

**DEVELOPMENT AND STANDARDIZATION OF MEDIA
PACKAGE ON ANIMAL HUSBANDRY PRACTICES FOR
RURAL WOMEN OF HARYANA**

By

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DEDICATED TO

**My Beloving Husband
Sunil Kumar Jain
&
Adorable Daughter
Ujjwala**

CERTIFICATE-I

This is to certify that this dissertation entitled, “**Development and standardization of media package on animal husbandry practices for rural women of Haryana**” submitted for the degree of **Doctor of Philosophy** in the subject of **Home Science Extension Education** to Chaudhary Charan Singh Haryana Agricultural University, Hisar, is a bonafide research work carried out by **Ms. Vinita Jain** under my supervision and guidance and that no part of this dissertation has been submitted for any other degree.

The assistance and help received during the course of investigation have been fully acknowledged.

Dr. (Mrs.) Shashi Kanta Varma
Major Advisor
Professor and Head
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CERTIFICATE-II

This is to certify that this dissertation entitled, “**Development and standardization of media package on animal husbandry practices for rural women of Haryana**” submitted by **Ms. Vinita Jain** to Chaudhary Charan Singh Haryana Agricultural University, Hisar, in partial fulfillment of the requirements for the degree of **Doctor of Philosophy**, in the subject of **Home Science Extension Education** has been approved by the student’s Advisory Committee after an oral examination on the same with collaboration of External Examiner.

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INTRODUCTION

1. INTRODUCTION

India ranks first with a total of 204 million cattle, which is 50 per cent of Asian and 16 per cent of the world's total cattle population (Mudgal, 2001). India also stands number one in milk production with the production of 81.0 million tones in the year 2000-2001. The contribution of milk group alone was more than Rs. 90,358 crore rupees (Ghosh, 2002).

India possess about 80 per cent of all the buffalo population and Haryana, a state of North India is a homeland for the best milch breed of buffalo "Murrah" in the world. In rural areas, a large number of families keep cows and buffaloes especially for milk, draught power and dung. Livestock is treated as a status symbol and wealth and therefore all possible efforts are made to look after the animals in the best possible manner.

Rural women in India, are closely linked and involved in livestock management. There are considerable evidence to show that livestock and management related activities continue to be pre-dominantly rural women's responsibility and domain (Gandhi *et al.*, 1986, Thakur, 1988, Jain, 1991, Sethi, 1993).

On an average a woman devotes 3.5 hours per day for animal husbandry activities against only 1.6 hours per day devoted by man (Varma, 1989).

Whereas Manjusha (1990) found that in Haryana on an average rural women spent 3 hours 26 minutes in dairy farming.

An important factor contributing to low productivity is the lack of scientific knowledge and low adoption of recommended practices especially by women who despite looking after animals remain aloof from most trainings and allied extension activities.

Women have low level of knowledge regarding modern animal husbandry practices. Varma (1989) reported that overall knowledge mean scores of women towards modern animal husbandry practices, breeding, feeding and cattle care was found to be lower than men irrespective of socio-economic status.

The 'silent majority' of the world's poor are women. They face peculiar social, cultural, educational, political and allied problems. Studies have shown that although rural women produce up to 80 per cent of food in developing countries, yet they have title to only a fraction of farm land and access to ten percent of credit and five per cent of extension advice (Agarwal, 2003). Women's average contribution in overall farm production is 55-66% of the total labour. Taking the economy as a whole, women perform two-thirds of the work, but earn only one-tenth of the income. In dairying 75 million women are engaged as against 15 million men, while in animal husbandry the ratio is 25 million to 1.5 million. In almost all societies women have less power than man,

have less control over resources and receive less for their work. They remain as an 'invisible' work force. Inevitably, all this affect women's capacity to open up, grow, develop, exceed and excel.

Hence, it is utmost important to educate and empower women, so as to have control over the circumstances of their lives. It includes both control over resources and ideology, greater self-confidence and an inner transformation of one's consciousness that enables one to overcome external affairs. Empowerment of women is critical not only for their own welfare but also for the very development of the country. The single most resource that empower women is knowledge and this knowledge can be passed to them through different means of communication.

