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(Anuradha)

Place: Bikaner

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Introduction 1

The communication revolution has brought in a tremendous transformation, both in the structure and function of the farming society as a whole. The electronic technology is revolutionizing the agricultural systems across the globe.

In the era of information technology no task in the world of today can be accomplished successfully and adequately without media support. The task of the media in development is of two fold. It helps remove illiteracy, fatalism, enlarge aspiration, increase and enhance social status and to lead to overall national progress and prosperity. More the media inputs and greater the media consumption by masses, increases the welfare of the people. The mass media services are based on the idea of mass production and mass distribution of message through various channels. Communication flow plants the seeds of progress in the minds of the people. This electronic manual could be used and managed in different ways to transmit different messages and satisfy varying needs of a diverse audience.

Mass media play a significant role in developing rural resources and motivating the masses for adoption of new technologies. Video technology entered India during the Asian Games of 1982, which was a miracle in the eighties is now in common use even in remote rural households. However, the potential of video as an educational medium for motivating farmers and farm women to change their attitude has not yet been fully realized.

The Government of India liberalized the import policy which resulted in an overnight growth of video cafes, video parlours and houses all over India.

The video technology with its technical advantages like this interactive nature, instant playback and recording facilities ease in use, high portability, durability and relatively inexpensive as compared to other media system can be advocated. Video will enhance training by visualizing a verbal message with motion and colour and standardize information.

1.1 Importance of video technology

Video is the most suitable medium for generating interaction. It has the ability to present a message to a community in moving images and sound immediately. Video with its unique quality of audio-visual it serves as an effective tool for rural extension work. It can be used effectively to assures two way interaction in a variety of context. Video technology with its technical advantages like interactive nature, instant playback recording facilities, case in use, high portability, durability, and relatively inexpensive as compared to other media system can be advocated. It enhance training by visualizing verbal message with motion, colour and standardized information. Video posses several advantages over other media as its attractiveness, easy in handling instant feedback, images are often remember long last than verbal messages and more attention seeking "One picture is worth of thousand words" (Phillip *et al.*, 1999).

1.2 Post harvest technology

The present age is an advanced age of technological development which demands change in every direction. With the introduction of balanced technology in the field of agriculture viz., improved varieties of fertilizers, mechanized, farming, pesticidal umbrella, irrigation facilities and timely agricultural operations, the production of food grains have increased many folds. The new farm technologies that were made available to the farmer have helped them tremendously in food production and to increase the over productivity from 54.32 million tones in 1949-50 to 208.60 million tones in 2005-2006.

We are now self sufficient in food grain production but still the problem of feeding the escalating human and animal population does not end with the production of food grains only.

Since a large quantity of produce is wasted unnecessary due to lack of knowledge among the farmers and technical as well as scientific technologies involved in the post-harvest operation.

However, development of the facilities to handle the process the production has not been able to keep pace. As a result about 10-15 per cent of various products are lost every year due to lack of scientific post-production management.

Post-harvest technology in the present study refer to all such technological aspects starting after harvesting and up to marketing, threshing, winnowing, drying, storage and use of fumigants and marketing.

1.3 Importance of post harvest technology

Food grain losses occur at various stages after a crop has harvested and before the food is consumed. Losses may be reduced at any stage of post-harvest system by improved harvesting, drying, processing or handling methods. The process and operations, however are interrelated and are subjected to climatological, sociological, economic, agronomic, cultural and ecological conditions imposed by the environment in which they take place. The effectiveness of any action undertaken to reduce losses must be economically justifiable and also practiced with the prevailing post-harvest system.

The introduction of technologies reduce food grain losses and improve the income of farmers. They are concerned with improved handling, storage and primary processing of grains. The technologies include providing farm and village storage structures, designing and constructing warehouses, providing small scale driers, improving processing facilities (farm threshing equipment for rice) improving rodent and insect control measures and undertaking all aspects of loss reduction during the post-harvest period. It is important that the initial cost benefit analysis be positive.

The existing technologies may not be compatible to the local conditions, to improve these we need to assess the existing knowledge and practices of farming community and specially farm women with respect to post-harvest operation. Hence in attempting to reduce or

even assess post-harvest losses, it is essential that the functioning of any particular environment be fully understood and analyzed only then constraints, problem and eventual solutions or improvements be identified.

1.4 Justification of study

Assess to information and improved communication is a crucial requirement for sustainable agricultural development. Post harvest technology importance is getting improved day by day, which are beneficial for extension worker, farmwomen and men etc.

The number of extension workers with knowledge, worthy of being extended is not large in contrast to the number of farm women to whom the knowledge has to be communicated. For the effective dissemination of the message there is a need of effective communication system. Communication is a essence of rural development. Different media like audio, visual, audio-visual are used for communication. Visual communication has a very special role in any system of communication. The messages can be conveyed through visuals to illiterate and unaware rural people easily and effectively.

Farm women play a key role in both production and post-harvest phase of farming. There is need to strengthen their role by playing specific attention to knowledge and skill empowerment and capacity building. So it's necessary to aware farm women about post-harvest technology of food grains.

Video Compact Disc (VCD) was developed on "Post-harvest technology of food grains", because it was effective in passing a meaningful information at a faster rate to the large number of people. We can say VCD is more beneficial for illiterate women because they perceive more information then audio or visual. VCD are more attention seeking "One picture worth of thousand worlds".

1.5 Objectives

1. To Develop Video Compact Disc (VCD) on "Post –harvest technology of food grains".
2. To field test VCD programme with the help of visual perception and comprehension.
3. To assess the effectiveness of the developed VCD.

1.6 Operational definitions

1. **Post harvest technology**

Post-harvest technology in the present study refer to all such technological aspects starting after harvesting and up to marketing, threshing, winnowing, drying, storage and use of fumigants and marketing.

2. **Harvest**

Harvest is the cutting, feting and gathering of crops.

3. **Video Compact Disc**

A Video Compact Disc is a plastic fabricated, circular medium for recording, storing and playing back audio, video and computer data.

4. **Effectiveness**

The ability of developed video disc to communicate desired message as reflected in the score of the knowledge test.

5. **Field testing**

Field testing is testing visual communication material before they are produced or printed.

1.7 Delimitation of the study

The study was delimited to only two villages of Nohar Panchayat Samiti of Hanumangarh district (Rajasthan).

Review of Literature 2

A comprehensive review of literature is important in any research work. It gives more emphasis on the study and make it effective. It provides an insight into the theoretical framework as well as meaningful conclusion. It is necessary for researcher to be well acquainted with the works done in the past to the important problem areas.

For supporting the findings of the present investigation all available journals, internet, periodicals, reports and books were referred by the researcher for collecting relevant review of literature.

Available review related to present study has been organized into three sections:

2.1 Post-harvest technology

2.2 Effectiveness of media

2.3 Impact of media

2.4 Field testing / pre testing of audio-visual aids

2.1 Post-harvest technology

Kavita (1991) evaluated that maximum number of people used *neem* leaves in wheat gain to protect it from infestation.

Panwar (1992) reported that knowledge of respondent about thresher was good (100%). Even though possession was very less, its frequency of use was good and so knowledge was also good.

Gupta and Sanadhya (1993) observed that for storage of produce mostly stone bins were used in both command and non-command area (60% and 46%) followed by mud bins (25.4% and 36%) and gunny bags (16.9% and 26%).

Rao and Singh (1993) observed that food grain are stored in big *kothies* made up of clay and cow dung. Cow dung acts as mechanical barrier against insects and moisture absorbent too.

Gaur (1998) revealed that *rakh* (ash) and dry leaves of *neem* were commonly used. While forty per cent respondents reported that they were practicing dusting of ash on gunny bags while filling grains in bags. More than half (60%) of the respondents used dry leaves of *neem*, foul odour of dry leaves of *neem* prevents infestation.

Kothari (1996) observed that the main constraints were, lack of knowledge about fumigants, lack of training and technical know-how regarding use of fumigants, lack of knowledge about minimum supporting prices, lack of know-how about grading procedure and lack of training about rat control, these are the main problems being faced by the respondents in adoption of improved practices of post-harvest technology.

Dante and Padua (1999) shows that significant gains have been achieved in rice farm production, but the development of rice post, production sector has not kept pace to take full advantage of the break through. Post-harvest loss figures are only indicators of a problem. Understanding the cause of losses is much more important. The key post-production system technologies for minimizing losses and in drying, storage and milling technologies.

Parvathil *et al.* (1999) observed that the constraints in adoption the modern PHT as expressed by the farm women, lack of threshing floor, lack of space for drying and high cost involved in purchasing post-harvest machineries were the important ones which could be solved by supplying post-harvest gadgets and subsidized rates for better adoption. Careful attention is to be bestowed to the other suggestions offered by the farm women in order to enhance the adoption of PHTs and help in getting very fruitful results.

Bhople *et al.* (2000) findings of the study indicated that the use of gunny bags, plastic bags and metal bins/*kothi* was common in rural household for storing grains. The use of traditional structures like earthen pots, wooden and bamboo structures and *kanaghi* were found to be in use in sizeable proportions of households. It shows that use of scientific storage structures is not yet popular among the farming community for storing of food grains in rural areas.

Kothari (2000) found that all the aspect of post-harvest technology had significant differences in the existing knowledge level of the tribal and non-tribal cultivators of the zone IV A. He further concluded that the tribal as well as non tribal cultivators had good level of knowledge regarding threshing and storage aspect and minimum level in the aspect of marketing and rat control.

Grover *et al.* (2001) reported that majority of the respondents had medium level of knowledge regarding preparation of storage structure (64%) and effect of fungus, moisture and insect pest on gram (82%). Only twenty per cent of respondents had high level of knowledge about post-storage practices while thirty one per cent respondents had high level of knowledge about advantages of safe storage of gram overall maximum number of respondents (60%) had medium knowledge level about safe storage practices of gram.

Meena (2001) observed that out of six aspects of post-harvest technology i.e. threshing, winnowing and drying, storage, use of fumigants, marketing and rodent control, selected for assessing extent of adoption, maximum adoption was reported in winnowing and drying and minimum in marketing.

Verma *et al.* (2003) found that in training area of improved grain storage, maximum i.e. complete retention in knowledge was observed about 30 per cent and of complete retention of knowledge was found in adolescent girls and rural women.

Sihag (2004) studied that majority of the respondents had medium level of knowledge about post-harvest technology. Among all the respondents maximum knowledge was about the winnowing component and the minimum knowledge was about the winnowing component marketing aspect of post-harvest technology of the wheat and paddy crops.

Magdum (2006) emphasized that with growing degradation of natural resources country's food security could only be achieved by resource conserving technologies. Now there is a growing realization that agriculture of Post-Green Revolution would be guided by the need to produce more of quality food at reduced cost from the marginal quality of lands and water resources. Agriculture is thus in need of infusion of newer technologies that saves our natural resources. The country wide adoption of resource conserving technologies could go a long way in ensuring sustainable food production and livelihood security.

Mukherjee (2006) found that the share of agriculture in national income is falling rapidly while the population dependent an agriculture is not declining correspondingly the prime minister's call for a Second Green Revolution appears to be appropriate. In line with agricultural renewal as suggested by the National Commission for farmers the Second Green Revolution may be focused improving farm management practices and reducing post-harvest losses, through better technologies in storage, transportation and processing.

Sihag and Singh (2006) concluded that majority of the respondents used sun drying method as the indigenous practices to dry their produce while the major indigenous practices used in storage were *neem* leaves, laying of sand, match sticks and match box.

2.2 Effectiveness of media

Fonesca and Kearl (1960) draw the following generalizations from their study.

1. Pictorial symbols to be the most useful for young people of limited schooling must evidence intelligent selection of detail. Comprehension is reduced either by excessive unnecessary detail or excessive deletion of detail.

2. Recognizable familiar objects presented in an illustration add to comprehensibility conversely the presence of locally unfamiliar objects tends to reduce correct interpretation of the symbol.

Gery (1982) revealed that video could be very well used as a medium for development of communication. There studies indicated that nearly 50 per cent of the farmers changed their practices after participating in the communication process using video tapes.

Kaur (1985) suggested that extension personnel engaged in knowledge transmission should be encouraged for frequent use of media rather than depending on monotonous lecture method.

Thombre *et al.* (1986) revealed that mass media play an immense role in dissemination of agriculture technologies.

Rao *et al.* (1987) concluded that video can take locally prepared cassettes, based on local needs, feedback is also there to a great extent. When compared to films, it is very cheap and easy to produce video cassette programmes.

Bhagat and Mathur (1988) reported that about 25 per cent of women had low mass media exposure and majority were categorized as having medium mass media exposure.

Kumar and Singh (1988) revealed that experience of using video in Portugal has proved that video can be used effectively to transfer new technologies to farmers.

Rao (1991) reported that the advantages of interactive video are long lasting and can serve many uses and information effective.

Brummelman *et al.* (1995) reported that video needs to be used together with other extension material and methods, and finally, that a clear cut methodology should be developed. These principles led to an approach in which a steering committee set the priorities, with separate working groups. An example of a video programme to train farmers to produce their own wheat seed describes the application of this approach the experiences with a programme of production and use of video in this way cover a period of some sixteen months.

Zacharan (1995) conducted study on the effects of multimedia based instruction on the academic achievement of student studying economics and reported that academic performance of students was increased as well as student liking toward economics was affected.

Parvathi *et al.* (1996) concluded that visual teaching aids have a wide range of application the field of possibilities for construction and use of these aids are restricted only by the imagination and competency of the trainer/extension function arises. The extension functionaries will have to make right choice of effective visual aids for the specific lessons to be taught and the particular information to be imparted employing visual aids will have a positive effect on the entire communication process. Hence, use of effective visual aids to impart knowledge and skill about the agriculture information should be given emphasis by the agricultural extension workers.

Braun and James (1998) reported that people with developmental disabilities could send a video message that tells how they feel about the funding and delivery of services or, especially important in this era of community inclusion, participators video could

be used to tell the larger community about the people who live the disability.

Kumar (1999) reported that video could be an effective tool to transfer new information of improved techniques to all kinds of audience. He further stated that video provides a systematized way for transferring information. The information stays the same and educates more and more people. The tape can help the audience to actually see some problems to specific problems and how these have worked in other situations similar to their own. He concluded that use of video requires advance planning.

Singh (1999) stated a well-known fact that video technology is one of the very effective media of communication and moreover the farmers usually believe in seeing rather than just listening to a new idea. He further added that this new medium of communication is not only very effective but also less costly than films.

Okahashi (2000) found that particularly video may also become powerful tool for people with developmental disabilities. If reading and writing is hard, people may find it easier to send and get messages by video than through the written word.

Chaturvedi *et al.* (2001) revealed that the new information technology, tools and techniques can play a great role to improve learning and extension process through visualization. The animation can explain many complex processes better than text and graphics and music can provide additional enjoyment to the study of extension material. This dream has already been realized in many sectors of science and technology and can now be realistically applied to enhance extension worker and farmer would welcome the technological advancements like multimedia and enjoy the benefits while disseminating information to the information seeker in the easiest and most economic and efficient way.

Chauhan *et al.* (2002) reported that all the teaching and training methods have exerted significant effect on gain in knowledge regarding transfer of sugarcane technologies but with a varying magnitude. Visual-plus-discussions emerged as the most effective method in transfer of sugarcane technologies followed by printed material-plus-discussions while the lectore-plus-discussions method was found as the transfer of sugarcane production technologies. Hence, it is suggested that communication media mix i.e. visual-plus-discussion should be largely used.

Pandian *et al.* (2002) found that the communication revolution has brought in tremendous transformation, both in the structure and function of the farming society as a whole. The electronic technology is revolutionizing the agricultural systems across the globe. Video technology, which was a miracle in the eighties, is now in common use even an remote rural households. However, the potential of video as an educational medium for motivating farmers and farm women to change their attitude has not yet been fully realized. Against this back drop, the present study aimed to study the effectiveness of video education among farm women on the selected video enterprise viz., layer farming. A substantial knowledge gain of 60.37 per cent was recorded among the respondents immediately after video exposure.

Pandian *et al.* (2002) observed that significant knowledge retention was effected by video education fifteen days after exposure to the video lesson on squash preparation. It is imperative that the agricultural technologies that are to be practiced within a fortnight may be disseminated through visual media like T.V., video etc. so that the information learnt may be utilized by the viewer/beneficiaries, without any deviation from the recommendations.

Sharma (2003) conducted a study of development and effectiveness of videocassette on women operated farm machinery for cotton cultivation and reported that the quality parameters of video film prepared have been perceived quite high by a large majority of respondents.

Amande (2004) visuals can be important part of any presentation. They can stimulate the audience, holding their attention and ensuring they remember and process the message. Visual aids have an active part of play in ensuring presentation, a successful communication. If used well, they can clarify inform and entertain the audience. If used ineffectively they can confuse, irritate and trivialize the message.

Chaudhary (2004) developed visual / print media for preschool children and reported that all the media were assessed high in terms of all the parameters that is under standing of title, clarity of picture, size of font, colour combination and under stability.

Antwal and Bellorkar (2005) found that the lecture plus demonstration was found to be more effective media followed by electronic media and followed by the print media used in the intervention programme on post natal care.

Denning (2005) reported that video may help to promote learning in students with high visual orientation in their learning styles video can also provide visually compelling access to information for many learner with learning difficulties who might miss learning opportunities provided solely by print based material videos provide important learning opportunities to student working.

Jain (2005) informed that exposure of CD had succeeded in gaining sufficient level of knowledge by rural women regarding animal practices.

John and Jiayi (2005) Developed the VCD to enhance primary education in the rural areas of China and the initial successful experience of the project are discussed finally. The challenges and issues of concern are highlighted.

