

## A TEST TO MEASURE KNOWLEDGE ABOUT INDIGENOUS RESOURCES MANAGEMENT

J. G. Patel<sup>1</sup>, N. B. Chauhan<sup>2</sup> and J. C. Trivedi<sup>3</sup>

### INTRODUCTION

Indigenous Resource Management (IRM) is an art or manner by which the available local resources are better managed to increase the income. The knowledge of indigenous resource management activities are found to be more in tribal farm women as these activities are traditional and are more women oriented. The knowledge on various aspects is passed on from generation to generation and they are within the domain of women. The participation in IRM activities has been operationally defined as the actual functions performed by tribal farm women in relation to their position in the family. For effective participation in any activities, one should have comprehensive knowledge of the activities to be performed.

Knowledge plays an important role for achieving desired results. Knowledge according to English and English (1961) is a body of understood information possessed by an individual or by a culture. Hence, to perform active role in any activities, information being understood plays an important role. High knowledge of indigenous resource management would lead an individual towards an active participation in income generating activities. Considering this fact, it was worth to develop a test to measure the knowledge of Tribal Farm Women about IRM.

### METHODOLOGY

Efforts have been made to develop a standardized knowledge test with the help of which knowledge about indigenous resource management of tribal farm women can be measured. Initially, a list of 118 items was prepared by reviewing the literature and after having discussions with the experts, for developing knowledge test. Each item was given the score of 1 or 0 for dichotomized responses of correct or incorrect answers, respectively.

The collected items were administered to the randomly selected 48 respondents from the area under study. The total score secured by an individual respondent of 118 items was the knowledge score.

After arranging the items in descending order on the basis of the total score obtained by the respondents, the respondents were divided in to six equal groups each of eight. For the item analysis, the middle two groups were eliminated and the four extreme groups with high and low scores were kept. Selection of items for final format for the knowledge test was done on the basis of following criteria.

#### Item Difficulty Index

The index of difficulty was worked out as the percentage of the respondents answering an item correctly the items with 'P' value (Item Difficulty Index) ranging from 10 to 90 were considered for final selection of the knowledge battery.

---

1 Associate Extension Educationist, Office of the ADEE, Unit-10, GAU, Anand.  
2 Associate Professor, Dept. of Extension Education, BACA, GAU, Anand  
3 Retd. Professor and Head, Dept. of Extension Education, BACA, GAU, Anand

### Discrimination Index

The item with E 1/3 values ranging from 0.20 to 80 were considered for final selection.

$$E \frac{1}{3} = \frac{(S_1 + S_2) - (S_5 + S_6)}{N/3}$$

Where,  $S_1, S_2, S_5$  and  $S_6$  are the frequencies of correct answers in four groups of  $G_1, G_2, G_5$  and  $G_6$  respectively.

N = Total member of respondents in item analysis sample

### Biserial Correlation

The Biserial correlation ( $r_{bis}$ ) for each of the item was calculated and tested by using the formula given by Guilford.

$$r_{bis} = \frac{Mp - Mq}{\delta^+} \times \frac{P}{Y}$$

Where,

Mp = Mean of x values for higher group in dichotomized variable

Mq = Mean of x values of lower group in dichotomized variable

P = Proportion of cases in higher group  
proportion of cases in lower group.

Y = Ordinate of the unit normal distribution curve with surface equal to 1.0 of the point of division between segments containing P and proportion of the cases.

$$\delta^+ = \frac{(x - \bar{x})^2}{n-1} - S.D.$$

### Test of Significance of $r_{bis}$ :

$$t = \frac{r_{bis}}{\frac{\sqrt{\frac{PQ}{Y} - r_{bis}^2}}{\sqrt{N}}}$$

Where,  $r_{bis}$  = Biserial correlation.

$$\frac{\sqrt{\frac{PQ}{Y} - r_{bis}^2}}{N} = \text{Standard deviation error of biserial correlation}$$

N = Total No. of respondent.

The items found significant at 5 per cent level of significance were kept in the final format of the knowledge test.

Thus, in light of the criteria described above, 40 items were included to form the final format of the knowledge test.

### Reliability and Validity of Test

To know the reliability of the knowledge test, test retest method was used ( $r=0.96$ ). For testing the validity, the result of the biserial correlation ( $r_{bis}$ ) was considered. Highly significant biserial correlation co-efficient ( $r_{bis}$ ) proved the validity of the items included in the test battery.

The final format of the test is presented in Appendix-I.

### REFERENCE

English, H.B. and English, A.G. 1961. New York: A comparative dictionary of psychological and psycho-analytical items.  
Guilford, J.P. 1965. Fundamental statistics in psychology and Education, New York, McGraw Hell - Book Co. Inc.: 317-319.