Media in the modern world are a force to reckon with. No task in the world of today can be accomplished successfully and adequately without media support. Therefore, an active role of media in development of human beings in national, regional or international spheres has to be endowed and fully acknowledged. The task of the media in development is two fold : to help remove illiteracy, fatalism, enlarge aspirations, increase and enhance social status; and secondly, to lead to overall national progress and prosperity. All other allied tasks are by-products of media inputs and media consumption. More the media inputs and greater the media consumption by masses, increased will be the welfare of the nation and happiness and knowledge of the people.

The world is now witnessing an information revolution. Information is power. Interchange of information or thoughts brings about mutual co-operation and progress. No organization or society can exist without information support. The communication media including new information technologies play a vital role in bringing about planned national development. The mass media services are based on the idea of mass production and mass distribution of messages through various channels. Communication flow plants the seeds of progress in the minds of the people.

Access to information and improved communication is a crucial requirement for sustainable agricultural development. Modern information and communication technologies including the internet, if adopted to the specific conditions of rural areas can help to improve knowledge and skill. It is being said that “cyber extension” would be the major form of technology dissemination in the near future. Improved communication and information access is directly related to social and economic development. The internet is emerging as a tool with potential to contribute to rural development.

It is observed that the rural population still have difficulty in accessing crucial information in forms they can understand in order to make timely decision. There is a concern that the gap between the information rich and information poor is getting wider. New information and communication technologies are generating possibility to solve the problems of rural poverty,

inequality and giving an opportunity to bridge the gap between the information rich and information poor and support sustainable development in rural and agricultural communities.

The media is playing an important role in passing on meaningful information at faster rate to the large number of farm women in our country. It has emerged as one of the powerful sources of seeking relevant scientific information by our farm women, therefore, tapping and utilizing media for transferring the newly generated technologies in agriculture and animal husbandry among the Indian farm women is crucial and of significant importance. This is mainly due to the facts that the vast majority of our farm women inhabiting in remote rural areas where facilities could not be arranged for sustainable individual or group approaches of technology transfer as it could be highly expensive and difficult in managing information infrastructure, therefore, responsibility and intervention of media in rural transformation is becoming more imperative and challenging. Undoubtedly, contribution of media in crop enterprise is noteworthy but relatively little efforts have been made to disseminate the scientific know-how amongst the livestock owners. With the technological break through in animal husbandry, too much know-how is now available which need to be transferred to the users to cope up with a pace of progress and time.

Empowerment of women in animal husbandry has been envisaged in terms of upgradation of awareness, knowledge, skill development based on local needs and resources through media exposure. Women are full of strength and responsibility, yet they are least equipped with skills and modern scientific knowledge regarding animal husbandry practices. Therefore, the present study was planned to develop the relevant media package to strengthen the technical know-how of rural women on animal husbandry messages and sensitize them for self-reliance. Present study was undertaken with the following specific objectives :

1. To assess information/media needs of the farm women regarding animal husbandry practices.
2. To develop and standardize media package on need based messages on animal husbandry practices.
3. To study the impact of media package on rural women for its effectiveness.

Scope of the study

1. The media prepared can be used as a handy reference by home scientists/extension workers of KVK's for making their training and learning programme more effective and meaningful.
2. The findings of the study would act as a base for working out effectiveness and standardizing other educational media.

3. Present investigation would provide adequate and exhaustive information on selected animal husbandry messages for rural women/field functionaries in Haryana state. The identified messages would also assist the home scientists, animal science field functionaries, planners, educational institutions, policy makers, rural fabricators and developmental workers engaged in the area of animal husbandry to plan strategic programmes.
4. The study would form a sound base for initiating similar research endeavours in a systematized manner.

Limitations of the study

1. The present study is being undertaken as a student research programme and hence it has a natural limitation of resources, particularly time and money.
2. The domain of study is confined to two media and five messages only.
3. The media were standardized only in four districts of Haryana state because of limited time but it can also be standardized covering the respondents of other states.

However, proper care and considerate thought have been exercised in making the study as empirical and systematic as possible.



REVIEW OF LITERATURE

2. REVIEW OF LITERATURE

A comprehensive review of past studies is necessary in any research endeavour. Besides reviewing the previous work in the fields related to this study the cited review of literature are to provide base for developing a frame work, provide insight into methodology and suggest operational definitions of concepts and finally to work out a basis for interpretation of findings.