Jain *et al.* (2006) revealed that the effectiveness of printed manual was assessed through several parameter. Overall weighted mean score indicated that accuracy, coverage, objectivity, writing style, content presentation, illustration and compatibility was perceived to be high for almost all the messages, effectiveness of video cassette/CD in terms of audio quality, video quality, presentation of messages, content importance and suitability and text was rated as high. The content validity ration for all the attributes of video cassette/CD and printed manual was found to be significant. Inter consistency reliability for video cassettes/CD and printed manual was found to be significant at 5 per cent level of significance field applicability was found to be quite for all messages.

Chauhan (2006) in her study, "Development and field testing of Educational Video cassette on 'Animal care and management practices' of milch animals" and indicated that respondents have perceived and comprehend the messages of video programme very well. The reason behind was that message were clearly understood by them.

Verma (2007) in her study "Development and standardization of video programme for Rural women on Vermi-Compost Technology" and indicated that 100 per cent respondents were having high level of comprehension regarding video programme.

2.3 Impact of video technology

Kozma (1992) found that the mix of spoken language, text, still images and moving images in television and video results in higher learning gain than media.

Rana (1992) revealed that video has high impact and its advantages need to be given due consideration as it holds potentiality of replacing the trainer once the message has been captured on the video. It is a cost effective media.

Sethi (1993) found that 93.3 per cent respondents had high audio literacy score. Whereas, 100 per cent respondents got high level of visual literacy and compatibility related to concerned message on the second exposure of video film. In comparison components of standardization parameters were non significant on first and second exposure in the two villages, suggesting that perception about the video film was uniform, thereby indicating no further need of improvement.

Mares (1996) indicated that positive learning and affective outcome are greatly enhanced and extended when the video is integrated into rest of the lesson.

Corporation of Public Broadcasting (CPB) [1997] reported that video use is an effective educational tool for all students, but its positive effect on special population of students is gaining greater attention all the time. Videos are "highly valued as teaching tools" and "seen as especially effective for reaching visual learners and special populations".

Jindal (1997) concluded that the combination of extension teaching methods i.e. lecture plus audio plus video was found to be best for gain in knowledge by video plus lecture. Lecture and audio individually were found to be least effective.

Bigelow and Lutzker (1998) evaluated that videos help in effective intervention, improving parent use of planned activities and appropriate interaction skills. Further observed that corresponding improvement in appropriates child interaction skills.

Mayer (2001) reported that video is a form of multimedia that conveys information through two simultaneous sensory channels: oral

and visual. It often uses multiple presentation modes, such as verbal and pictorial representation in the case of on screen print and closed captioning.

Dilworth *et al.* (2002) developed a video-based programme designed to promote social/emotional competence in elementary school children. The programme emphasis group planning, diversity appreciation. Result of research revealed that significant positive effect on aspect of students' social concept, but no significant behaviour changes over the intervention period.

Corporation of Public Broadcasting (CPB) [2004] stated that educational television and video;

- Reinforces reading and lecture material.
- Aids in the development of a common base of knowledge among students.
- Enhances students comprehension and discussion.
- Provides greater accommodation of diverse learning style.
- Increase students motivation and enthusiasm.

Promote teacher effectiveness.

2.4 Field testing / Pre-testing of audio visual aids

Pre-testing / Field testing means testing of communication material before or after they are produced or printed by interviewing audience for whom the material is meant. The purpose is to find out if people understood the message or idea in the way it was intended and to find out whether the audience liked the material.

Belbase (1988) revealed that before and after results showed 100 per cent comprehension of the video programme on diarrhoea and was found to be very effective for teaching people about ORS and nutrition during diarrhoea.

Sharma (1991) conducted a study on field testing of selected pamphlet related to mother craft for its readability and comprehension by educated rural women. It was reported that both readability and comprehension was better in case of respondents with upper primary education.

Kashyap (1998) regarding 'Pre testing of mother child welfare cards" revealed that the most of the women linked the cards instantly because of the bright colours. After the explanation of the cards it was mentioned that it contained a lot of important information. The information related to children was also liked by them.

Singh (1998) conducted a study on visual literacy and comprehension of communication material by tribal women of southern zone of Rajasthan. Findings revealed that in pre-test of slides, majority of the respondents had average visual perception but poor visual comprehension. After exposure of slides there was improvement, all the respondents exhibited good visual perception and comprehension.

Sharma (1999) in her study "Development and pre-testing slides on "Role of rural women in clean environment" concluded that comprehension of developed slides set on "Role of rural women in clean environment" was good with mean per cent score 70.00.

Verma (1999) in her study "Developing and field testing of slides on women's role in agriculture for Home Science undergraduate students concluded that perception of visuals in each slide was good with 86.66 per cent mean score and comprehension of slide set was excellent with 100 per cent mean score.

Tiwari (1999) stated that visual perception and comprehension of slides on entrepreneurship for undergraduate students were excellent with 100 per cent score.

Randhawa and Kumari (1999) regarding development and field testing of a synchronized slide tape sequence on food hygiene and sanitation. Findings revealed that the effectiveness of the self-developed set of slides, synchronized audio commentary and the instructional guide. Field application of synchronized slide tape sequence on actual users also proved its greater effectiveness over more presentation of audio commentary in the absence of visual image. It is therefore, recommended for its commercial use by field functionaries for educating rural women of Punjab.

Jain (2000) study on "Development and field testing of flip book on vegetables in diet for rural women" revealed that the visual perception of developed flipbook by respondents was good with having mean per cent score 92.21. The comprehension of developed flipbook was excellent having mean per cent score 96.22.

Singh and Gupta (2000) study on "Visual perception and comprehension of charts by tribal women" showed that before exposure to the chart, majority of the respondents had good visual perception but poor comprehension whereas after exposure there was tremendous improvement as all the respondents exhibited good visual perception as well as comprehension of the chart.

Bhati (2002) conducted a study on visual comprehension of flip book on "Feeding children from birth to one year" by caretaker of selected ICDS blocks of Bikaner district. Finding of the study revealed that on the whole visual perception of the flipbook was good and comprehension was poor in pre test. In post-test visual perception was very good and comprehension found to be excellent.

Arora (2004) conducted overall comprehension of folder in terms of the title, key messages and illustration was excellent as majority of respondents (85%) were above mean score followed by below mean score (15%).

Yadav (2004) reported that the significant gain in knowledge and change in attitude of women respondents was observed after exposing them to the video film.

Anuradha and Singh (2006) shows that visual perception of developed *phad* was increased with 67.5 to 84.16 mean per cent score. It was also observed that visual comprehension was increased with 56 to 80 mean per cent score in post-test.

Dudi and Singh (2006) revealed that the developed *phad* was judged between very good to excellent by experts. The initial knowledge of the respondents was poor as their pre-test score was only 47.0 per cent. Significant improvement in the knowledge of respondents was found as a result of exposure of *phad* as the pre-test score was increased to 79.3 per cent with the gain in knowledge of 32.3 per cent.

Sharma *et al.* (2006) studied on visual perception and comprehension of *phad* on 'Importance of Immunization' for rural women. The major findings of the present research reveals that visual perception and comprehension of developed *phad* was increased in post test. It could be concluded that the developed *phad* on "Importance of Immunization" was excellent.

Anuradha (2007) conducted a study on "Field testing of slides on HIV/AIDS for B.Sc. (Home Science) students". The results indicated that respondents have identified the visuals and perceive the message of slides as very well. The reason behind was that the visuals and message were clearly understood by them.

Verma (2007) revealed that there was significant gain in knowledge after exposure of developed video programme. The initial knowledge of the respondents was poor as their pre-test score was 22.71 per cent. Significant improvement in the knowledge of respondents were found as a result of exposure of video programme as the pre-test score increased 22.71 to 61.96 per cent with the gain in knowledge of about 39.25 per cent.

Material and Methods 3

The present study was undertaken for the is Development and Field testing of Video Compact Disc (VCD) on "Post-Harvest technology of food grains". The procedure and techniques for conducting the investigation of the present study are discussed in this chapter under the following heads:

3.1 Research design

3.2 Locale of the study

3.3 Sampling procedure

3.3.1 Selection of panchayat samiti

3.3.2 Selection of villages

3.3.3 Selection of respondents

The study was conducted in two phases:

Phase I

Development of Video Compact Disc (VCD) on "Post-harvest technology of food grains

1. Deciding broad aspect of video programme
2. Preparation of video programme
3. Pre-testing of video programme
4. Evaluation of video programme by experts

Phase II

Field testing of Video Compact Disc (VCD) on "Post-harvest technology of food grains"

1. Development of knowledge test

A. General information

B. Knowledge test on "Post-harvest technology of food grains"

1) Development of knowledge test

2) Scoring of knowledge test

3) Evaluation of knowledge test by experts

4) Pre-testing of knowledge test

5) Reliability and validity of knowledge test

C. Measurement of comprehension of VCD.

1) Visual perception and comprehension

2) Record sheet and scoring procedure for comprehension of video lesson.

2. Collection of Data

A. Pre-knowledge test of data (Before exposure)

B. Exposure of VCD

C. Post-test (After exposure)

i. Perception and Comprehension of VCD

ii. Knowledge test

3. Analysis of data

3.1 Research Design

Post-test experimental design was used for field testing of VCD on "Post-harvest technology of food grains" and pre and post-test experimental design used for knowledge test.

3.2 Locale of the study

The study was conducted in the Hanumangarh district which is situated in the north part of Rajasthan and lie between $29^0$5 and $30^0$6 north latitude and between 74^0 to $75^0$3 east longitude. Administratively Hanumangarh district is divided into three panchayat samities. The district comes under agroclimatic zone 1b which is characterized by irrigated north western plain. The total geographical area of Hanumangarh district is 9656.09 sq km. As per 2007 census total population of Hanumangarh district is 15,18,005 which is 2.69 per cent of state's population.

The present study was conducted in Hanumangarh district because production of major cereal crops like wheat, paddy is highest in this region. The production of major cereal crops wheat and paddy are shown in Table I (Chhimpa, 2006-07).

Table I. Production in major crops (wheat and paddy in SriGanganagar zone)

Name of district	Production of crops in 2006-2007(metric tones)	
	Wheat	Paddy
Hanumangarh	186381	15550
SriGanganagar	674026	6600
Bikaner	Nil	Nil
Churu	-	-

Source: Annual Report on M.P.R. Office of Joint Director Agriculture Extension, SriGanganagar

3.3 Sampling procedure

3.3.1 Selection of Panchayat Samiti

Hanumangarh district consists of three Panchayat Samities. Out of which Nohar Panchayat Samiti was selected purposively as investigator was familiar to the area.

3.3.2 Selection of villages

Two villages Bhukarka and Chainpura were randomly selected by chit method from Nohar Panchayat Samiti of Hanumangarh district.

3.3.3 Selection of respondents

From these selected villages, fifty illiterate farm women were selected randomly by chit system (twenty five from each village).

Phase I

Development of video compact disc (VCD) on "Post-harvest technology of food grains"

As per objective, video programme was developed on "Post-harvest technology of food grains". For developing video programme indepth literature was reviewed from textbooks, research publications, journals. Experts of Agriculture science were also consulted.

1. Deciding broad aspect of video programme

Development video programme is based on "Post-harvest technology of food grains". After collection of subject matter information the investigator selected major aspects finalized for video programme in consultation with subject matter specialists. The aspects finalized for video programme were:

- Knowledge regarding harvesting of crop.
- Process of using thresher
- Process of winnowing

- Method of Drying
- Advantages of storage
- Different types of fumigants
- Marketing process

2. Preparation of video programme

For the present research video programme was prepared by investigator herself with the help of photographer under the guidance of experts.

Following steps were followed for developing video programme.

- Planning
- Scripting
- Recording
- Editing and mixing
- Evaluation

Planning

To accomplish any task in an effective way, planning is required. In order to harness the potentials of video production. One should develop an appropriate and effective system of production as well as using the video programme. If the video that is its images and sound are to fulfill the required communication purpose, they need to be organized properly to convey the meaning. Before going for video production, following questions need to be asked in planning.

- Who will be the learner?
- What will be the aims and objectives?

- What will be the subject content?
- What are the learning assessment criteria?
- How the subject be sequenced?
- What will be the treatment given to the message?

It was planned to prepare video compact disc for farm women with an objective to give them necessary critical information on "Post-harvest technology of food grains".

Scripting

Script is a blue print for production an educating programme. A video script may be defined as the pre-visualized description of the visual and aural elements of a video programme. Under the guidance of subject matter specialist script was developed on selected aspects of the topic and was checked by the experts (Appendix-III).

After complete writing of the video script. It was reviewed by experts of Rajasthan Agricultural University, Bikaner.

Recording

Recording is the stage where all the visual and aural elements described in the script were collected.

In order to record the scene, survey was done to select the proper venue for taking shots. The visual portions were recorded as per convenience to availability of shots.

Editing and mixing

After completion of shooting according to a video script, next is to put all the shots/recorded material script.

To do this one may have to add, delete and trim various shots. To do this computerized editing was done. Commentary as per, script was recorded so as to match with visual scenes.

Also light background music was also dubbed to give pleasant hearing to the audience.

Evaluation

Based on the results from the testing process. The video compact Disc was fine tuned by incorporating the feedback.

3. Pre-testing of video programme

The developed video programme was pre-tested with twenty farm women of Makkasar village of Hanumangarh district, who were not included in the sample. The purpose of pre-testing was to check the clarity of visuals audio quality, content and presentation of the message.

Evaluation of VCD by fifteen experts

To test the effectiveness of educational video compact disc and messages in each scene. It was exposed in front of panel of experts. Including Entomologist, field functionaries and home scientists from Rajasthan Agricultural University, Bikaner for their feedback evaluatory scale was used developed by Sethi (1993) [Appendix - II].

Phase II

Field testing of Video Compact Disc (VCD) on "Post-harvest technology of food grains".

1. Development of knowledge test

Keeping in mind the nature of target group research tool was developed by the investigator.

A. General information

The section concern with background information of farm woman. To collect this information standardized AICRIP socioeconomic Performa was included (Appendix – III(a)].

B. Knowledge test on "Post-harvest technology of food grains"

1) **Development of knowledge test**

To determine the existing knowledge of the farm women, a knowledge test was developed for this study. Seven major components of post-harvest technology of food grains were included in knowledge test. Each major component was further divided into several questions to find out the existing knowledge of the farm women regarding post-harvest technology of food grains [Appendix – III (b)].

2) Scoring procedure of knowledge test

The farm women were asked to reply in dichotomized/multiple choice categories. That is correct or incorrect. The knowledge score of each farm women were calculated by assigning marks for the correctly answered questions one mark was given for every right answer the range of knowledge score was 0 to 68.

3) Evaluation of knowledge test by experts

The developed knowledge test on "Post-harvest technology of food grains was evaluated by experts". For their valuable suggestions and comments. The suggestions were incorporated.

4) Pre-testing of knowledge test

The developed knowledge test was pre-tested with the fifteen farm women from Makkasar village of Hanumangarh district who were not included in the sample, purpose of pre-testing was to check the clarity of questions in the text.

5) Reliability and Validity test

Reliability test

According to Kerlinger (1973) "Reliability is the accuracy or precision of measuring instrument". To know reliability of post-harvest technology of food grains knowledge test, 'Split half' method was used.

The entire tool was administered on a group of fifteen farm women other than the sample group. Total items of the test were then divided into two equal halves by putting the odd numbered items on the other side. Both were considered as a separate schedule. To find out the agreement between two sets of questions of the schedule. Correlation of coefficient were calculated and put to Spearman Brown Prophesy formula given here:

$$r_n = \frac{2\,(r_{oe})}{1+_{oe}}$$

Where r_{oe} is the coefficient of reliability to two half test i.e. odd v/s even items. It is the reliability coefficient of total test.

Result of correlation coefficient (r) was found 0.85 fro "Post-harvest technology of food grains.

This value was significant, indicating the internal consistency of schedule and was reliable for the use of the study.

Validity test

The intrinsic validity of this measuring tool was calculated by taking square root of reliability coefficient. The coefficient of validity was found 0.92 for "Post-harvest technology of food grains".

C. Measurement of comprehension of Video Compact Disc

1) Visual perception and comprehension

To find out the visual perception and comprehension of VCD unstructured open ended questions were framed. Reason for open ended questions were to provide freedom to the farm women to express freely about the visuals and their interpretation about the visuals. Separate questions were prepared for visual perception and comprehension.

For visual perception, questions framed were:

1. What do you see in the picture / scene?
2. What else do you see in the picture / scene?
3. What is this? (Pointing out a visual / scene)

For visual comprehension questions framed were:

1. What do you under stand from the picture / scene?
2. What else do you understand?
3. What message do this picture / scene give you?

2) Record sheet and scoring procedure for comprehension of video programme

A list of each visuals was prepared separately to record the response of the farm women [Appendix IV (a)] and a list intended message of each scene were prepared separately to record the response of the farm women [Appendix V (a)].

A score of one was assigned for each correct answer, zero to each incorrect response for perception and comprehension. The total score for visual perception and comprehension were as follows:

Video programme	Maximum scores	
	Perception	Comprehension
Scene	81	51

[Appendix IV (b) and V (b)]

2. Collection of Data

The data was collected with the help of a structured interview schedule constructed according to the objectives and variables incorporating all the items on which information was required. The farm women were individually contacted either at the Kirten Mandal or on their home/farms. For the data collection following procedure was followed.

A. Pre-knowledge test (Before exposure)

Before exposure of VCD on post-harvest technology of food grains. Pre-knowledge test was administered to the farm women. Total selected farm women were interviewed to find out the existing knowledge of individual farm women regarding post-harvest technology.

B. Exposure of VCD

After pre-testing developed VCD was exposed to the farm women in each of the two villages, village women were collected at the common place where T.V. facility was available and the programme was exposed to them on "Post-harvest technology of food grains".

Exposure of Video Programme

C. Post test (After exposure)

After seven days of exposure of video programme post-test was administered.

i. Perception and comprehension of VCD

After exposing the VCD on "Post-harvest technology of food grain". Visual perception and comprehension was done with the help of open ended questions.

ii. Knowledge test (post-test)

Knowledge test was administered to find out gain in knowledge on various aspects of post-harvest technology of food grains with the help of same knowledge test used in pre-test.