Appendix 1 Final format of the test to measure tribal farmwomen knowledge about Indigenous Resource Management

1. When the green maize cob should be plucked? Correct/Incorrect.
2. Which varieties of maize are recommended for grain purpose? Correct / Incorrect
3. How much ghee can be produced from one liter of milk? Correct / Incorrect
4. When does hen start to lay eggs? Correct / Incorrect
5. When broiler variety should be sold? Correct / Incorrect
6. Which type of food should fed to hens at rearing time? Correct / Incorrect
7. Which are the important diseases in poultry farm? Correct / Incorrect.
8. Which type of grafting method should be followed to improve deshi ber? Correct / Incorrect
9. Which fruits can be dried? Correct / Incorrect
10. Which preservatives are used for preserving pickles? Correct/Incorrect.
11. Which type of leafy vegetables can be sold after drying? Correct/Incorrect.
12. How much flowers can be obtained from a single mahua tree? Correct/Incorrect.
13. How a stem of timru leves ('bhoyadori') should be removed? Correct/Incorrect.
14. At what color the timru leaves should be plucked for selling? Correct/Incorrect.
15. In which month the flowers of 'KHAKHAR' should be collected? Correct/Incorrect
16. What is the rate of 'khakar' flowers? Correct/Incorrect.
17. Where training is given for preparation of dishes and bowls from 'khakar' leaves? Correct/Incorrect.
18. How will you collect a better quality of gum from tree? Correct/Incorrect.
19. Name the gum which gives higher price. Correct/Incorrect.
20. What aspect should be considered for getting better price of gum? Correct/Incorrect.
21. What should be done to get more quantity of gum from a tree? Correct/Incorrect.
22. What is the rate of one kilogram of 'charoli'? Correct/Incorrect.
23. What is the shape of 'mardasing'? Correct/Incorrect.
24. In which month 'chanothi' seeds are to be collected? Correct/Incorrect.
25. In which month 'behda' fruits are being collected ? Correct / Incorrect.
26. In which disease 'karanj' seeds are utilized? Correct/Incorrect
27. For which purpose 'bavalsings' can be used frequently? Correct/Incorrect.
28. For which disease 'kadaya' bark is utilized? correct/Incorrect.
29. When Rosa grass is harvested? Correct/Incorrect.
30. Which part of the 'nagarmoth' is used as medicine? Correct/Incorrect.
31. Which organizations are useful for marketing of medicinal raw products? Correct/Incorrect.
32. What should be the length and thickness of bamboo for cutting? Correct/Incorrect.
33. How and in how many stroke bamboo should be cut? Correct/Incorrect.
34. How bamboos are harmful to the human being? Correct/Incorrect.
35. From which part of bamboo pickle can prepare? Correct/Incorrect.
36. Which type of leaves should be selected for preparation of mat? Correct/Incorrect.
37. Which plants gives fiber for rope making? Correct/Incorrect.
38. In which season honey is to be collected from forest? Correct/Incorrect.
39. Do you know that honey can be produced by rearing of honey-bee? Correct/Incorrect.
40. Which insects produce lac? Correct/Incorrect.

-----

---

**SOCIETY OF EXTENSION EDUCATION (GUJARAT)**


---

(Reg. No. Guj. 737 - Kheda & F/ 478/ Kheda/ January 1, 1990)

No: SOEE/ 1222/ 2003

December 6, 2003

---

**Proceedings of the General Body Meeting of the Society of Extension Education held on 6<sup>th</sup> December 2003 at 17.30 hrs at GAU, Anand**

---

Dr. B. T. Patel, President, SEEG welcomed all members of SEEG and conducted the business of this meeting as per the agenda. In all 80 members were present in the meeting.

**1. Confirmation of the proceedings of the last General Body Meeting**

The proceeding of General Body Meeting of SEEG held on 27th February 2003 at GAU Navsari was confirmed and approved unanimously by the house.

**2. Approval of annual statement of accounts and review of auditor's report**

Dr. H. U. Vyas, Joint Secretary, SEEG presented the statement of accounts showing income and expenditure as on 31st March, 2003, audited by M/s. M. A. Shah and Co. Anand which was accepted and approved unanimously by the house.

**3. Note of work done by Executive Council as well as Editorial Board**

As per rules and regulations, the members at the annual meeting should take note of the activities carried out by the executive council & editorial board at various meetings during the period under report. Dr. K. F. Patel, Secretary-cum-Treasurer, SEEG, has presented the brief review of the work done by executive council & editorial board at various meeting during period under report which was accepted and approved unanimously by the house.

**4. Report of the activities of the Society.**

Dr. K. F. Patel. Secretary- cum -Treasurer, SEEG has presented the report of the activities of the society which was accepted unanimously by the house.

