observed that many known areas of neem were not properly utilised by the farmers, such areas need to be popularized among the farmers.

Neem is known as versatile tree, thus each farmers should be motivated to grow neem tree near

by their home and farm to make best uses of various parts of neem for eco-friendly agriculture and family health care.

REFERENCE

Jadeja, M.K. and Thakrar, D.M. 2008. Indigenous and scientific knowledge of farmers about uses of neem. M.Sc. (Ag.) Thesis Submitted to J.A.U. Junagarh.

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