3. Analysis of data

After data collection, coding was done and then data were compiled and tabulated for analysis and interpretation in light of the objectives of study.

Measurement of Independent variables

Independent variable in the study refers to personal particulars of the farm women. Age, marital status, education, occupation, organizational membership and socio-economic status were the important independent variables included in the study.

Age

The chronological age of the farm women the time of data collection expressed in completed years was taken as their age the respondents were grounded on the basis of their age as follows:

Category

18 to 30 years

31 to 45 years

46 to 60 years

Occupation of the respondents

This referred to the means of livelihood of the farm women and the accordingly they were categories as non-wage earner and wage earner farm labour farming and service.

Education of the respondents

The farm women selected forth were totally illiterate. It was pre decided so the educational level of the farm women were nil.

Organizational membership

Farm women were categorized in to three categories that is non membership, member of formal organization and office bearer of formal organization.

Socio-economic status

For socio-economic status three categories were formed as under:

Socio economic status categories of respondents.

Category	Scores
Low	0-10
Medium	10-30
High	Above 30

There categories were formed according to socio-economic status scale, scores of AICRP, Home Science Extension Education (1997).

Measurement of dependent variables

1. Analysis of visual perception and comprehension

The visuals and message of each scene of video compact disc were identified. The farm women of the sample were tabulated in terms of frequencies for visuals and message.

Each correct answer for perception and comprehension was assigned score 1 and for incorrect was zero, respectively.

Total score for visual perception were 81. For comprehension total score were 51.

2. Knowledge

In the present study knowledge refers to the amount of correct information of an individual before and after exposure of video programme.

In order to assess knowledge level of farm women knowledge items included in the knowledge test were asked to the farm women and score were assigned to them as per scoring procedure.

The variables was categorized in to three categories. On the basis of mean and S.D. value. The minimum and maximum scores obtained by farm women in pre-test were 15 and 39.

Category	Score
Low	0-17
Medium	17 to 22
High	22 to 68

The minimum and maximum score by farm women in post-test were 37 and 60.

Category	Score
Low	0-46.36
Medium	46.36 to 56.16
High	56.16 to 68

Statistical Analysis

The following statistical measures were used for interpreting the data.

Percentage

It was used for making simple comparisons. For calculating percentage, the frequency of particular cell was multiplied by 100 and divided by the total number of the farm women in that particular category to which cell they belong.

❖ **Frequency**

It was conducted to find out the number of response in a particular cell.

❖ **Mean score**

Mean score were calculated to find out overall perception and comprehension of the VCD by respondents.

$$\text{Mean score} = \frac{\text{Total scores}}{N}$$

Mean score are obtained by dividing total scores by number of respondents.

❖ **Standard deviation**

It was conducted to find out the number of response in a particular cell.

$$Sd = \sqrt{\frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n}}$$

x = age range

n = number of respondents

Paired 't' test

This test was used to analyze significance of difference between pre and post test of VCD by respondents.

$$t = \frac{\bar{d}}{\sqrt{\frac{sd^2}{n}}}$$

$\bar{d} = x_1y$

$\bar{d} = \Sigma d / n$

$$Sd^2 = \left(\frac{1}{n-1} \frac{(\Sigma d)^2}{n}\right)$$

x_1y = Score of two tests

d = difference between the scores of two tests

$\bar{d}$ = mean of scores

Sd^2 = Standard deviation or error around te mean of the group

Mean per cent score

Mean per cent score were calculated to find out overall knowledge. Mean per cent score:

$$\text{Mean per cent score} = \frac{\text{Total score obtained by respondent}}{\text{Maximum obtainable score}} \times 100$$

Mean per cent score were calculated by multiplying total obtained score of the respondents multiply by numbered. Then divided by the maximum obtainable score.

Co-efficient of correlation

The coefficient was used to test the reliability of knowledge check by Person moment correlation co-efficient and P Spearman Brown Prophesy Formula.

$$r. \; N\Sigma xy - (\Sigma x)(\Sigma y)$$
$$[N\Sigma x^2 - (\Sigma x)^2][N\Sigma y^2 - (\Sigma y)^2]$$

r = Co - efficient of correlation

N = Number of statement of odd and even

Σx and Σy = Sum of raw scores of odd and even group

Σx^2 and Σy^2 = Sum of square of individual score of odd and even group respectively

Σxy = Sum of multiplication of scores of odd and even group

$$r_{tt} = \frac{2\, r_{oe}}{1 + r_{oe}}$$

Validity test

$$r = \sqrt{r_{tt}}$$

Results and Discussion 4

The chapter of Results and Discussion is the most crucial and significant part of research work. In the light of the objectives of study, the data were collected, tabulated and analyzed. The results are presented under the following major section.

4.1 Profile of the farm women

4.2 Evaluation of Video Compact Disc

4.3 Perception and Comprehension of VCD programme

4.3.1 Perception of the VCD (Video Compact Disc) programme

4.3.2 Comprehension of the Video programme

4.3.3 Overall Perception and Comprehension of the Video programme

4.4 Effectiveness of video programme

4.4.1 Knowledge level of the farm women in pre-test

4.4.2 Knowledge level of the farm women in post-test

4.4.3 Differential knowledge gain by the farm women

4.4.4 Comparison in pre-test and post-test

4.4.5 Overall gain in knowledge

4.4.3 Overall Perception and Comprehension of the Video programme

4.1 Profile of the farm women

Age

The results in Table II and Fig. I reveal that majority of the farm women belong to 31 to 45 years and twenty eight per cent farm women belong 18 to 30 years age group.

Table II. Distribution of farm women according to their age

N = 50

S. No.	Category	n	%
1.	18 to 30 years (Young)	14	28
2.	31 to 45 years (Lower middle)	36	72
3.	45 to 60 years (Upper middle)	-	-

Marital status

The results in Table III reveal that majority of the farm women were married (96%), followed by four per cent farm women were widow.

Table III. Distribution of farm women according to the marital status

N = 50

S. No.	Category	n	%
1.	Married	48	96
2.	Widow	2	4

Occupation

The results in Table IV and Fig. I reveals that majority of the farm women had farming as main employment (80%), rest twenty per cent farm women were labourers.

Table IV. Distribution of farm women according to the occupation of farm women

N = 50

S. No.	Category	n	%
1.	Labour	10	20
2.	Farming	40	80

Caste

The Table V and Fig. I indicated that majority of farm women belong to Other Backward Class (OBC) group (46%), Schedule caste / Schedule tribe category forty two per cent and twelve per cent women belonged to General caste.

Table V. Distribution of farm women according to their caste

N = 50

S. No.	Category	n	%
1.	SC/ST	21	42
2.	OBC	23	46
3.	General	6	12

Family structure

Family type

The results in Table VI and Fig. II depicts that majority of farm women were from the nuclear family (58%) and rest forty two per cent belonged to joint family. With regard to size of family, it was found that majority forty eight per cent had small family up to 4 and few of them i.e. six per cent had large family.

Table VI. Distribution of farm women according to the family structure

N = 50

S. No.	Categories	Variables	n	%
1.	Family type	Nuclear	29	58
		Joint	21	42
2.	Family size	Small (up to 4 members)	23	46
		Medium (up to 5-8 members)	24	48
		Large (8 & more)	3	6

Family occupation

Table VII reveals that family occupation of farm women were farming (90%), Service (14%), Artisan/Craftman and Farm Labour (4%).

Table VII. Distribution of farm women according to the family occupation

N = 50

S. No.	Category	n	%
1.	Farming (Crop/Dairy/Fish/Poultry)	45	90
2.	Service	7	14
3.	Artisan/Craftsman	2	4
4.	Farm Labour	5	4

Family Education

Table VIII indicates that majority sixty per cent of farm women's family members were illiterate followed by primary school education twenty per cent and ten per cent farm women's family member have done middle school education and able to read and write.

Only eight per cent farm women's family member were having high school education.

Table VIII. Distribution of farm women according to the family education

N = 50

S. No.	Category	n	%
1.	Illiterate	30	60
2.	Read and Write	5	10
3.	Primary School	10	20
4.	Middle School	5	10
5.	High School	4	8

Organizational membership

Table IX and Fig. II shows that majority sixty eight per cent of the farm women were not member of any organization and thirty two per cent had membership of an informal organization.

Table IX. Distribution of farm women according to the organization membership

N = 50

S. No.	Category	n	%
1.	No membership	34	68
2.	Membership of an informal organization	16	32

Ownership of fixed assets

1. Land holding

Table X shows that thirty four per cent of farm women had more then 10 acres of land, followed by 2.6 to 5.0 acres (20%), Up to 1 to 2.5 acres and 5.1 to 10 acres of land (16%) whereas fourteen per cent were landless.

2. Housing

Table X indicates that majority of farm women had '*katcha'* house (52%), followed by mixed house (28%), twenty per cent farm women had '*pucca'* house.

3. Livestock ownership

Table X shows that majority seventy six per cent of farm woman had small herd size, twelve per cent had medium herd size and eight per cent farm women had large herd size. Whereas four per cent farm women had open/nil.

4. Dwelling for livestock

Table X reveals that eighty six per cent of farm women had *katcha*/dwelling for livestock and fourteen per cent had *pucca*. Whereas four per cent farm women had open/nil.

Table X. Distribution of farm women according to their ownership of fixed assets

N = 50

S. No.	Category		n	%
1.	Land holding	No Land	7	14
		1.0 to 2.5 acres	8	16
		2.6 to 5.0 acres	10	20
		5.1 to 10.0 acres	8	16
		More than 10 acres	17	34
2.	Housing	*Katcha* house (Partially *katcha*+*pucca* house)	26	52
		Mixed house	14	28
		Pucca house	10	20
3.	Livestock ownership	Small herd size	38	76
		Medium herd size	6	12
		Large herd size	4	8
		Open / Nil	2	4
4.	Dwelling for livestock	Thatched / *Katcha*	43	86
		Pucca	7	14

Farm assets

The data presented in Table XI that majority eighty per cent of farm women were having wooden plough, fifty eight per cent had hand

tools, forty six per cent had winnower, forty four per cent had sprayer/duster, thirty eight had improved disc plough, thirty two per cent had thresher and twelve per cent had tractor tiller and patella, whereas very few i.e. eight per cent had chaff cutter as farm equipments.

Table XI. Distribution of farm women according to farm assets

N = 50

S. No.	Categories	n	%
1.	*Desi*/Wooden plough	40	80
2.	Improved disc plough / Bullock drawn tiller	19	38
3.	Tractor tiller / Farm machinery attachment	6	12
4.	Land leveler / Patella	6	12
5.	Pump set	11	22
6.	Hand tools	29	58
7.	Sprayer / Duster	22	44
8.	Chaff cutter	4	8
9.	Thresher	16	32
10.	Winnower	23	46

House assets

Table XII depicts sanitary latrine that majority of farm women were having Sanitary latrines (74%), followed by hand pump/water tap forty six per cent, modern household furniture twenty four per cent and biogas twenty per cent and eighteen per cent farm women having grain store in their house.

Table XII. Distribution of farm women according to their house equipment

N = 50

S. No.	Category	n	%
1.	Sanitary latrines	37	74
2.	Biogas	10	20
3.	Grain storage bin / improved structure	9	18
4.	Hand pump / water tap	23	46
5.	Modern household furniture	12	24

Media ownership

Perusal of Table XIII reveals that maximum number of farm women had no media ownership (64%) whereas thirty six per cent had newspaper / magazine and twenty per cent had television sets and eighteen per cent had radio / transistor.

Table XIII. Distribution of farm women according to their media ownership

N = 50

S. No.	Category	n	%
1.	Nil	32	64
2.	Newspaper / Magazine	18	36
3.	Radio / Transistor	9	18
4.	Television	10	20

Distinctive features

Table XIV indicated that majority forty four per cent had no facilities of transportation thirty per cent had bicycle, twenty per cent had bullock cart, twenty per cent had, motorcycle/scooter and six per cent and developed bullock cart six per cent. Only two per cent farm women were having tractor trolley/four wheeler.

Table XIV further depicts that majority (82%) of farm women were having electricity in their Home, followed by gas stove and sewing machine thirty two per cent, smokeless *chulha* thirty per cent, Pressure cooker twenty six per cent, peeler/grater twenty four per cent, kitchen equipment (fan, iron, mixer) twenty two per cent, freeze twenty per cent and heater, washing machine sixteen per cent. Only four per cent farm women had electricity in their farm.

Table XIV. Distribution of farm women according to their other facilities

N = 50

S. No.	Categories	Variables	n	%
1.	Transportation	Nil	22	44
		Bullock/Mule/Camel cart	13	26
		Improved cart	3	6
		Bicycle	15	30
		Scooter / Motorcycle	10	20
		Tractor trolley/four wheeler	1	2
2.	Electricity	At home	41	82
		Farm	2	4
3.	Household items	Smokeless *chulha* / kerosene stove	15	30
		Gas stove	16	32
		Pressure cooker	13	26
		Improved kitchen tools (Peeler, Grater etc.)	11	22
		Kitchen equipment (fan, iron, mixer)	12	24
		Refrigerator	10	20
		Sewing machine	16	32

4.2 Evaluation of Video Compact Disc

The media prepared were subjected to panel of fifteen judges to assess their effectiveness in terms of several parameters selected separately for video compact disc, the findings are presented as below:

Effectiveness of Video Compact Disc on "Post-harvest technology of food grains" was assessed through judges on selected parameters like visual quality, audio quality, content, presentation of message, text and perceived field applicability. The percentage were computed from the evaluation done by the panel of judges.

a) Visual quality

Table XV. Visual quality of various message related to post-harvest technology of food grains

N = 15

S. No.	Attributes of visual quality	Very good	Good	Bad	Percentage of effectiveness
1.	Clarity of scenes / shots	10	5	-	88.88
2.	Size of illustration	10	5	-	88.88
3.	Perception	9	6	-	86.66
4.	Interest orientation	7	8	-	82.22
5.	Attention catching	10	5	-	88.88
6.	Self explanation	7	8	-	82.22
7.	Sequence	7	8	-	82.22
8.	General set up	9	6	-	86.66
9.	Colour	10	5	-	88.88
10.	Tuning commentary	7	8	-	82.22
11.	Impressive	6	9	-	80.00

The data of Table XV depict that effectiveness of VCD in terms of clarity of scenes/shots, size of illustration, attention catching, colour was found (88.88%), followed by perception, general set up (86.66%) and interest orientation self explanation, sequence, tuning commentary (82.22%) however, eighty per cent found it impressive.

b) Audio quality

Table XVI. Audio quality of various messages related to post-harvest technology of food grains

N = 15

S. No.	Attributes of audio quality	Very good	Good	Bad	Percentage of effectiveness
1.	Voice	8	7	-	84.44
2.	Pitch of voice	5	10	-	77.77
3.	Interest orientation	8	7	-	84.44
4.	Language	8	7	-	84.44
5.	Comprehension	5	10	-	77.77
6.	Accuracy	7	8	-	82.22
7.	Sequence	8	7	-	84.44
8.	Music	5	10	-	77.77

Table XVI shows that effectiveness of VCD in terms of voice, interest orientation, language, sequence was found (84.44%) and accuracy (82.22%), whereas pitch of voice and comprehension of music, percentage of effectiveness was nearly about seventy eight per cent (77.77%).

c) Content

Table XVII. Content of various messages related to post-harvest technology of food grains

N = 15

S. No.	Attributes of content	Very good	Good	Bad	Percentage of effectiveness
1.	Informativeness	7	8	-	82.22
2.	Technical terms	7	8	-	82.22
3.	Coverage	8	7	-	84.44
4.	Relevancy	3	2	-	95.55
5.	Usefulness	13	2	-	95.55

Table XVII reveals that effectiveness of VCD in terms of relevancy and usefulness was found (95.55%) followed by coverage (84.44%) and informativeness, technical terms were found (82.22%).

d) Presentation of message

Table XVIII. Perception of various messages related to post-harvest technology of food grains

N = 15

S. No.	Attributes of messages	Very good	Good	Bad	Percentage of effectiveness
1.	Speed presentation	7	8	-	82.22
2.	Simplicity	7	8	-	82.22
3.	Style of presentation	6	9	-	80.00
4.	Explaining ideas	6	9	-	80.00
5.	Message treatment	7	8	-	82.22

The data of Table XVIII depict that effectiveness of VCD in terms of speed presentation simplicity, message treatment was found (82.22%), style of presentation, explaining ideas was eighty per cent.

e) Text

Table XIX. Text of various messages related to post-harvest technology of food grains

N = 15

S. No.	Attributes of text	Very good	Good	Bad	Percentage of effectiveness
1.	Clarity of text	6	9	-	80.00
2.	Size of text	6	9	-	80.00

Table XIX shows that effectiveness of VCD in terms of clarity of text and size of text was found eighty per cent.

f) Perceived field applicability

Table XX. Perceived field applicability of selected post-harvest technology of food grains

N = 15

S. No.	Attributes of field applicability	Very good	Good	Bad	Percentage of effectiveness
1.	Relative advantages	7	8	-	82.22
2.	Cultural compatibility	10	5	-	88.88
3.	Physical compatibility	10	5	-	88.88
4.	Simplicity/ compatibility	14	1	-	97.77
5.	Trialability	9	6	-	86.66

Table XX shows that effectiveness of VCD in terms of simplicity/capability was found (97.77%), followed by cultural compatilibity and physical compatibility (88.88%) and trialability (86.66%), however, relative advantages (82.22%).

4.3 Perception and Comprehension of VCD programme

In depth analysis

The findings in terms of visual perception and visual comprehension are presented separately for each scene of the video compact disc.