Thus, a brief resume of past researches, relevant to the present study have been incorporated in this chapter. The pertinent literature on various aspects has been reviewed under the following sub-heads :

- 2.1 Need of rural women regarding animal husbandry practices
- 2.2 Impact of media package
 - 2.2.1 Print media
 - 2.2.2 Video cassette
 - 2.2.3 Internet/multimedia/compact disc (CD)
- 2.3 Standardization of media package

2.1 Need of rural women regarding animal husbandry practices

To tone-up the utilization of human resources for management and development of agriculture and allied activities, it is necessary to modernize the farm women outlook regarding new technology in agriculture and animal husbandry. Therefore, the relevant technical know-how should be imparted to the farm women in their own situations through the practical training. No training would bring desirable changes in the behaviour of farm women unless it is need and interest based. Therefore, the following reviews have been collected to assess the need of farm women. Different workers have emphasized the training needs of farm women in different aspects of dairying.

Manjusha (1990) estimated that majority of the rural women perceived balanced feeding and production of clean milk as important technologies for rural women.

Farooqui *et al.* (1992) emphasized that need assessment of farm women for training in respect of specific areas is most crucial. They also found that 84.3 per cent of farm women were interested to have training in case of crossbred and milch animals.

Ingole *et al.* (1993) found that 78.33 per cent of respondents expressed need for training in animal related activities. Out of them 68.34 per cent respondents suggested to have training in summer and majority of them needed training in animal health and disease control, animal care and management,

animal breeding and feeding. Whereas Sheela and Swamy (1993) revealed that majority of respondents perceived feeding of milch animals (69.86%), symptoms of pregnancy (57%), feeding of pregnant animals (45%) and health care (44%) as most needed areas of training.

Shreeshailaja and Veebhadhaiah (1993) indicated that the preferred areas of training were health care of animals (29%), balanced feeding (28%), care of pregnant animals (15%) and disease diagnosis (13%) with 87 per cent preferring peripatolic to institution training.

Omprakash and Kherde (1994) studied the training needs of women working in dairy farming indicated that the most perceived needs were in health care practices (78.57%) and breeding (67.14%). Local training programmes were preferred (54.2%) which were not dependent on minimum literacy level.

Fulzele and Meena (1995) reported that the training needs for breeding, feeding, management, health care and fodder production were recorded. Overall training requirements of women (72.5%) were in the most-needed category. The areas which required the most training were selection of breeds and knowledge of balanced feeding, castration of calves and bulls, deworming of young stock, vaccination and fodder production and their variety, artificial insemination, feeding, care of pregnant animals, disease prevention, time and method of sowing crops etc.

Nikam and Rajmane (1995) revealed that tribal farmers training need on dairy management practices should mainly focus on most essential aspects such as common disease and treatment, cattle housing and cleaning, marketing of milk, veterinary first aid and animal selection, health care and management, cattle breeding, cattle feeding, crop rotation and fodder production etc.

Prakash *et al.* (1995) studied that training needs of landless women working in dairy farming and found that the most perceived need were health care practices (82.5%), breeding (70.3%) and feeding (62%) of animals.

Sailaja and Reddy (1996) noted that farm women identified area of training as cultivation of fodder crops, feeding of young stock, management breeding and health and sanitation. The order of preference for training in skill was management, breeding, cultivation of fodder crop, feeding, health and sanitation. While Malik (1997) concluded that improved livestock farming required control of disease, improved nutrition, improved management and breeding.

Pandey and Bijubala Devi (2000) observed training of women in animal husbandry was found to be a totally neglected aspect. In spite of the key role performed by women in animal husbandry, no female was ever included in training related to animal husbandry in Haryana.

Prasad and Govind (2001) reported that selection of good breeds (2.72) was being chosen as 'most needed' area for training under dairy. Selection of

suitable and highly production breed was also an important need followed by disease prevention.

Singh *et al.* (2001) revealed that for cattle management, health care of animals (2.88), milking of milch animals (2.86) and enriching the nutrient content of fodder (2.79) have been found the most needed area of training.

It can be concluded that need assessment of farm women for training in respect of specific areas of animal husbandry is most crucial. Rural women need training in areas viz., balanced feeding, clean milk production, health care of animals, care of pregnant animals, disease diagnosis and their prevention, breeding and artificial insemination.

