

RESEARCH NOTE

## **A Knowledge Test to Measure Wheat Growers' Knowledge about Wheat Production Technology**

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### **INTRODUCTION**

The wide yield gap in tribal farming areas exists between the average yield of common farmers (1996 kg/ha) and actual potential yield (2800 kg/ha) in demonstration plots of the wheat (Anonymous, 1990). This may be due to the lack of knowledge of recommended technology of wheat crop. Knowledge of recommended wheat cultivation practices play a vital role in adoption of the technology by the farmers.

For measuring the knowledge level of wheat growers with respect to tribal area, it is essential to develop the standardized knowledge test. Knowledge means those behaviour and test situations which emphasise the remembering either by recognition or recall of ideas, material or phenomena (Bloom *et al.* 1965).

Efforts have been made to develop a standardised knowledge test which can measure the level of knowledge regarding recommended technology of wheat crop in a scientific manner. Initially, 48 items were selected for developing knowledge test. The method of item analysis used by Jha and Singh (1970) was followed so as to yield three kinds of indices viz. "item difficulty", "item discrimination" and "item validity". For this

purpose the items were administered to 48 respondents of Sabarkantha District selected at random

As a result of this, final format of the knowledge test was formed which contained 25 items (Appendix-1)

### **Reliability of the test.**

To know the reliability of the knowledge test, the test retest method ( $r=0.9056^{**}$ ) and the split halves method ( $r=0.8844^{**}$ ) were used.

### **Validity of the Test**

For testing the validity of the test, the known group technique was used which showed very high validity of the test. Similarly, the significant coefficient of Biserial correlation reflected positively about the validity of the items included in the test battery.

### **CONCLUSION**

This knowledge test could be used effectively for measuring wheat growers' knowledge about recommended technology of wheat crop. Consequently the categorization of wheat growers could be made on the basis of their knowledge level. Extension strategies viz. training programme, diffusion and communication of technology for speedy adoption may be planned according to knowledge level of wheat growers.

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### APPENDIX-1

**Final format of the knowledge test for measuring wheat growers' knowledge with respect to wheat production technology.**

1. Which are the latest recommended varieties for wheat ?
2. Which varieties are recommended for late sowing ?
3. Which varieties are recommended for timely sowing ?
4. What is the recommended seed rate for timely sowing of wheat crop ?
5. What is the recommended seed rate for late sowing ?
6. Which fungicides are recommended for seed treatment before sowing ?
7. What is the recommended dose of nitrogen per hectare ?
8. How much nitrogen per hectare is recommended for basal application ?
9. Which fertilizer is used to provide nitrogen for basal application ?
10. How much quantity of phosphatic fertilizer per hectare is recommended ?
11. What is the recommended spacing for sowing wheat crop ?
12. What is recommended depth of sowing ?
13. What is appropriate time period for timely sowing of wheat ?
14. What is appropriate time period for late sowing of wheat ?
15. Which are the critical stages for irrigating wheat ?
16. After how many days of sowing, first irrigation should be given ?
17. Which stage of wheat is most critical for irrigation ?
18. Which are the major pests of wheat crop ?
19. Name the insect which damages the earhead at milking stage.
20. Name the insect by which central earhead dried called dead heart and which is pulled out easily.
21. Name the insect through which infestation starts on roots and entire plant dried.
22. Which are the major diseases of wheat crop ?
23. Name the disease in which black fungus is observed in place of grain in earhead.
24. Name the disease through which entire plant dried.
25. Name the disease by which rusty spots are observed on lower side of leaves and red powdery spores are observed.