4.3.1 Perception of the VCD (Video Compact Disc) programme

Scene 2

Table XXI. Distribution of farm women according to visual perception of Scene No. 2 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Lush Green field	50	100
2.	Heap of wheat	50	100
3.	People eating chapatti	50	100
4.	Low production of wheat	45	90
5.	Combine	47	94

Table XXI persuades that cent per cent farm women identified correctly Lush Green field. Heap of wheat and people eating chapatti. While ninety four per cent were able to recognize combine. Only ninety per cent of farm women identified the visual of low production of wheat. The reason for correct visual perception could be that the visuals were clearly visible, bright and effective. So, it gave the lively effects to the visuals.

Scene 3

Table XXII. Distribution of farm women according to visual perception of Scene No. 3 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Harvesting of wheat by sickle	50	100
2.	Threshing of the wheat by women	47	94
3.	Winnowing of the wheat	50	100
4.	Drying the wheat in sunlight	47	94
5.	Storage of wheat	47	94
6.	Carrying the gunny bags of wheat	50	100
7.	Wastage of wheat	47	94
8.	Clean wheat	43	86

Table XXII depicts that cent per cent farm women identified correctly viz., Harvesting of wheat by sickle, winnowing of the wheat and carrying the gunny bags of wheat. The reason for correct visual perception could be that the visuals in VCD were clear and farm women had post experiences due to which they could perceive correct. While ninety four per cent of the farm women identified correctly threshing of the wheat by women, Drying the wheat in sunlight, storage of wheat and wastage of wheat. Only eighty six per cent farm women identified clean wheat.

Scene 4

Table XXIII. Distribution of farm women according to visual perception of Scene No. 4 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Mature grain crops	49	98
2.	Grain crop rubbing by hand	50	100
3.	Harvesting the crop by sickle	49	98

The data presented in Table XXIII indicates that all farm women correctly identified grain crop rubbing by hand. While ninety eight per cent of the farm women identified correctly mature grain crops and harvesting the crop by sickle.

Scene 5

Table XXIV. Distribution of farm women according to visual perception of Scene No. 5 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Making bundle of wheat after harvesting of wheat crop	50	100
2.	Drying the bundle in sunlight	48	96

Table XXIV shows that cent per cent farm women identified the visuals correctly making bundle of wheat after harvesting of wheat crop only ninety six per cent farm women identified drying the bundle in sunlight.

Scene 6

Table XXV. Distribution of farm women according to visual perception of Scene No. 6 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Combine rotating from left to right	49	98
2.	Harvesting by the combine	48	96
3.	Making the edge of knife	46	92
4.	Cleaning the machine	45	90
5.	Tightening the nut and bolt	42	84
6.	Greasing the combines part	43	86
7.	Grain and bundle both come out through machine	44	88

Table XXV reveals that most of ninety eight per cent of the farm women identified the visual of combine rotating from left to right and ninety six per cent of farm women identified the visuals of harvesting by the combine while ninety two per cent of the farm women identified the visuals of harvesting by the combine while ninety two per cent of the farm women identified the visuals of making the edge of knife and ninety per cent farm women identified cleaning the machine, followed by grain and bundle both come out through machine eighty eight and greasing the combine's part eighty six per cent. Only eighty four per cent farm women identified the visual of tightening the nut and bolt.

Scene 7

Table XXVI. Distribution of farm women according to visual perception of Scene No. 7 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Heap of grains crop	50	100
2.	Threshing by wooden stick	50	100

Table XXVI persuades that all the farm women identified correctly viz., heap of grains crop and threshing by wooden stick. The reason for correct visual perception could be that the visuals in VCD were clear and farm women had post experience due to which they could perceive correct.

Scene 8

Table XXVII. Distribution of farm women according to visual perception of Scene No. 8 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Threshing by bullock cart	50	100
2.	Separated grain crops	50	100
3.	Wastage of grains	48	96

Table XXVII represents that cent per cent farm women were able to identified the visuals of threshing by bullock cart and separated grain crops. Only ninety six per cent farm women identified visuals of wastage of grains.

Scene 9

Table XXVIII. Distribution of farm women according to visual perception of Scene No. 9 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Using the thresher by women	45	90
2.	Separation of grain by thresher	45	90
3.	Big poly sheet	50	100
4.	Washing the poly sheet	50	100
5.	Drying the poly sheet in sunlight	50	100
6.	Collection the grain on the dried poly sheet	49	98
7.	Tightening the nut and bolt of the thresher	49	98
8.	Clean the straw from thresher using the thresher by women	49	98

Table XXVIII depicts that all the farm women were able to identify the visuals of big poly sheet, washing the poly sheet and drying the poly sheet in sunlight. The reason for correct visual perception could be that the visuals in VCD were familiar, simple, understandable and real, followed by ninety eight per cent collection the grain on the dried poly sheet, tightening the nut and bolt of the thresher and clean the straw from thresher using the thresher by women.

Ninety per cent of the farm women identified visuals of using the thresher by women and separation of grain by thresher.

Scene 10

Table XXIX. Distribution of farm women according to visual perception of Scene No. 10 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Beating the grain crop by the women	50	100
2.	Threshing the grain by the animals	50	100
3.	Wastage of grains	49	98
4.	Winnowing by grain fork	50	100
5.	Straw is gathered on distance	50	100
6.	Fodder is fed by animals	50	100
7.	Winnowing the grain by women with the help of basket	50	100
8.	Picking up the straw by women of clean grain	48	96

Table XXIX reveals that cent per cent of farm women were able to identify the visuals of beating the grain crop by the women, threshing the grain by the animals, winnowing by grain fork, straw is gathered on distance, fodder is fed by animals and winnowing the grain by women with the help of basket, followed by ninety eight per cent farm women identified the visuals of wastages of grain.

Only ninety six per cent farm women identified the visual of picking up the straw by women of clean grain.

Scene 11

Table XXX. Distribution of farm women according to visual perception of Scene No. 11 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Drying the grain in sunlight	47	94
2.	Protecting the grain from birds	50	100
3.	Keep the grain in the shady place	50	100
4.	Clean gunny bags	50	100
5.	Infected grains	48	96

Table XXX shows that cent per cent of farm women were able to identify the visuals of protecting the grain from birds, keep the grain in the shady place and clean gunny bags. While ninety six per cent of farm women identified the visual of the infected grains. Only ninety four per cent farm women identified the visual of drying the grain in sunlight.

Scene 12

Table XXXI. Distribution of farm women according to visual perception of Scene No. 12 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Plastering the old storage floor by kneaded mud	50	100
2.	Mixing the BHC in kneaded mud for plastering	44	88
3.	Plastering the big clay pot	44	88
4.	Drying the clay pot in sunlight	48	96
5.	Plastering the *pucca* storage	50	100

Table XXXI shows that cent per cent farm women were able to identify the visuals of plastering the old storage floor by kneaded mud and plastering the *pucca* storage. While ninety six per cent of farm women identified the visual of the drying the clay pot in sunlight.

Only eighty eight per cent of farm women identified mixing the BHC in kneaded mud for plastering and plastering the big clay pot.

Scene 13

Table XXXII. Distribution of farm women according to visual perception of Scene No. 13 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Keep the gunny bags on the timber slabes	40	80
2.	Grains are eaten by rats	42	84
3.	Grains are polluted by rats	42	84
4.	Women using rat poison for protecting grain from rat	44	88
5.	Grain of insects women applying insect killer for preventing insect	42	84

Table XXXII depicts that eighty eight per cent of the farm women identified correctly the visuals of women using rat position for protecting grain from rat, while eighty four per cent of the farm women identified correctly grains are polluted by rats, grains are eaten by rats and grain of insects women applying insect killer for preventing insect.

Only eighty per cent of farm women identified to the visual of keep the gunny bags on the timber slabes.

Scene 14

Table XXXIII. Distribution of farm women according to visual perception of Scene No. 14 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Keep the grain in iron tin	50	100
2.	Sun drying of grain	50	100
3.	Women plucking *neem* leaves	48	96
4.	Shadow drying of *neem* leaves	50	100
5.	Keep *neem* leaves in grains	50	100

Table XXXIII indicates that cent per cent farm women identified correctly the visuals to keep the grain in iron tin, sun drying of grain, shadow drying of *neem* leaves and keep *neem* leaves in grains. The reason for correct visual perception could be that the visuals were clearly visible, bright and real. So, it gave the lively effects to the visuals. While ninety six per cent of the farm women identified correctly women plucking *neem* leaves.

Scene 15

Table XXXIV. Distribution of farm women according to visual perception of Scene No. 15 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Cleaning the tractor	50	100
2.	Clean the bullock cart	49	98

Table XXIV represents that cent per cent farm women were able to identify the visuals of cleaning the tractor.

Only ninety eight per cent farm women identified visual of clean the bullock cart.

Scene 16

Table XXXV. Distribution of farm women according to visual perception of Scene No. 16 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Cleaning the grain by broom	48	96
2.	Grain gunny bags	49	98
3.	Beating the grain	50	100

Table XXXV reveals that cent per cent farm women identified the visual of beating the grain, followed by ninety eight identified grain gunny bags, while ninety six per cent farm women were correctly identified the visual of cleaning the grain by broom.

Scene 17

Table XXXVI. Distribution of farm women according to visual perception of Scene No. 17 of video compact disc

N = 50

S. No.	Visuals	n	%
1.	Truck filled with grains	50	100
2.	Different products of wheat	47	94
3.	Thresher and combine	44	88
4.	Clean grain and women counting the money	50	100
5.	Grain heap with money	50	100

Table XXXVI indicates that cent per cent of the farm women were able to identify the visuals of Truck filled with grains, clean grain and women counting the money and grain heap with money. While ninety four per cent of the farm women were identified the visual of different products of wheat.

Only eighty eight per cent of farm women correctly identified the visual of thresher and combine.

4.3.2 Comprehension of the Video programme

Scene 2

Table XXXVII. Distribution of farm women according to visual comprehension of Scene No. 2 of video compact disc

N = 50

S. No.	Message	n	%
1.	Farm women can get good crop production by hard work	48	96
2.	Wheat is the important crop of India	45	90
3.	Lack of knowledge regarding post-harvest technology leads to less production	45	90
4.	Adoption of post-harvest technology for large production	43	86

Table XXXVII reveals that ninety six per cent of the farm women were able to comprehend the message of the video compact disc that farm women can get good crop production by hard work, followed by wheat is the important crop of India and lack of knowledge regarding post-harvest technology lead to less production ninety per cent.

Only eighty six per cent of the farm women could comprehend that adoption of post-harvest technology for large production.

Scene 3

Table XXXVIII. Distribution of farm women according to visual comprehension of Scene No. 3 of video compact disc

N = 50

S. No.	Message	n	%
1.	More quantities of crops are lost due to cutting, threshing, winnowing, drying storage and marketing	49	98
2.	One should take care of cutting to marketing of crops	47	94

Table XXXVIII depicts that ninety eight per cent of the farm women were able to comprehend the message that more quantities of crops are lost due to cutting, threshing, winnowing, drying, storage and marketing, followed by one should take care of cutting to marketing of crops ninety four per cent.

Only eighty six per cent of the farm women could comprehend that adoption of post-harvest technology for large production.

Scene 4

Table XXXIX. Distribution of farm women according to visual comprehension of Scene No. 4 of video compact disc

N = 50

S. No.	Message	n	%
1.	After maturation of crop cutting should take place	48	96

Table XXXIX reveals that ninety six per cent of the farm women were able to comprehend the message that after maturation of crop cutting should take place correctly.

Scene 5

Table XL. Distribution of farm women according to visual comprehension of Scene No. 5 of video compact disc

N = 50

S. No.	Message	n	%
1.	During cutting bundles are being made	50	100
2.	To protect farm storage wind tie the bundle properly	49	98
3.	Dry the bundle properly in sunlight	48	96

Table XL persuades that cent per cent of the farm women were able to comprehend the message of the video compact disc that during cutting bundles are being made, followed by ninety eight of farm women could comprehend the message correctly that to protect farm storage wind tie the bundle properly.

Only ninety six per cent of farm women were able to comprehend the message of the video compact disc that dry the bundle properly in sunlight.

Scene 6

Table XLI. Distribution of farm women according to visual comprehension of Scene No. 6 of video compact disc

N = 50

S. No.	Message	n	%
1.	Use combine for saving time	49	98
2.	Sharp the edges of knife	48	96
3.	Clean the knife bar	46	92
4.	Grease the parts of machine	48	96

Table XLI reveals that ninety eight per cent of the farm women were able to comprehend the message of the video compact disc that use combine for saving time, followed by ninety six per cent of the farm women correctly comprehend that sharp the edges of knife and grease the parts of machine.

Only ninety two per cent of farm women were able to comprehend the message of the video compact disc that clean the knife bar.

Scene 7

Table XLII. Distribution of farm women according to visual comprehension of Scene No. 7 of video compact disc

N = 50

S. No.	Message	n	%
1.	Threshing by wooden stick	45	90

Table XLII represents that ninety per cent of the farm women could comprehend the message that threshing by wooden stick correctly.

Scene 8

Table XLIII. Distribution of farm women according to visual comprehension of Scene No. 8 of video compact disc

N = 50

S. No.	Message	n	%
1.	Threshing by camel cart	45	90
2.	Wastage of grain by threshing with wooden stick and camel cart	47	94
3.	Use thresher for good grain production	49	98

Table XLIII shows that ninety eight per cent of the farm women were able to comprehend the message of the video compact disc that use thresher for good grain production, ninety four per cent of the farm women comprehend that wastage of grain by threshing with wooden stick and camel cart.

Only ninety per cent farm women correctly comprehend that threshing by camel cart.

Scene 9

Table XLIV. Distribution of farm women according to visual comprehension of Scene No. 9 of video compact disc

N = 50

S. No.	Message	n	%
1.	Threshing is time saving process	50	100
2.	Thresher separates both straw and grains	50	100
3.	For collecting grain use clean poly sheets	50	100
4.	Wash and dry the poly sheets in sunlight	50	100
5.	In clean poly sheet there is no chance to spoilage the grains	48	96
6.	Tight the nut and bolt of thresher properly before use	50	100
7.	Clean the straw of thresher	50	100
8.	Wear tight fitted cloth while using thresher	48	96

Table XLIV represents that cent per cent of the farm women could comprehend the message that threshing is time saving process, thresher separates both straw and grains, for collecting grain use clean poly sheets, wash and dry the poly sheets in sunlight, tight the nut and bolt of thresher properly before use and clean the straw of thresher. While ninety six per cent of farm women were able to comprehend the message of VCD that in clean poly sheet there is no chance to spoilage the grains and wear tight fitted clothes while using thresher correctly.

Scene 10

Table XLV. Distribution of farm women according to visual comprehension of Scene No. 10 of video compact disc

N = 50

S. No.	Message	n	%
1.	Threshing by wooden stick and camel cart lead to straw and stone in grains	47	94
2.	Winnowing of grains by fork according to direction of wind	50	100
3.	Use of basket for winnowing grains	50	100
4.	Clean the straw by hand	50	100

Table XLV persuades that cent per cent of the farm women were able to comprehend the message of the video compact disc that winnowing of grains by fork according to direction of wind, use of basket for winnowing grains. The reason for correct comprehension could be that the visuals were clearly visible, bright and effective.

Only ninety four per cent of farm women were correctly comprehend the message that threshing by wooden sticks and camel cart lead to straw and store in grain.

Scene 11

Table XLVI. Distribution of farm women according to visual comprehension of Scene No. 11 of video compact disc

N = 50

S. No.	Message	n	%
1.	Before storage of grains dry it in sunlight	45	90
2.	Protect the grains from birds	47	94
3.	Keep the grains in gunny bags after cooling the hot grains	48	96
4.	Storage of hot grains lead to spoilage of grains	48	96
5.	Use clean gunny bags for storage	48	96

Table XLVI depicts that ninety six per cent of the farm women were able to comprehend the message of the storage of hot grains lead to spoilage of grains, keep the grains in gunny bags after cooling the hot grains and use clean gunny bags for storage followed by protect the grain from birds ninety four per cent and ninety per cent of the farm women were correctly comprehend the message that before storage of grain dry it in sunlight.

Scene 12

Table XLVII. Distribution of farm women according to visual comprehension of Scene No. 12 of video compact disc

N = 50

S. No.	Message	n	%
1.	Plastering the old storage floor by kneaded mud and mix BHC also for protecting grain from insects	47	94
2.	Plastering the big clay pot	48	96
3.	Plastering the *pucca* storage with Endosulphan dust	47	94

Table XLVII reveals that ninety six per cent of the farm women could comprehend the message correctly that plastering the big clay pot, followed by plastering the old storage floor by kneaded mud and mix BHC also for protecting grain from insects and plastering the *pucca* storage with Endosulphan powder ninety four per cent correctly.

Scene 13

Table XLVIII. Distribution of farm women according to visual comprehension of Scene No. 13 of video compact disc

N = 50

S. No.	Message	n	%
1.	Keep the gunny bags of grains on timber slides for preventing from damping	47	94
2.	Use rat poison	48	96
3.	Use EDB Ampoule (insect killer) for protecting the grains from insects	47	94

Table XLVIII shows that ninety six per cent of the farm women could comprehend the message that use rat poison. While ninety four per cent farm women able to comprehend message that keep the gunny bags of grains on timber slides for preventing from damping and use EDB Ampoule (insect killer) for protecting the grains from insects.

Scene 14

Table XLIX. Distribution of farm women according to visual comprehension of Scene No. 14 of video compact disc

N = 50

S. No.	Message	n	%
1.	Use iron tins for storage	45	90
2.	Dry grains stored in iron tin	47	94
3.	Use *neem* leaves for protecting the grains from insects.	48	96

Table XLIX represents that ninety six per cent farm women were able to comprehend the message that use *neem* leaves for protecting the grains from insects and ninety four per cent of farm women comprehend the message that dry grains stored in iron tin.

Only ninety per cent of farm comprehend the message that use iron tins for storage correctly.