**5. Any other items with permission of chair.**

**a) To approve appointment of the auditors.**

As per rule 6.c.3.G.B., the name of M/s. M. A. Shah and Co., Anand was unanimously approved as auditors of SEEG.

**b) Next date of seminar/G.B.**

The members have expressed their feeling to meet every year regularly either in form of organizing seminar and General Body Meeting. The next turn of organizing seminar/annual meet is of Junagadh Campus. Hence, Dr. B. T. Patel has suggested that members of Junagadh Campus should meet and discuss about the date of holding seminar, G. B. Meeting, etc. and send their opinion to Secretary-cum-Treasurer as early as possible. All the members of the society were also requested to suggest the topic of the seminar.

**c) New executive council of the Society of Extension Education, Gujarat**

The term of the present executive council of the SEEG will be over on 30th April 2004. In view of this, there is a need to form new executive council of SEEG. The house has decided to give general election for seven posts of the members of executive council. It was also decided that Dr. G. C. Jadeja or Dr. B. D. Bhatt, BACA, GAU, Anand may be nominated to work as an election officer for the same. The Secretary- cum -Treasurer, SEEG may finalize the office after consulting them.

**6. Address of the chief guest**

Dr. B. T. Patel, president expressed his sincere thanks to all members who have attended this meeting. He also suggested that the society is working effectively but efforts should be made so as more members may remain present at such events. The Editorial Board is also working effectively and publishing its research journal viz. Gujarat Journal of Extension Education. He also appreciated the efforts put by the Chief Editor and the Editorial Board to sort out the accretion of the issues of the Journal. At this point he suggested that the members should contributed qualitative papers for the journal.

Dr. H. U. Vyas, Joint Secretary expressed thanks to all members, donors and those who have extended their help for making the annual meet cum seminar a success. He also expressed sincere thanks to Honorable Dr. R. P. S. Ahlawat, Vice chancellor, GAU as well as Shri G. R. Patel, Director of campus, G.A.U., Anand.

At the completion of office business, the meeting was ended.

Sd/-  
(B.T.PATEL)  
President

Sd/-  
(K.F.PATEL)  
Secretary-cum-Treasurer

## Report of Activities of SEEG

(Submitted to General Body meeting held at Anand on 06.12.2003)

It gives me a great pleasure to place before General Body meeting of the SEEG the progress of the activities of the Society of Extension Education, Gujarat during last year.

### Membership position:

As per the rules and regulation 6-C-(ii) the current membership position is as under:

1.	Life members	-	343
2.	Annual members	-	008
3.	Institutional members	-	008
4.	Honorary members	-	004
5.	Patrons	-	002
	<b>Total</b>		<b>357</b>

### Organization of the seminar

Lastly, the annual meet cum seminar was held at GAU Navsari Campus on 27th February 2003. Dr. B. T. Patel, Director of Extension Education, GAU, Ahmedabad remained present as chief guest on the occasion. The seminar was attended by 66 life members and other delegates/participants. The theme of the seminar was 'Transfer of agricultural technology in 21<sup>st</sup> century'. Abstracts of all papers were printed in ninth meet seminar souvenir.

### Publication of Gujarat Journal of Extension Education

Up till now the society published 13 volumes of the Journal. The combined volume of 10 & 11 i.e. December, 1999 and 2000 carried 19 papers and the volume of 12 & 13 i.e. December 2001 and 2002 contained 18 papers. With this, the journal becomes regular. The next issue of the Journal will come out by end of March 2004.

### Khusalbai Revabhai Patel Medal cum Cash Prize

Up till now we have awarded 11 medals cum cash prizes to the candidates.

### Financial position

The statement of income and expenditure has been presented by Dr. H. U. Vyas, Joint Secretary to all members. He also placed at record of the members the details of deposits as under:

1. Rs. 42,000/- Double Money Plan-H of Gruh Finance purchased on 1-10-99. (Date of maturity: 1-6-2005).
2. Rs. 48,471/- deposited in Central Bank of India, Khetiwadi, Anand on 11-2-03 for three years (Date of maturity: 11-2-2006).
3. Rs. 67,200/- deposited in Central Bank of India, Khetiwadi, Anand on 21-2-03 for three years (Date of maturity: 21-2-2006).
4. Rs.24800/- deposited in Central Bank of India, Khetiwadi, Anand for three years (Date of maturity: 10-3-2006).

Friends, I sincerely thank all of you and especially members of Executive Council and Editorial Board for helping to perform my job as a Secretary-cum-Treasurer. I heartily extend my special thanks to Dr. H. U. Vyas, Joint Secretary.

Date: 6-12-2003

( K. F. Patel )  
Secretary-cum-Treasurer