Scene 15

Table L. Distribution of farm women according to visual comprehension of Scene No. 15 of video compact disc

N = 50

S. No.	Message	n	%
1.	Clean the tractor, camel cart, bullock cart before transportation	49	98

Table L depicts that ninety eight per cent of the farm women were able to could comprehend the message that clean the tractor, camel cart, bullock cart before transportation correctly.

Scene 16

Table LI. Distribution of farm women according to visual comprehension of Scene No. 16 of video compact disc

N = 50

S. No.	Message	n	%
1.	Before selling of grains clean it properly	42	84
2.	Sell it after knowing the price of grain	43	86

Table LI represents that ninety six per cent of the farm women were able to comprehend the message that grease the parts of machine, followed by clean the knife bar ninety two per cent and eighty six per cent of the farm women comprehend that sell it after knowing the price of grain. Only eighty four per cent before selling of grains clean it properly.

Scene 17

Table LII. Distribution of farm women according to visual comprehension of Scene No. 17 of video compact disc

N = 50

S. No.	Message	n	%
1.	Various items are prepared from wheat	40	80
2.	Distribution of grains in every parts of the country	42	84
3.	Due to complete knowledge of post-harvest technology of food grains, farm women can get good profit and production	40	80

Table LII reveals that eighty four per cent of the farm women were able to comprehend the message of the video compact disc that that distribution of grains in every parts of the country. While eighty per cent of farm women were able to comprehend the message that various items were prepared from wheat and due to complete knowledge of post-harvest technology of food grains, farm women can get good profit and production.

4.3.3 Overall Perception and Comprehension of the Video programme

The level of per cent and comprehension was measured in terms of percentage of perceived messages. The score for each scene were calculated and converted into percentage and presented under different categories.

Overall perception of video compact disc

Table LIII. Distribution of farm women according to their perception of video compact disc

N = 50

S. No.	Categories perception level	n	%
1.	Good (67-100)	47	94
2.	Average (33-67)	3	6
3.	Poor (0-33)	-	-

Table LIII and Fig. III shown that ninety four per cent of the farm women were having high level of perception regarding complete programme.

Only six per cent of the farm women were having average level of perception.

Overall comprehension of video compact disc

Table LIV. Distribution of farm women according to their comprehension of video compact disc

N = 50

S. No.	Categories comprehension level	n	%
1.	Good (67-100)	46	92
2.	Average (33-67)	4	8
3.	Poor (0-33)	-	-

Table LIV and Fig. III shown that ninety two per cent of the farm women were having high level of comprehension regarding video compact disc. Only eight per cent of the farm women were having average level of comprehension. There are several studies conducted by researchers, which supports the results of perception and comprehension of video.

Fonesca and Kearl (1960) reported that rural people give more attention to those topics which are closely related to their experiences.

Kaur (1985) suggested that extension personnel engaged in knowledge transmission should be encouraged for frequent use of media rather than depending on monotonous lecture method.

Thombre *et al.* (1986) revealed that mass media play an immense role in dissemination of agriculture technologies. This has also been revealed in past studies like Indian Institute of Mass Communication (IIMC, 1968), Sandhu (1973), Sehario and Singh (1976) and Chole (1977).

Rao *et al.* (1987) concluded that video can take locally prepared cassettes, based on local needs, feedback is also there to a great extent. When compared to films, it is very cheap and easy to produce video cassette programmes.

Belbase (1988) revealed that before and after results showed 100 per cent comprehension and after results showed 100 per cent comprehension of the video programme on diarrhoea and was found to be very effective for teaching people about ORS and nutrition during diarrhoea.

Chauhan (2006) reported that developed video programme "Animal Care and Management Practices of Milch Animals" was well perceived and comprehended.

Verma (2007) reveals in her study that cent per cent respondent were having high level of comprehension regarding video programme.

On the basis of present finding it could be concluded that developed VCD on "Post-harvest technology of food grains' was very good and clearly understood by the farm women.

The various reason for very good perception and comprehension of video compact disc by farm women could be as follows:

(a) Message shown in developed video compact disc were familiar, simple, understandable and real.

(b) Simple language was used by researcher to deliver the message to farm women that might help them in understanding the message to such a great extent.

(c) Expert guidance and suggestions were the most important consideration while planning of the video compact disc.

4.4 Effectiveness of video programme

In this section attempt has been made to find out the effectiveness of developed VCD in terms of gain in knowledge by the farm women. Result presented in this was sub divided as follows:

4.4.1 Knowledge level of the farm women in pre-test

This section describes the existing level of knowledge of the farm women regarding post-harvest technology of food grains in pre-test.

To test knowledge of the farm women a knowledge test was administered to the farm women individually and the response were recorded. Maximum score regarding knowledge was 68.

Table LV. Distribution of farm women according to score range of knowledge and standard deviation at pre-test

Range of knowledge	Coefficient of range	Average score	S.D.	C.V.
5-39 (24)	0.44	21.10	4.15	19.66

Table LV depicts that the highest score obtained by the farm women was 39 and lowest was 15 with a range of 24 and lowest was 15 with a range of 24 and co-efficient of range 0.41.

Standard deviation of knowledge at pre-test was 4.15 and co-efficient of variation was 19.66 per cent. Knowledge was divided into three categories that is high, medium and low on the basis of standard deviation.

Table LVI. Distribution of farm women according to level of knowledge and mean per cent score of each category in pre-test

N = 50

Knowledge with score range	n	%	Mean per cent score
Low (15-17)	1	2	22
Medium (18-25)	43	86	29.38
High (26-39)	6	12	44.36

Data presented in Table LVI and Fig. IV shows that majority of eighty six per cent of farm women had medium knowledge with mean per cent score of 29.38, while twelve per cent of farm women had high knowledge with mean per cent score 44.36 and only two per cent farm women had low level of knowledge with mean per cent score of twenty two per cent.

4.4.2 Knowledge level of the farm women in post-test

In this section describes the knowledge level of the farm women after exposure of developed video compact disc by investigator.

To test the knowledge some knowledge test was administered to the farm women individually. After (seven days) exposure of video compact disc the response were recorded.

Table LVII. Score range of knowledge and standard deviation (Gain in knowledge)

Range of knowledge	Coefficient of range	Average score	S.D.	C.V.
40-60 (20)	0.2	51.26	4.93	9.62

Table LVII indicates that the highest score obtained by farm women in post-test was 60 and lowest was 40 with a range of 20 and coefficient of range was 0.20.

Standard deviation of knowledge at post-test was 4.93 and coefficient of variation was 9.62 per cent. Knowledge was categorized into three categories that are high, medium and low on the basis of standard deviation.

According to Aggarwal (1988) less the coefficient of range, better are the results. Standard deviation of knowledge test was 4.93. Knowledge level was categorized into three categories i.e. high, medium and low on the basis of standard deviation. Further he reported that smaller the value of coefficient of variation, more consistent are the data and vice versa. Hence score with smaller coefficient of variation i.e. 9.62 per cent possess less variability. As coefficient of variation is low, it indicates more reliability of findings.

Table LVIII. Distribution of farm women by overall knowledge and mean per cent score of each category in post-test

N = 50

Knowledge with score range	n	%	Mean per cent score
Low (20-42)	1	2	58.22
Medium (42-58)	47	94	73.77
High (59-60)	2	4	88.23

The data presented in Table LVIII and Fig. IV shows that in post-test, majority of farm women ninety four per cent had medium knowledge with mean per cent score of 73.77 while two per cent farm women had high knowledge with mean per cent score of 88.23 and one per cent farm women had low level of knowledge with mean per cent score of 58.82. There are several studies conducted by researcher which supports the results of gain in knowledge by media.

Kumar and Singh (1988) revealed that experience of using video in Portugal has proved that video can be used effectively to transfer new technologies to farmers.

Bhagat and Mathur (1988) reported that about 25 per cent of women had low mass media exposure and majority were categorized as having medium mass media exposure.

Gery (1982) revealed that video can be very well used as a medium for development of communication. These studies indicated that nearly 50 per cent of the farmers changed their practices after participating in the communication process using video tapes.

4.4.3 Differential knowledge gain by the farm women

This section describes the differential knowledge gain by the farm women after exposure of developed video compact disc.

Table LIX. Score range of knowledge and standard deviation (Gain in knowledge)

Range of knowledge	Coefficient of range	Average score	S.D.	C.V.
13-42 (29)	0.52	30.16	6.63	21.98

The data presented in Table LIX reveals that the highest score gained by the farm women was 42 and coefficient of range was 0.52. Standard deviation of knowledge test was 6.63 and coefficient of variation was 21.98 per cent with average score of 30.16.

Knowledge was categorized into three categories that is high, medium and low knowledge gain on the basic of standard deviation.

Table LX. Differential knowledge gain

N = 50

Knowledge with score range	n	%	Mean per cent score
Low (13-22)	7	14	26.89
Medium (23-37)	38	76	45.70
High (38-42)	5	10	58.23

It is observed from Table LX and Fig. IV shows that according to the difference in farm women pre and post scores, majority of farm women seventy six per cent in category of medium knowledge gain with mean per cent score of 45.70, followed by fourteen per cent were in the low level of knowledge gain category with mean per cent score of 26.89 and 10 per cent were falling in the category of high knowledge gain with mean per cent score of 58.23.

4.4.4 Comparison in pre-test and post-test

This section describes the comparison between pre and post test score for find out the effectiveness developed video compact disc in terms of gain in knowledge.

Paired 't' test was applied to find out whether there was significant gain or not, in the knowledge level of farm women.

Table LXI. Overall gain in knowledge of the farm women

N = 50

Items	Mean per cent score	Calculated 't' value
Pre-test	21.10	31.51**
Post-test	51.26	
Gain	30.16	

** Significant at 0.1% level of significance

Table LXI shows the mean per cent score of farm women in pre and post test, paired 't' test calculated value 31.51.

4.4.5 Overall gain in knowledge

Table LXI indicates that there are significant difference in the pre and post test scores of the farm women as calculated 't' values was found to be a significant at 0.1% level of significance, indicates that there was significant gain in knowledge after exposure of developed video compact disc.

The initial knowledge of the farm women was poor as their pre-test score was 21.10 per cent. Significant improvement in the knowledge of farm women were found as a result of exposure of video compact disc as the pre-test score increased 21.10 to 51.26 per cent with the gain in knowledge of about 30.16 per cent.

Summary and Conclusion 5

The communication revolution has brought in a tremendous transformation, both in the structure and function of the farming society as a whole. The electronic technology is revolutionizing the agricultural systems across the globe. Video is the most suitable medium for generating interaction. It has the ability to present a message to a community in moving image and sound immediately. The message can be conveyed through visuals to illiterate and unaware rural people easily and effectively. Video with its unique quality of audio-visual it serves as an effective tool for rural extension work. Farm women play a key role in both production and post-harvest phase of farming. There is need to strengthen their role by paying specific attention to knowledge and skill empowerment and capacity building, so it is necessary to develop the video programme on post-harvest technology because there is a need to enrich the rural women about new technologies for increasing their knowledge level. Therefore, present study was planned to develop Video Compact Disc on post-harvest technology for rural women.

Objectives

1. To Develop Video Compact Disc (VCD) on "Post –harvest technology of food grains".

2. To field test VCD programme with the help of visual perception and comprehension.

3. To assess the effectiveness of the developed VCD.

Methodology

The study was conducted in randomly selected two villages i.e. Bhukarka and Chainpura of purposively selected Nohar Panchayat

Samiti of Hanumangarh district. Sample of fifty farm women were selected (twenty five from each village) for present investigation. Post – test experimental research design was used for the investigation.

The study was conducted in two phases:

Phase I: Development Video Compact Disc (VCD) on "Post-harvest technology of food grains".

1. Deciding broad aspects of video programme
2. Preparation of video programme
3. Pre-testing of video programme
4. Evaluation of video programme by experts

Phase II: Field testing of Video Compact Disc (VCD) on "Post-harvest technology of food grains".

1. Development of Knowledge test

A. General information

B. Knowledge test on "Post-harvest technology of food grains"

i. Development of knowledge test

ii. Scoring of knowledge test

iii. Evaluation of knowledge test by experts

iv. Pre-testing of knowledge test

v. Reliability and validity of knowledge test

C. Measurement of comprehension of VCD

i. Visual perception and comprehension

ii. Record sheet and scoring procedure for comprehension of video lesson

2. Collection of data

A. Pre-testing of data

B. Exposure of VCD

C. Post-test (After exposure)

i. Perception and comprehension of VCD

ii. Knowledge test

3. Analysis of data

Major findings

Profile of the farm women

- Majority of the farm women were from middle age (30-45 years) group (72%).
- Majority of the farm women were married (96%).
- Most of the farm women had farming as main employment (80%).
- Majority of the farm women were from other Backward Caste Category (46%).
- Most of the farm women belonged to Nuclear family (58%) and size of family was medium (up to 5-8) 48 per cent.
- Majority of the farm women had farming as their family occupation (90%).
- Most of the farm women's family member were illiterate (60%).
- Maximum of the farm women (68%) had no membership of organization.

- Most of the farm women had more then 10 Acres of land (34%), *katcha* house (52%), small herd size (76%) and thatched dwelling for livestock (86%).
- Majority of farm women were having plough (80%).
- Maximum of the farm women were having clean toilet (74%) in their house.
- Most of the farm women had no media ownership (64%).
- Most of farm women had no facilities of transportation (44%) and 82 per cent from women were having electricity in their house.

Evaluation of Video Compact Disc by Experts

The effectiveness of video programme is terms of video quality, visual quality, presentation of message, content importance suitability and text was rated high. The overall effectiveness of video compact disc was also high. It indicates that the video compact disc was effective for educating the farm women.

Visual perception and comprehension of Video Compact Disc

Visual perception of the video compact disc by the farm women

Visual perception of the video compact disc was found high as majority of farm women were able to perceive the visually correctly (100%) viz., Lush Green, field, heap of wheat, people eat wheat chapatti, harvesting of wheat by sickle, winnowing of the wheat, carring the gunny bags of wheat, heap of grains crop, threshing by wooden stick, threshing by bullock-cart, separated grain crops, big polysheet, washing the polysheet, drying the polysheet in sunlight, beating the grain crop by the women, threshing the grain crop by the women, threshing the grain with the animals, winnowing the grain fork, straw is gathered on distance, fodder is fed by animals, winnowing the grain by

women with the help of basket, protecting the grain from birds, keep the grain in the shaddy place, clean gunny bags, plastering the old storage floor by kneaded mud, plastering the *pucca* storage, keep the grain in iron tin, sun drying grain, shadow drying of *neem* leaves, keep *neem* leaves in grains, cleaning the tractor, beating the grain, truck filled with grains, clean grain and women counting the money and grain heap with money.

Overall it can be concluded that perception of the visuals were good as visual had rural and familiar background with natural site. Hence, there was no confusion in recognizing the scenes.

Visual comprehension of the Video Compact Disc by farm women

Visual comprehension of the video compact disc was found high as majority of farm women were able to comprehend the message of video compact disc correctly (100%) i.e. during cutting bundles are being made, threshing is time saving process, thresher separates both straw and grains, for collecting grain, use clean polysheets, wash and dry the polysheets in sunlight, tight the nut and bolt of thresher properly before use, clean the straw of thresher, wear tight fitted clothes, while using thresher, winnowing of grains by fork according to direction of wind, use straw the grains in basket and clean the straw by hand.

Overall it can be concluded that visual comprehension of the scene was good as the messages were easy and directly related to the target group.

a) Message shown in developed video compact disc were familiar, simple, understandable and real.
b) Simple language was used by researcher to deliver the message that might have helped them in understanding the messages to such a great extent.
c) Expert guidance and suggestions were the most important consideration which planning of the video compact disc.

Effectiveness of developed video compact disc in terms of gain in knowledge

- Most of farm women (86%) were in the medium level knowledge category with mean per cent score 29.98 followed by high level knowledge category (2%) with (MPS 22) in pre-test.
- In post-test maximum number of farm women (94%) had medium knowledge with mean per cent score of 73.77, followed by high knowledge category (4%) with MPS 88.23 and low knowledge category (1%) with MPS 58.82.
- Majority of farm women (76%) were in category of medium level knowledge gain with mean per cent score of 45.70, followed by low knowledge gain category (14%) with MPS 26.89 and high knowledge gain category (10%) with MPS 58.23.
- The overall gain in knowledge through developed video compact disc was found to be statistically significant at 1 per cent level of significance.

Conclusion

On the basis of the result obtained from the study it can be concluded that majority of farm women were from middle age category, belonged to other backward caste category, illiterate, had nuclear family and size of family was medium with farming as main occupation, had no membership of organization, had *katcha* house, had plough, had no facilities of transportation, no media ownership.

Video programme was very effective because the message was simple, familiar, understandable and real. So all the farm women had perceived and comprehend the message of video compact disc very well. In both pre and post level of knowledge test, majority of farm women fell in the category of medium level knowledge category. The findings conclude that the developed video compact disc was found effective in educating to farm women.

Recommendation for further studies

1. The results of the study would act as a base for working out effectiveness and standardizing other educational media.

2. A web site can be launched for field functionaries/extension specialists where related information can be contributed by experts.

3. Media is a effective tool for educating to illiterate rural women. It could be tried in other messages for the transfer of technology in agriculture, sericulture and allied fields.

4. A little bit change in mode of presentation may be more advantageous.

5. Computer and other mode are the media of future, more and more C.D. Rom package in Hindi/Colloquial language can be developed on for educating rural masses.

6. The media prepared can be used as a handy reference by home scientist/extension worker of KVKs for making their training and learning programme more effective and meaningful.

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M.Sc. Thesis 2007

Topic: Development and Field Testing of Video Compact Disc (VCD) on "Post-harvest technology of food grains"

ABSTRACT

The communication revolution has brought in a tremendous transformation, both in the structure and function of the farming society as a whole. The electronic technology is revolutionizing the agricultural systems across the globe.

Video is the most suitable medium for generating interaction, video is an aid which serves as a magical carpet to millions of people for communication of message. It has the ability to present a message to a community in moving images and sound immediately.

Post-test experimental design was used for field testing of VCD and pre and post experimental design used for knowledge test.

The study was conducted in randomly selected by two villages i.e. Bhukarka and Chainpura of purposively selected Nohar panchayat samiti of Hanumangarh District with a sample of fifty farm women (twenty five from each village). The study was conducted in two phases.

In first phase, the video compact disc was developed on "Post-harvest technology of food grains". Under the guidance of experts and pre-test with twenty farm women non sample farm women's. In second phase knowledge test was developed, in this AICRIP socio economic Performa was included and dichotomized/multiple choice questions were framed.

The developed knowledge test was pre-tested with the fifteen non-sample farm women and reliability and validity was also calculated. To find out the visual perception and comprehension of video compact disc, unstructured open ended question were framed, record sheet was also prepared.

For collection of data pre-test was done by the help of developed knowledge test with the farm women, to know the existing knowledge on "Post-harvest technology of food grains", and after this developed video compact disc was exposed to the farm women. Post-test carried out to check the gain in knowledge. For perception and comprehension of VCD, post-test after exposure was carried out.

The finding regarding background information of farm women revealed that majority of farm women were from middle age (30-45 years) belonged to other backward caste category had nuclear family, with agriculture as main occupation, fall in large long, holding, had *katcha* house and majority of farm women having no membership in organization but having facility of electricity in their houses.

In both pre and post level of knowledge test, majority of farm women fall in the category of medium level knowledge. The findings of the present study revealed that the self developed video compact disc were found effective in educating farm women. Findings further indicates that farm women have perceived and comprehended the messages of video compact disc was very well the reason behind was the message were clearly understood by them.

On the basis of these findings, it could be concluded that the developed video compact disc on "Post-harvest technology of food grains" was good and could be used by field functionaries, extension workers and all those agencies/organizations working in the rural areas for transfer of scientific information to rural farm women.

(Major Advisor) **(Scholar)**

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स्नातकोत्तर शोध कार्य (2007)

विषयः खाद्यान्नों की कटाई उपरान्त तकनीक पर वीडियो कॉम्पेक्ट डिस्क (वीसीडी) का विकास एवं क्षेत्र परीक्षण

अनुक्षेपण

संचार क्रान्ति कृषि समुदाय की संरचना और कार्य दोनों में ही बहुत बड़ा परिवर्तन लाई है। विद्युतीय तकनीक कृषि तन्त्र को विश्व तक पहुंचाने में क्रान्ति साबित हुई है।

लोगों को आकर्षित करने के लिए वीडियो एक उपयुक्त माध्यम है। वीडियो एक ऐसा साधन है जो सूचनाओं को प्रसारित करने में जादुई कालीन की तरह कार्य करता है। यह ध्वनि एवं चलित तस्वीरों के सामंजस्य से जनसमुदाय को संदेश प्रदान करता है। वीसीडी को क्षेत्र परीक्षण करने के लिए पश्चवर्ती परीक्षण प्रायोगिक अनुसंधान विधि का प्रयोग किया गया है पूर्व व पश्चवर्ती अनुसंधान विधि का उपयोग ज्ञान की जांच के लिए किया गया है।

यह अध्ययन हनुमानगढ़ जिले की सोद्देश्य चयनित नोहर पंचायत समिति के यादृच्छिक विधि से चयनित दो गांवों भुकरका व चैनपुरा में किया गया। साथ ही पचास कृषक महिलाओं को चुना गया (प्रत्येक गाँव से पच्चीस महिलाएँ) इस अध्ययन को दो चरणों में किया गया।

प्रथम चरण में विशेषज्ञों को निर्देशन में खाद्यान्नों की कटाई उपरान्त तकनीक पर वीडियो कॉम्पेक्ट डिस्क (वीसीडी) विकसित की गई व बीस प्रतिदर्शविहीन कृषक महिलाओं के साथ पूर्व परीक्षण किया गया। दूसरे चरण में ज्ञान जांच पत्र विकसित किया गया जिसमें AICRIP सामाजिक-आर्थिक शामिल किया गया और सही-गलत व बहुविकल्पी प्रश्न निर्मित किए गए। विकसित ज्ञान-जांच पत्र को पन्द्रह प्रतिदर्शविहीन

कृषक महिलाओं के साथ पूर्व परीक्षण किया गया साथ ही विश्वसनीयता व प्रमाणिकता की गणना की गई। दृश्यावलोकन व अर्थग्रहण का पता लगाने हेतु असंरचनात्मक खुले प्रश्न तैयार किए गए व ज्ञान प्रमाण सूची भी तैयार की गई।

कृषक महिलाओं की खाद्यान्नों की कटाई उपरान्त तकनीक के बारे में ज्ञान की जांच के लिए उनका पूर्व परीक्षण किया गया तथा इसके पश्चात् विकसित वीसीडी को ग्रामीण महिलाओं के सामने प्रदर्शित किया गया। अर्जित ज्ञान की जांच हेतु पश्च परीक्षण किया गया। वीसीडी का दृश्यावलोकन व अर्थग्रहण के लिए प्रदर्शन उपरान्त पश्च-परीक्षण किया गया।

कृषक महिलाओं की आधारभूत जानकारी से यह प्रदर्शित होता है कि अधिकतर कृषक महिलाएँ मध्यम उम्र, अशिक्षित, अन्य पिछड़ी जाति तथा एकाकी परिवार से थी, उनका मुख्य व्यवसाय कृषि, वृहद् भूमि स्वामिनी, कच्चे मकान वाली थी और अधिकतर कृषक महिलाएँ किसी संस्था में भागीदारी नहीं रखती थी परन्तु उनके घरों में बिजली की व्यवसाी थी।

पूर्व व पश्च परीक्षणों में अधिकांश कृषक महिलाएँ मध्यम ज्ञान स्तर की पाई गईं। अध्ययन के परिणामों से दृष्टिगत होता है कि स्वनिर्मित वीसीडी, कृषक महिलाओं के लिए कारगर व प्रभावोत्पादक पाई गई।

अध्ययन से विदित होता है कि वीसीडी का दृश्यावलोकन व अर्थग्रहण भली प्रकार से किए गए, जिसका कारण वीसीडी का संक्षिप्त एवं सारगर्भित जानकारी देना है।

उपर्युक्त परिणामों के आधार पर यह निष्कर्ष निकाला जा सकता है कि खाद्यान्नों की कटाई उपरान्त तकनीक पर निर्मित वीडियो कॉम्पेक्ट डिस्क उत्तम है और यह क्षेत्रीय कार्यकर्ताओं, प्रसार कार्यकर्ताओं एवं उन संस्थाओं/संगठनों जो ग्रामीण क्षेत्रों में कार्यरत हैं, के द्वारा ग्रामीण किसानों को वैज्ञानिक जानकारी हस्तान्तरित करने के लिए प्रस्तुत की जा सकती है।

(मुख्य सलाहकार) **(शोधार्थी)**

Appendix – I

Questionnaire for evaluation of Video Programme on "Post-harvest technology of food grains"

Personal Information

1. Name : _____
2. Age : _____
3. Background : _____
4. Marital status : _____
5. Educational qualification : _____
6. Department : _____
7. Designation : _____
8. Experience (years) : _____
9. Nature of job : _____

Assessment of video programme

A. Visual Quality

S. No.	Particulars	Scores		
1.	Clarity of pictures	Very clear **(3)**	Clear **(2)**	Not clear **(1)**
2.	Size of illustration	Highly appropriate **(3)**	Appropriate **(2)**	Not at all appropriate **(1)**
3.	Perception	Very good **(3)**	Good **(2)**	Bad **(1)**

S. No.	Particulars	Scores		
4.	Interest orientation	Very good **(3)**	Good **(2)**	Bad **(1)**
5.	Attention catching	Very good **(3)**	Good **(2)**	Bad **(1)**
6.	Self explanation	Very good **(3)**	Good **(2)**	Bad **(1)**
7.	Sequence	Very good **(3)**	Good **(2)**	Bad **(1)**
8.	General set up	Very good **(3)**	Good **(2)**	Bad **(1)**
9.	Colour	Very good **(3)**	Good **(2)**	Bad **(1)**
10.	Tuning with commentary	Very good **(3)**	Good **(2)**	Bad **(1)**
11.	Impressive	Highly Impressive **(3)**	Impressive **(2)**	Not at all impressive **(1)**

B. Audio Quality

S. No.	Particulars	Scores		
		Very good	Good	Bad
1.	Voice	**(3)**	**(2)**	**(1)**
		Very good	Good	Bad
2.	Pitch of voice	**(3)**	**(2)**	**(1)**
		Very good	Good	Bad
3.	Interest orientation	**(3)**	**(2)**	**(1)**
		Very good	Good	Bad
4.	Language	**(3)**	**(2)**	**(1)**
		Very good	Good	Bad
5.	Comprehension	**(3)**	**(2)**	**(1)**
		Very good	Good	Bad
6.	Accuracy	**(3)**	**(2)**	**(1)**
		Very good	Good	Bad
7.	Sequence	**(3)**	**(2)**	**(1)**
		Very good	Good	Bad
8.	Music	**(3)**	**(2)**	**(1)**

C. Content

S. No.	Particulars	Scores		
1.	Informativeness	Very informative **(3)**	Informative **(2)**	Not informative (**1)**
2.	Technical terms	Very easy to understand **3)**	Easy to understand **(2)**	Not easy to understand **(1)**
3.	Coverage	Very informative **(3)**	Informative **(2)**	Not informative (**1)**
4.	Relevancy	Very good (3)	Good (2)	Bad (1)
5.	Usefulness	Very useful (3)	Useful **(2)**	Not useful (1)

D. Presentation of message

S. No.	Particulars	Scores		
1.	Speed of presentation	Very good **(3)**	Good **(2)**	Bad **(1)**
2.	Simplicity	Very simple **(3)**	Simple **(2)**	Not simple **(1)**
3.	Style of presentation	Very good **(3)**	Good **(2)**	Bad **(1)**
4.	Explaining ideas	Very good **(3)**	Good **(2)**	Bad **(1)**
5.	Message treatment	Very good **(3)**	Good **(2)**	Bad **(1)**

E. Text

S. No.	Particulars	Scores		
1.	Clarity of text	Very good **(3)**	Good **(2)**	Bad **(1)**
2.	Size of text	Very good **(3)**	Good **(2)**	Bad **(1)**

Perceived field applicability of selected Post-harvest technology of food grain messages

A. Relative advantage

a) Video programme on Post-harvest technology improves the economic status of rural women	To greater extent (3)	To some extent (2)	Not at all (1)

B. Cultural compatibility

a) Video programme is according to users existing cultural values	To greater extent (3)	To some extent (2)	Not at all (1)

C. Physical compatibility

a) Video programme on Post-harvest technology according to users working conditions	To greater extent (3)	To some extent (2)	Not at all (1)

D. Simplicity/compatibility

a) Video programme is providing information is understandable and in simple manner/easy to understand	To greater extent (3)	To some extent (2)	Not at all (1)

E. Triability

a) Knowledge imparted through video compact disc can be tried on a limited basis	To greater extent (3)	To some extent (2)	Not at all (1)

Appendix – II

कटाई उपरान्त तकनीक

कटाई उपरान्त उन्नत तकनीक अपनाकर अधिक संरक्षित अनाज पाएँ

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
1.	20 सैकण्ड	गेहूँ के लहलहाते खेत	लांग-क्लोज अप	कितना अच्छा लगता है जब किसान बहनों की मेहनत रंग लाती है और उनके खेतों में सोने जैसी फसल लहलहाती है।
2.	20 सैकण्ड	गेहूँ के ढेर व गेहूँ की चपातियां खाते लोग	मीडियम क्लोज अप	गेहूँ हमारे देश की महत्वपूर्ण फसल है। एक आम भारतीय जब तक गेहूँ की रोटी नहीं खा लेता तब तक उसे सन्तुष्टि नहीं मिलती है। किसी ने सच ही कहा है - "भूखे भजन न होय गोपाला"।
3.	15 सैकण्ड	गेहूँ के ढेर (छोटे व बड़े)	मीडियम क्लोज अप	लेकिन क्या आप जानते हैं कि जितनी फसल की पैदावार होनी चाहिए उतना उत्पादन हमें प्राप्त नहीं हो पाता है और यह होता है कटाई उपरान्त तकनीकों की कम जानकारी के कारण।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
4.	30 सैकण्ड	कटाई, मढ़ाई, ओसाई, सुखाई, संग्रहण व विपणन प्रक्रिया व व्यर्थ हुआ अनाज, फसल कटाई की मशीनें	मीडियम क्लोज अप	अनाज का एक बड़ा भाग फसल की कटाई, मढ़ाई, ओसाई, सुखाई-संग्रहण व विपणन की प्रक्रिया के दौरान व्यर्थ चला जाता है अतः अनाज की पूरी प्राप्ति के लिए यह बहुत जरूरी है कि सभी किसान बहनों को कटाई उपरान्त प्रक्रियाओं का पूर्णतया ज्ञान हो। आओ देखते हैं कि फसल कटाई से लेकर सुरक्षित अनाज को कैसे प्राप्त किया जा सकता है।
5.	10 सैकण्ड	पकी हुई बालियों से दानों को झड़ते हुए दिखाना	मीडियम क्लोज अप	फसल पककर तैयार हो गई है। गेहूँ की कटाई अप्रेल-मई में दानें झड़ने से पहले करनी चाहिए।
6.	15 सैकण्ड	दरांती से फसल काटती महिलाएँ	क्लोज अप	फसल को काटने के लिए किसान बहनें दरांती को काम में लेती हैं। इसे चलाने के लिए काटने वाले को बैठकर चलना पड़ता है।
7.	15 सैकण्ड	फसल को इकट्ठा कर गठ्ठरों के रूप में बांधते हुए	क्लोज अप	फसल को काटने के साथ-साथ इसे गठ्ठरों के रूप में इकट्ठा करते रहना चाहिए व इसे रस्सी से कस कर बांध देना चाहिए ताकि तेज हवा से ये गट्ठर बिखर न जाएँ।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
8.	15 सैकण्ड	कटाई के लिए काम में ली जाने वाली मशीन (कम्बाइनर)	मीडियम	फसल की जल्दी कटाई के लिए कम्बाईन का उपयोग करना चाहिए इसमें समय की बचत होती है।
9.	15 सैकण्ड	मशीन द्वारा फसलों की कटाई करते हुए	मीडियम क्लोज अप	मशीन में कटाई दाएँ से बाँए की ओर होती है। मशीन बाल काटने वाली मशीन की भांति कार्य शुरू करती है।
10.	15 सैकण्ड	छुरों की धार पैना करते हुए	क्लोज अप	फसल की कटाई सही प्रकार हो इसके लिए कुछ बातों का ध्यान रखना चाहिए। (i) छुरों की धार को समय-समय पर पैना करते रहना चाहिए।
11.	10 सैकण्ड	मशीन को खाली चलाकर साफ करते हुए	क्लोज अप	(ii) पूरा दिन कार्य करने के पश्चात् कटर बार की सफाई करनी चाहिए।
12.	10 सैकण्ड	मशीन के पुर्जों को ग्रीस से चिकना करते हुए	क्लोज अप	(iii) मशीन के पुर्जें अच्छी तरह कसे होने चाहिए व ग्रीस लगाकर चिकना करते रहना चाहिए।
13.	10 सैकण्ड	मशीन द्वारा फसलों के गट्ठर बनाना	मीडियम	इसमें कटाई के साथ-साथ फसल को गट्ठरों के रूप में बांधने का व अनाज निकालने का भी कार्य होता है।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
14.	10 सैकण्ड	इकट्ठा किए हुए बंडल लकड़ियों से पीटते हुए	मीडियम क्लोज अप	फसल की मढ़ाई या बालियों से अनाज तीन प्रकार से निकाला जाता है। (i) पीट कर - बालियों को पीट-पीट कर अनाज निकालने के लिए साफ व सख्त स्थान पर फसल को इकट्ठा करके लकड़ियों की या औजार की सहायता से पीटते हैं।
15.	10 सैकण्ड	पशुओं द्वारा अनाज की मढ़ाई करते हुए	मीडियम व क्लोज अप	(ii) पशुओं द्वारा - अधिक फसल होने पर पशुओं द्वारा मढ़ाई की जाती है। इसमें ऊँट या बैल को फसल पर कई दिन तक घुमाया जाता है।
16.	5 सैकण्ड	बालियों से अलग हुआ अनाज	क्लोज अप	ऐसा करने से फसल की बालियों से दानें अलग हो जाते हैं।
17.	15 सैकण्ड	व्यर्थ हुआ अनाज व थ्रेसर का प्रयोग	मीडियम	लेकिन लकड़ियों व पशुओं द्वारा मढ़ाई करने में काफी अनाज व्यर्थ चला जाता है इसलिए मढ़ाई के लिए थ्रेसर का प्रयोग करना चाहिए।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
18.	15 सैकण्ड	छलनियों द्वारा अनाज छनना	क्लोज अप	(iii) **थ्रेसर द्वारा** - थ्रेसर द्वारा अनाज कम समय में ही निकल सकता है इसमें दानों के आकार के अनुसार कई प्रकार की छलनियाँ होती है।
19.	15 सैकण्ड	भूसा व गेहूँ अलग-अलग गिराते हुए	क्लोज अप	थ्रेसर द्वारा अनाज व भूसा अलग-अलग हो जाते हैं। थ्रेसर से प्राप्त अनाज साफ व धूल रहित होता है।
20.	45 सैकण्ड	प्लास्टिक की चद्दरें धोते हुए। सुखाते हुए व अनाज इकट्ठा करते हुए	क्लोज अप	थ्रेसर द्वारा प्राप्त अनाज को इकट्ठा करने के लिए बड़ी प्लास्टिक की चद्दरें काम में ली जाती हैं लेकिन ये चद्दरें पूरी तरह साफ व कीटाणु रहित हों तभी काम में लेनी चाहिए। ❖ चद्दरें साफ करने के लिए इन्हें अच्छी तरह धो लेना चाहिए। ❖ फिर इन्हें धूप में सुखाना चाहिए जब ये पूरी तरह सूख जाएँ तब इन्हें काम में लेना चाहिए। इससे अनाज खराब होने का खतरा नहीं रहता है।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
21.	10 सैकण्ड	थ्रेसर के नट बोल्ट कसते हुए	क्लोज अप	थ्रेसर को प्रयोग में लाते समय कुछ बातों का ध्यान रखना चाहिए ताकि दुर्घटना होने की सम्भावना ना रहे। (i) थ्रेसर के नट बोल्ट पूरी तरह कसे हों।
22.	10 सैकण्ड	थ्रेसर की लॉक सुखाते व साफ करते हुए	मीडियम	(ii) थ्रेसर की लॉक सूखी व साफ होनी चाहिए।
23.	10 सैकण्ड	कसे कपड़े पहनकर थ्रेसर में बालियां डालना	मीडियम व क्लोज अप	(iii) थ्रेसर में लॉक लगाने वाले को कसे कपड़े पहनने चाहिए क्योंकि थोड़ी सी असावधानी से हाथ कट सकता है।
24.	15 सैकण्ड	इकट्ठे किए अनाज में भूसा व कंकड़ मिले होना	क्लोज अप	लकड़ी से पीटकर व पशुओं द्वारा जब अनाज निकालते हैं तो उसमें अधिकांश मात्रा में भूसा व कंकड-पत्थर मिले होते हैं।
25.	10 सैकण्ड	जेई की सहायता से अनाज को उछालना	मीडियम व क्लोज अप	जेई द्वारा ओसाई करना - अनाज को साफ करने के लिए जेई की सहायता से अनाज को उछालना चाहिए।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
26.	10 सैकण्ड	हवा के रूख के अनुसार कुछ दूरी पर इकट्ठा होता भूसा	मीडियम व क्लोज अप	हवा के रूख के अनुसार भूसा थोड़ी दूर पर इकट्ठा होता जाता है।
27.	10 सैकण्ड	भूसा खाते पशु	मीडियम	यह भूसा पशुओं के चारे के रूप में काम आ जाता है।
28.	10 सैकण्ड	टोकरी में अनाज भरते व ओसाते हुए	क्लोज अप	अनाज में बचे भूसे को निकालने के लिए अनाज को टोकरी में भर कर ओसाया जाता है।
29.	10 सैकण्ड	हाथों से बीन कर मोटी गांठों को निकालना व साफ अनाज के ढ़ेर	क्लोज अप	हाथों से बीन कर मोटी गांठों को निकाल दिया जाता है। इससे अनाज पूरी तरह साफ हो जाता है।
30.	15 सैकण्ड	साफ किए हुए अनाज को सुखाते हुए	क्लोज अप व मीडियम	अनाज केवल साफ करने से ही लम्बे समय तक सुरक्षित नहीं रहता है। इसे सुरक्षित रखने के लिए भण्डारण से पहले सुखाना आवश्यक होता है।
31.	10 सैकण्ड	धूप में सूखता अनाज	क्लोज अप व मीडियम	अनाज को सुखाने के लिए, अनाज को 2 से 4 दिनों तक धूप में सुखाना चाहिए।
32.	10 सैकण्ड	चिड़ियों से अनाज की रक्षा करते हुए	मीडियम	सुखाई के समय अनाज की चिड़ियों तथा अन्य प्राणियों से सुरक्षा करनी चाहिए।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
33.	10 सैकण्ड	अनाज को छाया वाले स्थान पर रखना। गर्म अनाज को बोरों में भरने से खराब हुआ अनाज	मीडियम	जब अनाज में नमी 8-10 प्रतिशत तक हो जाए तब इसे छाया में रख देना चाहिए क्योंकि धूप में अनाज गर्म हो जाता है व गर्म अनाज को बोरों में भरने से अनाज खराब हो जाता है।
34.	15 सैकण्ड	सूखे अनाज को बोरों में भरते हुए। अनाज में लगे कीड़े	मीडियम	अनाज को साफ बोरों में भरना चाहिए। कभी भी पुराने बोरों में अनाज नहीं भरना चाहिए इससे अनाज में कीड़े लग जाते हैं व अनाज खराब हो जाता है।
35.	10 सैकण्ड	अनाज का चूहों, चिड़ियों, कीड़ों व सीलन द्वारा खराब होना	क्लोज अप	**अनाज बिगड़ने के कारण -** ❖ अनाज अधिकतर चूहों द्वारा, चिड़ियों द्वारा, कीड़ें लगने व सीलन के कारण खराब हो जाता है।
36.	30 सैकण्ड	गारा बनाते हुए कोठियों को लीपते हुए	मीडियम व क्लोज अप	अनाज का भण्डारण करते समय कुछ बातों का ध्यान रखना चाहिए। (i) पुरानी गारे की कोठियों को भण्डारण से पहले लीप-पोत लेना चाहिए। कोठियों को बी.एच.सी. मिलाकर लीपना चाहिए ताकि छिपे कीट मर जाएँ।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
37.	15 सैकण्ड	बड़े बर्तनों (मिट्टी के) को लीपते हुए	मीडियम व क्लोज अप	(ii) इसी तरह बड़े मिट्टी के बर्तनों को भी लीप-पोत लेना चाहिए।
38.	10 सैकण्ड	बर्तनों को धूप में सुखाते हुए	क्लोज अप	जब तक बर्तन पूरी तरह ना सूखें इन्हें धूप लगाते रहना चाहिए।
39.	15 सैकण्ड	पक्की कोठी में लिपाई करते हुए	क्लोज अप	पक्की कोठियों में अनाज भण्डारण करने से पहले एण्डोसल्फान डस्ट मिलाकर लिपाई कर देनी चाहिए ताकि कोठी में कीड़े न लग पाएँ।
40.	10 सैकण्ड	लकड़ियों के पट्टों पर रखी अनाज की बोरियां	मीडियम व क्लोज अप	अनाज से भरी बोरियों को सीधे जमीन पर ना रखकर उन्हें लकड़ियों के पट्टों पर रखना चाहिए ताकि अनाज में सीलन न आ पाए।
41.	15 सैकण्ड	गेहूँ को चूहों से बचाने के लिए चूहा नाशक का प्रयोग करते हुए	क्लोज अप	अनाज को चूहों से बचा कर रखना चाहिए क्योंकि चूहे अनाज को खाते ही नहीं, उसे मल-मूत्र से दूषित भी कर देते हैं अतः इसके नियन्त्रण के लिए रेड पॉयजन या अन्य चूहारोधी विष का उपयोग करना चाहिए। हम इसे घर में आसानी से तैयार कर सकते हैं।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
42.	15 सैकण्ड	अनाज को कीड़ों से बचाने के लिए कीट नाशक का उपयोग करना चाहिए।	क्लोज अप	अनाज को कीड़ों से बचाव के लिए कीट नाशकों का उपयोग करना चाहिए जो बाजार में आसानी से उपलबध हो जैसें - ई.डी.बी. एम्प्यूल, पारे की गोलियां व सेल्फॉस की गोलियां।
43.	10 सैकण्ड	लोहे की टंकियों में अनाज का भण्डारण	मीडियम व क्लोज अप	अनाज भण्डारण के लिए लोहे की टंकियों का उपयोग किया जाने लगा है इसमें नमी व कीटों का प्रकोप कम होता है।
44.	10 सैकण्ड	अनाज से भरी टंकियों को धूप लगाते हुए	क्लोज अप	अनाज से भरी टंकियों को धूप लगाते रहना चाहिए व इन्हें कम खोलना चाहिए।
45.	15 सैकण्ड	नीम की सूखी पत्तियों को अनाज में रखना	क्लोज अप	अनाज को सुरक्षित रखने के लिए नीम की पत्तियों को तोड़कर छाया में सुखाकर, काम में लेना चाहिए।
46.	10 सैकण्ड	किसान द्वारा अनाज बाजार में लाना	मीडियम	किसान कृषि क्षेत्र की उत्पादित वस्तुओं को बाजार तक ले जाता है व वहाँ बेचता है।
47.	10 सैकण्ड	ढुलाई में काम लाने वाले साधनों को साफ करना	मीडियम	अनाज की ढुलाई करने से पहले ट्रेक्टर, बैलगाड़ी या ऊँटगाड़ी को पूरी तरह साफ कर लेना चाहिए।

शॉट संख्या	समयावधि	दृश्य	शॉट विवरण	श्रव्य सामग्री
48.	20 सैकण्ड	अनाज की सफाई व अलग-अलग ढेरियाँ	मीडियम	कई बार बिक्री से पहले उत्पादित अनाज की सफाई, श्रेणीकरण और पैकिंग की क्रिया की जाती हैं यह काम किसान स्वयं करता है।
49.	15 सैकण्ड	संस्था द्वारा अनाज की बोली लगाना	मीडियम	इसके बाद वितरण का कार्य होता है। इसमें खरीदने वाली संस्था का व्यक्ति अनाज का मोल-भाव करता है।
50.	15 सैकण्ड	अनाज को देश के विभिन्न कोनों में ले जाते हुए व विभिन्न प्रकार के खाद्य पदार्थ	मीडियम व लांग शॉट	वितरण के लिए अनाज एक स्थान से दूसरे स्थान पर भेजा जाता है व इससे विभिन्न प्रकार के उत्पाद तैयार किए जाते हैं। सुरक्षित खाद्य पदार्थ देश के हर कोने में वितरित हो जाता है।
51.	15 सैकण्ड	अनाज की ढेरियां व पैसे	मीडियम	इस प्रकार कटाई उपरान्त तकनीकों का पूर्ण ज्ञान रखने से किसान बहनें अधिक सुरक्षित अनाज पा सकती हैं साथ ही अपनी उपज व आमदनी को बढ़ा सकती है।

Appendix – III (a)

साक्षात्कार पत्रक

भाग – 1 (अ) : पृष्ठभूमि की जानकारी

1. उत्तरदाता का नाम ..... गाँव .....

2. आयु

18 से 30 वर्ष तक	31 से 45 वर्ष तक	46 वर्ष से 60 वर्ष	60 वर्ष से ऊपर

3. वैवाहिक स्तर

अविवाहित	विवाहित	विधवा	तलाकशुदा

4. रोजगार स्तर

बेरोजगार	रोजगार			
	मजदूरी	खेती	नौकरी	उद्यम

भाग - 2 (अ) : सामाजिक-आर्थिक पृष्ठभूमि

(अ) सामाजिक कारक

1. **जाति**

अनुसूचित जाति / अनुसूचित जनजाति (1.0)	पिछड़ा वर्ग (1.5)	उच्च मध्य स्तर (2.5)	उच्च जाति (3.5)
प्राप्तांक =			

2. **परिवार की संरचना**

(अ) परिवार का प्रकार	एकांकी	1
	संयुक्त	2
(ब) परिवार का आकार	छोटा (4 सदस्य तक)	0.5
	मध्यम (5 से 8 तक)	1.0
	बड़ा (8 से भी ज्यादा)	1.5
कुल (अ+ब) =		

3. **पारिवारिक व्यवसाय**

(अ) प्रमुख व्यवसाय	खेती (फसल डेयरी / मुर्गीपालन / भेड़पालन / कोई अन्य)	2.0
	कारोबार/नौकरी	3.0
	काश्तकार	1.5
	मजदूर	1.0
(ब) अन्य व्यवसाय	कोई नहीं	0
	कोई एक	1.0
	एक या एक से ज्यादा	1.5
कुल (अ+ब) =		

4. **पारिवारिक शिक्षा**

क्र.सं.	परिवार में सदस्य	शिक्षा का स्तर						
		0	**0.5**	**1.0**	**1.5**	**2.0**	**2.5**	**3.5**
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

औसत संख्या =

अनपढ़ = 0, केवल पढ़ना व लिखना = 0.5, प्राथमिक शिक्षा = 1.0, आठवीं उत्तीर्ण = 1.5, बारहवीं उत्तीर्ण = 2.0, पोस्ट मैट्रिक डिप्लोमा = 2.5, स्नातक एवं स्नातकोत्तर = 3.51

5. **संगठन में सदस्यता**

कोई सदस्यता नहीं	0
औपचारिक संगठन में सदस्यता (पंचायत सहकारी समिति, राजनीति आदि)	1.0
औपचारिक संगठन में पद	1.5
अनौपचारिक संगठन में सदस्यता (धार्मिक, औपचारिक, मण्डल)	1.0
अनौपचारिक संगठन में पद	1.5
कुल संख्या	

(ब) आर्थिक कारक

6. **स्थिर साधनों का स्वामित्व**

(अ) जमीन	भूमिहीन	0
	4-5 बीघा तक	0.5
	5-10 बीघा तक	1.0
	10-20 बीघा तक	2.0
	20/ बीघा से भी ज्यादा	4.0
(ब) मकान	कच्चा मकान	0.5
	कच्चा व पक्का मकान	1.0
	पक्का मकान	1.5
(स) पालतू पशुओं की संख्या	छोटा पशुओं का समूह	0.5
	मध्यम समूह	1.0
	बड़ा समूह	1.5
	खुला	0
(द) पालतू पशुओं के रहने का मकान	घास फूस से बना मकान/कच्चा मकान	0.5
	पक्का मकान	1.0
कुल (अ+ब+स+द) =		

पशुपालक की संख्या =

छोटा - 1 से 3 दूध देने वाले पशु व 10 छोटे पशु

मध्यम - 4 से 6 दूध देने वाले व 20 छोटे पशु

बड़ा - 6 से भी अधिक दूध देने वाले पशु

7. **खेती के साधन**

देशी/लकड़ी का हल	1.0
उन्नत हल / बैल से खींचने वाला हल	1.0
ट्रेक्टर/ट्रेक्टर से जोड़ने वाली विभिन्न मशीनें	2.5
जमीन को समतल करने वाली मशीन	2.0
पम्प सेट	1.0
हाथ के उपकरण	0.5
छिड़काव/डस्टर	1.0
कुटी मशीन	1.0
थ्रेशर	1.0
छानने का यन्त्र	1.0
कुल संख्या	

8. **घर के साधन**

स्वच्छ शौचालय	1.5
गोबर गैस	2.0
अनाज भण्डारण / उन्नत कोठियाँ	0.5
हैण्ड पम्प/वाटर टेप	1.0
आधुनिक घरेलू फर्नीचर	1.0
कुल संख्या	

9. **संचार के साधन**

कोई नहीं	0
अखबार / मैग्जीन	1.0
रेडियो / ट्रांजिस्टर	2.0
टेलीविजन	3.0
कुल संख्या	

10. **अन्य**

(अ) यातायात के साधन	कोई नहीं	0
	बैलगाड़ी / ऊँट गाड़ी	0.5
	उन्नत बैलगाड़ी	1.0
	साइकिल	1.0
	स्कूटर/मोटरसाईकिल	2.0
	ट्रेक्टर ट्राली / चार पहिए वाली गाड़ी	2.0
(ब) बिजली	घर में	1.0
	खेत में	1.0
(स) घरेलू उपकरण	धुआं रहित चूल्हा/केरोसिन / स्टोव	0.5
	गैस चूल्हा	2.0
	प्रेशर कुकर	1.5
	उन्नत/नए रसोई के उपकरण (पीलर, ग्रेटर आदि)	1.0
	रसोई के बिजली के उपकरण, छोटे उपकरण (पंखा, प्रेस, मिक्सी आदि)	1.5
	बड़े उपकरण (हीटर, कपड़े धोने की मशीन, दूध बिलोने की मशीन)	2.0
	फ्रिज	2.5
	सिलाई मशीन	1.0
	कुल संख्या	

Appendix – III (b)

ज्ञान जाँच पत्र

भाग - 2

कटाई उपरान्त तकनीक का ज्ञान परीक्षण

1. क्या आप कटाई उपरान्त उन्नत तकनीक के बारे में जानते हैं?

   (अ) हाँ

   (ब) नहीं

2. आप के अनुसार फसल की कटाई कब करनी चाहिए?

   (अ) दाने झड़ने लगे उससे पहले।

   (ब) दानें झड़ने लगे उसके बाद।

3. फसल की कटाई के लिए क्या काम में लेते हैं?

   (अ) दरांती

   (ब) कटाई मशीन द्वारा करवाते हैं।

4. क्या आप फसल काटने के बाद उसे तेज हवा से बचाने के लिए रस्सी या किसी अन्य वस्तु से बांधते हैं?

   (अ) हाँ

   (ब) नहीं

5. मशीन फसल की कटाई सही प्रकार से करें इसके लिए क्या करना चाहिए।

   (अ) छुरों की धार को समय-समय पर धार लगाते रहना चाहिए।

   (ब) कटर बार की सफाई करनी चाहिए।

   (स) मशीन के पुर्जे अच्छी तरह से कसे हों।

   (द) पुर्जों को अच्छी तरह से ग्रीस लगाकर चिकना करना चाहिए।

6. क्या आप जानते हैं कि फसल की मढ़ाई किस प्रकार से की जाती है?

(अ) पीटकर

(ब) पशुओं द्वारा

(स) थ्रेशर द्वारा

7. थ्रेशर का उपयोग करने से क्या लाभ हैं?

(अ) अनाज साफ निकलता है।

(ब) अनाज का नुकसान कम होता है।

(स) समय की बचत होती है।

(द) श्रम की बचत होती है।

8. आप थ्रेशर को प्रयोग में लाते समय किन बातों का ध्यान रखते हैं?

(अ) थ्रेशर के नट-बोल्ट पूरी तरह कसे हों।

(ब) थ्रेशर की लॉक सूखी व साफ करना चाहिए।

(स) थ्रेशर में लॉक लगाने वाले को कसे हुए कपड़े पहनना चाहिए।

9. क्या आप थ्रेशर को वायु के समानान्तर रखते हैं?

(अ) हाँ

(ब) नहीं

10. क्या आप अनाज इकट्ठा करने के लिए काम में आने वाली चद्दरों को पूरी तरह साफ करते हैं?

(अ) हाँ

(ब) नहीं

11. अनाज को ओसाने के लिए स्थान का चुनाव करते समय किन-किन बातों का ध्यान रखना चाहिए।

(अ) फर्श पक्का व समतल होना चाहिए

(ब) सफाई का पूरा ध्यान रखना चाहिए

(स) फर्श पर तिरपाल बिछाना चाहिए

(द) हवा तेज होनी चाहिए।

12. आप अनाज को किस विधि द्वारा सुखाते हैं?

(अ) धूप द्वारा

(ब) गर्म हवा द्वारा

13. क्या आप जानते हैं कि थ्रेसिंग के बाद अनाज को सुखाना चाहिए?

(अ) हाँ

(ब) नहीं

14. अनाज को सुखाते समय किन बातों का ध्यान रखना चाहिए।

(अ) अनाज को पलटना चाहिए।

(ब) सुखाने का स्थान साफ होना चाहिए।

(स) अनाज को पशु/पक्षियों से बचाना चाहिए।

(द) अनाज को सीधा धूप में रखना चाहिए।

15. क्या आप अनाज भण्डारण के तरीकों के बारे में जानते हैं?

(अ) हाँ

(ब) नहीं

16. क्या आप जानते हैं कि मिट्टी की कोठी की लिपाई के समय बी.एच.सी. या अन्य कीटरोधी को मिलाना चाहिए।

(अ) हाँ

(ब) नहीं

17. यदि बोरी में अनाज संग्रहित कर रखना हो, तो बोरी को कैसे रखना चाहिए?

(अ) सीलन वाले स्थान से दूर

(ब) सीधी धूप व हवा से बचाना

(स) जमीन से ऊपर व दीवार से दूर

(द) बोरी को पूरा भरकर आड़ी एक के ऊपर एक जमाते हुए रखना चाहिए

18. भण्डारण के समय किन-किन प्रमुख बातों का ध्यान रखना चाहिए?

(अ) अनाज को उचित नमी तक सुखाकर भरना चाहिए (8 से 10% तक नमी)

(ब) पुराने अनाज में नया अनाज नहीं मिलाना चाहिए।

(स) अनाज को सीधे धूप से लाकर कोठी में नहीं भरना चाहिए

(द) अनाज को धूप से छाया में रखकर तापमान कम करके भण्डारण करना चाहिए।

19. क्या आप जानती हैं कि अनाज को साफ बोरियों में भरना चाहिए?

(अ) हाँ

(ब) नहीं

20. भण्डारण के समय अनाज में नमी का प्रतिशत कितना होना चाहिए?

(अ) 10 प्रतिशत तक

(ब) जानकारी नहीं

21. अनाज को सुरक्षित भण्डारण के लिए क्या काम में लेते हैं?

(अ) नीम की पत्तियाँ

(ब) राख

(स) प्लास्टिक के कट्टों में बन्द करके

(द) अन्य

22. घरों में चूहों को नियन्त्रित करने के लिए कौनसे तरीके है?

(अ) पिंजरे का उपयोग करके

(ब) परभक्षी (झाऊ, चूहा, कुत्ता, बिल्ली)

(स) ध्वनि का उपयोग करके

(द) रेड-पॉयजन या अन्य चूहारोधी विष को उपयोग करके

23. क्या आप जानते हैं कि लोहे की टंकियों से कीटों व नमी का प्रकोप कम होता है?

(अ) हाँ

(ब) नहीं

24. क्या आप अनाज ढुलाई करने से पहले ट्रेक्टर, बैलगाड़ी, ऊँटगाड़ी को पूरी तरह साफ करते हैं?

(अ) हाँ

(ब) नहीं

25. क्या आपको फसल बोने से पहले उसके समर्थन मूल्य की जानकारी रहती है?

(अ) हाँ

(ब) नहीं

26. अनाज को बेचते समय किन-किन बातों का ध्यान रखना चाहिए?

(अ) सही नाप-तौल का

(ब) सरकार द्वारा नियत बाजार में बेचना

(स) साफ व श्रेणीकरण कर अनाज को बेचना

(द) मध्यस्थ का उपयोग नहीं करना

(य) ठीक मूल्य प्राप्ति हेतु उचित समय का निर्णय लेना।

27. श्रेणीकरण किस प्रकार किया जाता है?

(अ) किस्म के आधार पर

(ब) बाहरी आकार के आधार पर

(स) गुणवत्ता के आधार पर

28. अनाज को बेचने के कौन-कौन से तरीके हैं?

(अ) खुली बोली

(ब) सीधा आढ़तियों को

(स) थोक व्यापारियों को

(द) अन्य

Annexure – IV (a)

Response Sheet

Visual Perception

Scene No.	Visuals	Identified		Other responses
		Yes	No	
2.	❖ Lush Green field			
	❖ Heap of wheat			
	❖ People eat wheat chapatti			
	❖ Low production of wheat			
	❖ Combine			
3.	❖ Harvesting of wheat by sickle			
	❖ Threshing of the wheat by women			
	❖ Winnowing of the wheat			
	❖ Drying the wheat in sunlight			
	❖ Storage of wheat			
	❖ Carrying the gunny bags of wheat			
	❖ Wastage of wheat			
	❖ Clean wheat			
4.	❖ Mature grain crops			
	❖ Grain crop rubbing by hand			
	❖ Harvest the crop by sickle			

Scene No.	Visuals	Identified		Other responses
		Yes	No	
5.	❖ Making bundle of wheat after harvesting of wheat crop			
	❖ Drying the bundle in sunlight			
6.	❖ Combine rotating from left to right			
	❖ Harvesting by the combine			
	❖ Making the edge of knife			
	❖ Clean the machine			
	❖ Tightening the net and bolt			
	❖ Greasing the combines part			
	❖ Grain and bundle both come out through machine			
7.	❖ Heap of grains crop			
	❖ Threshing by wooden stick			
8.	❖ Threshing by bullock cart			
	❖ Separated grain crops			
	❖ Wastage of grains			

Scene No.	Visuals	Identified		Other responses
		Yes	No	
9.	❖ Using the thresher by women			
	❖ Separation of grain by thresher			
	❖ Big poly sheet			
	❖ Washing the poly sheet			
	❖ Drying the poly sheet in sunlight			
	❖ Collection the grain on the dried poly sheet			
	❖ Tightening the nut and bolt of the thresher			
	❖ Clean the straw from thresher. Using the thresher by women			
10.	❖ Beating the grain crop by the women			
	❖ Threshing the grain by the animals			
	❖ Wastage of grains			
	❖ Winnowing by grain fork			
	❖ Straw is gathered on Distance			
	❖ Fodder is fed by animals			
	❖ Winnowing the grain by women with the help of basket			
	❖ Picking up the straw by women. Cleaned grain			

Scene No.	Visuals	Identified		Other responses
		Yes	No	
11.	❖ Drying the grain in sunlight			
	❖ Protecting the grain from birds			
	❖ Keep the grain in the shady place			
	❖ Clean gunny bags			
	❖ Infected grains			
12.	❖ Plastering the old storage floor by kneaded mud			
	❖ Mixing the B.H.C. in kneaded mud for plastering			
	❖ Plastering the big clay pot			
	❖ Drying the clay pot in sunlight			
	❖ Plastering the *pucca* storage			
13.	❖ Keep the gunny bags on the timber slabes			
	❖ Grains are eaten by rats			
	❖ Grains are polluted by rats			
	❖ Women using rat poison for protecting grains from rat			
	❖ Grain of insects. Women applying insect killer for preventing insect			

Scene No.	Visuals	Identified		Other responses
		Yes	No	
14.	❖ Keep the grain in iron tin			
	❖ Sun drying of grain			
	❖ Women plucking *neem* leaves			
	❖ Shadow drying of *neem* leaves			
	❖ Keep *neem* leaves in grains			
15.	❖ Cleaning the tractor			
	❖ Clean the bull cart			
16.	❖ Cleaning the grain by broom			
	❖ Grain gunny bags			
	❖ Beating the grain			
17.	❖ Truck filled with grains			
	❖ Different products of wheat			
	❖ Thresher and combine			
	❖ Clean grain and women counting the money			
	❖ Grain heap with money			

Annexure – IV (b)

Response Sheet

Visual Perception

Scene No.	Visuals	Scores
2.	❖ Lush Green field	1
	❖ Heap of wheat	1
	❖ People eat wheat chapatti	1
	❖ Low production of wheat	1
	❖ Combine	1
3.	❖ Harvesting of wheat by sickle	1
	❖ Threshing of the wheat by women	1
	❖ Winnowing of the wheat	1
	❖ Drying the wheat in sunlight	1
	❖ Storage of wheat	1
	❖ Carrying the gunny bags of wheat	1
	❖ Wastage of wheat	1
	❖ Clean wheat	1
4.	❖ Mature grain crops	1
	❖ Grain crop rubbing by hand	1
	❖ Harvest the crop by sickle	1

Scene No.	Visuals	Scores
5.	❖ Making bundle of wheat after harvesting of wheat crop	1
	❖ Drying the bundle in sunlight	1
6.	❖ Combine rotating from left to right	1
	❖ Harvesting by the combine	1
	❖ Making the edge of knife	1
	❖ Clean the machine	1
	❖ Tightening the net and bolt	1
	❖ Greasing the combines part	1
	❖ Grain and bundle both come out through machine	1
7.	❖ Heap of grains crop	1
	❖ Threshing by wooden stick	1
8.	❖ Threshing by bullock cart	1
	❖ Separated grain crops	1
	❖ Wastage of grains	1

Scene No.	Visuals	Scores
9.	❖ Using the thresher by women	1
	❖ Separation of grain by thresher	1
	❖ Big poly sheet	1
	❖ Washing the poly sheet	1
	❖ Drying the poly sheet in sunlight	1
	❖ Collection the grain on the dried poly sheet	1
	❖ Tightening the nut and bolt of the thresher	1
	❖ Clean the straw from thresher. Using the thresher by women	1
10.	❖ Beating the grain crop by the women	1
	❖ Threshing the grain by the animals	1
	❖ Wastage of grains	1
	❖ Winnowing by grain fork	1
	❖ Straw is gathered on Distance	1
	❖ Fodder is fed by animals	1
	❖ Winnowing the grain by women with the help of basket	1
	❖ Picking up the straw by women. Cleaned grain	1

Scene No.	Visuals	Scores
11.	❖ Drying the grain in sunlight	1
	❖ Protecting the grain from birds	1
	❖ Keep the grain in the shady place	1
	❖ Clean gunny bags	1
	❖ Infected grains	1
12.	❖ Plastering the old storage floor by kneaded mud	1
	❖ Mixing the B.H.C. in kneaded mud for plastering	1
	❖ Plastering the big clay pot	1
	❖ Drying the clay pot in sunlight	1
	❖ Plastering the *pucca* storage	1
13.	❖ Keep the gunny bags on the timber slabes	1
	❖ Grains are eaten by rats	1
	❖ Grains are polluted by rats	1
	❖ Women using rat poison for protecting grains from rat	1
	❖ Grain of insects. Women applying insect killer for preventing insect	1

Scene No.	Visuals	Scores
14.	❖ Keep the grain in iron tin	1
	❖ Sun drying of grain	1
	❖ Women plucking *neem* leaves	1
	❖ Shadow drying of *neem* leaves	1
	❖ Keep *neem* leaves in grains	1
15.	❖ Cleaning the tractor	1
	❖ Clean the bull cart	1
16.	❖ Cleaning the grain by broom	1
	❖ Grain gunny bags	1
	❖ Beating the grain	1
17.	❖ Truck filled with grains	1
	❖ Different products of wheat	1
	❖ Thresher and combine	1
	❖ Clean grain and women counting the money	1
	❖ Grain heap with money	1

Annexure –V (a)

Response Sheet

Visual comprehension

Scene No.	Message	Identified		Other responses
		Yes	No	
2.	❖ Farm women can get good crop production by hard work			
	❖ Wheat is the important crop of India			
	❖ Lack of knowledge regarding post harvest technology leads to less production			
	❖ Adoption of post-harvest technology for large production			
3.	❖ More quantities of crops are lost due to cutting, threshing, winnowing, drying, storage and marketing			
	❖ One should take care of cutting to marketing of crops			
4.	❖ After maturation of crop cutting should take place			
5.	❖ During cutting bundles are being made			
	❖ To protect from strong wind tie the bundle properly			
	❖ Dry the bundle properly in sunlight			

Scene No.	Message	Identified		Other responses
		Yes	No	
6.	❖ Use combine for saving time			
	❖ Sharp the edges of knife			
	❖ Clan the knife bar			
	❖ Grease the parts of machine			
7.	❖ Threshing by wooden stick			
8.	❖ Threshing by camel cart			
	❖ Wastage of grain by threshing with wooden stick and camel cart			
	❖ Use threshing for good grain production			
9.	❖ Threshing is time saving process			
	❖ Thresher separates both straw and grains			
	❖ For collecting grains use clean poly sheets			
	❖ Wash and Dry the poly sheets in sunlight			
	❖ In clean poly sheet there is no chance to spoilage the grains			
	❖ Tight the nut and bolt of thresher properly before use			
	❖ Clean the straw of thresher			
	❖ Wear tight fitted cloth while using thresher			

Scene No.	Message	Identified		Other responses
		Yes	No	
10.	❖ Threshing by wooden sticks and camel cart lead to straw and stone in grains			
	❖ Winnowing of grains by fork according to direction of wind			
	❖ Use of basket for winnowing grains. Clean the straw by hand			
11.	❖ Before storage of grain dry it in sun light			
	❖ Protect the grains from birds			
	❖ Keep the grains in gunny bags after cooling the hot grains			
	❖ Storage of hot grains lead to spoilage of grains			
	❖ Use clean gunny bags for storage			
12.	❖ Plastering the old storage floor by kneaded mud and mix B.H.C. also for protecting grain from insects			
	❖ Plastering the big clay pot			
	❖ Plastering the *pucca* storage with Endosulphan dust			

Scene No.	Message	Identified		Other responses
		Yes	No	
13.	❖ Keep the gunny bags of grains on timber slides for preventing from damping slades			
	❖ Use not poison			
	❖ Use E.D.P. Emfual (Insect killer) for protecting the grains from insects			
14.	❖ Use iron tins for storage			
	❖ Dry the grains stored in iron tin			
	❖ Use *neem* leaves for protecting the grains from insects			
	❖ Use dry *neem* leaves			
15.	❖ Clean the tractor, camel cart, bullock cart before transportation			
16.	❖ Before selling of grains clean it properly			
	❖ Sell it after knowing the price of grains			
17.	❖ Various items are prepared from wheat			
	❖ Distribution of grains in every parts of the country			
	❖ Due to complete knowledge of post-harvest technology of food grains. Farm women can get good profit and production			

Annexure –V (b)

Response Sheet

Visual comprehension

Scene No.	Message	Scores
2.	❖ Farm women can get good crop production by hard work	1
	❖ Wheat is the important crop of India	1
	❖ Lack of knowledge regarding post harvest technology leads to less production	1
	❖ Adoption of post-harvest technology for large production	1
3.	❖ More quantities of crops are lost due to cutting, threshing, winnowing, drying, storage and marketing	1
	❖ One should take care of cutting to marketing of crops	1
4.	❖ After maturation of crop cutting should take place	1
5.	❖ During cutting bundles are being made	1
	❖ To protect from strong wind tie the bundle properly	1
	❖ Dry the bundle properly in sunlight	1

Scene No.	Message	Scores
6.	❖ Use combine for saving time	1
	❖ Sharp the edges of knife	1
	❖ Clan the knife bar	1
	❖ Grease the parts of machine	1
7.	❖ Threshing by wooden stick	1
8.	❖ Threshing by camel cart	1
	❖ Wastage of grain by threshing with wooden stick and camel cart	1
	❖ Use threshing for good grain production	1
9.	❖ Threshing is time saving process	1
	❖ Thresher separates both straw and grains	1
	❖ For collecting grains use clean poly sheets	1
	❖ Wash and Dry the poly sheets in sunlight	1
	❖ In clean poly sheet there is no chance to spoilage the grains	1
	❖ Tight the nut and bolt of thresher properly before use	1
	❖ Clean the straw of thresher	1
	❖ Wear tight fitted cloth while using thresher	1

Scene No.	Message	Scores
10.	❖ Threshing by wooden sticks and camel cart lead to straw and stone in grains	1
	❖ Winnowing of grains by fork according to direction of wind	1
	❖ Use of basket for winnowing grains. Clean the straw by hand	1
11.	❖ Before storage of grain dry it in sun light	1
	❖ Protect the grains from birds	1
	❖ Keep the grains in gunny bags after cooling the hot grains	1
	❖ Storage of hot grains lead to spoilage of grains	1
	❖ Use clean gunny bags for storage	1
12.	❖ Plastering the old storage floor by kneaded mud and mix B.H.C. also for protecting grain from insects	1
	❖ Plastering the big clay pot	1
	❖ Plastering the *pucca* storage with Endosulphan dust	1

Scene No.	Message	Scores
13.	❖ Keep the gunny bags of grains on timber slides for preventing from damping slades	1
	❖ Use not poison	1
	❖ Use E.D.P. Emfual (Insect killer) for protecting the grains from insects	1
14.	❖ Use iron tins for storage	1
	❖ Dry the grains stored in iron tin	1
	❖ Use *neem* leaves for protecting the grains from insects	1
	❖ Use dry *neem* leaves	1
15.	❖ Clean the tractor, camel cart, bullock cart before transportation	1
16.	❖ Before selling of grains clean it properly	1
	❖ Sell it after knowing the price of grains	1
17.	❖ Various items are prepared from wheat	1
	❖ Distribution of grains in every parts of the country	1
	❖ Due to complete knowledge of post-harvest technology of food grains. Farm women can get good profit and production	1

❑❑❑