2.2 Impact of media package

Media have contributed tremendously in changing nations and societies. In spite of inequalities in our society, revolutionary changes have taken place. Our farm women are sufficiently awakened about their farming operations which are being affected by media inputs. In fact, Indian agriculture is the living proof of excellent progress by intimate media support. No task can be accomplished successfully and adequately without media support. Some reviews related with impact of media have been presented below :

2.2.1 Print media

Mass media assume very important responsibilities. Mass media have been termed as hidden-persuades which selectively reflect social reality and

thereby create a reality in the minds of audience. Among the mass media print media occupy a key position, being the cheapest and also very reliable medium. It also has the unique value of preservation. Print media is one of the most suitable channels for communicating information as people still believe in written communication and it can be stored and referred again. The popular belief that only literate have access to the print media has been disapproved by the researcher. There is a growing evidence that even illiterate can be reached through print media via the dependency literacy route (Roger, 1963).

Use of print media is of greater advantage in the agricultural sector because of reliable and scientific information in simple language, on a specific topic and generally illustrated with picture and can reach a large number of farmers quickly and simultaneously (Nataraju, 1996).

Krishan Kumar (1990) reported that regular readers of 'farm page' having favourable attitude towards print media.

Gajre *et al.* (1991) found that media mix combination i.e. video show plus printed material and video show plus slide treatments were ranked first and second respectively for transfer of technology.

Nataraju and Perumal (1995) reported that although electronic media carries more immediate weight on focusing attention on various issues, it is print media which had more persistent and lasting effect. Print medium is potent means of communication of information to the masses and possesses the

potentialities of communicating information to a large number of people quickly at the same time.

Mishra and Verma (1996) concluded that print media messages should present the information in such a way that it could be pliable educative to the masses. Influence persuasion effect system, thus need to be generated through print media.

Saini and Kaur (1996) found that the information provided in the magazine was understandable. It was further found that 85.71 per cent of the respondents considered the information relevant for them.

Vasan and Trikha (1996) studied the effectiveness of a leading national farm magazine and concluded that 66.67 per cent of the readers perceived the magazine to be effective and the content components relevancy of the message to the region and the format components (title of the articles, aspects related to pages, letter size and column arrangement) were perceived as satisfactory.

Shourie (1997) concluded that the print medium is uniquely placed and oriented as a communicator because of its ability to reach specific audience.

Arneja and Singh (1998) indicated that information carried by the magazine enjoyed highest degree of worthiness among majority of the respondents.

Barmon and Gogoi (1999) concluded that the farm page communicate the message to the farmers in time. Regarding applicability 54.67 per cent respondents found that the contents were more relevant to them.

Rangi (2000) revealed that effectiveness of support material developed and standardized for dairy functionaries was found to be effective in terms of readability and understandability.

Dub (2003) found that majority of the respondents expressed opinion that language of all newspaper was easy. The news was found to be reasonably interesting and somewhat useful. News was of appropriate length and was timely also.

Verma (2003) found that after imparting the knowledge through various visual/printed material such as posters, chart, leaflets and booklet, a significant gain in knowledge was found.

Chaudhary (2004) developed visual/print media for pre-school children and reported that all the media were assessed high in terms of all the parameters i.e. understanding of the title, clarity of printing, size of font, appropriateness of language, sequence, usefulness of information, appropriateness, clarity of picture, colour combination folds and understandability by more than 75 per cent of judges.

Therefore, it could be rightly said that the unique advantage of print media in the total communication system is that publications allow the readers

to control the occasion, the pace and the direction of change. Publications produce superior retention of complex factual material as compared to oral presentation. They also force the reader to participate more effectively and creatively. Print media are considered to be the most powerful channel of communication pouring useful information in every field including agriculture and animal husbandry.

2.2.2 Video

Video with its unique quality of audio-visual recording, ease in handling and instant feedback serves as an effective tool in rural extension work, it can be used effectively to assure two way interaction in a variety of context. Video possess several advantages over other media. The first advantage is its attractiveness, images are often remembered long last than verbal messages and more attention seeking. Secondly “one picture is worth of thousand words” (Philip *et al.*, 1999). Thirdly, there is the entertainment/educating feature. Video tape can be played over and over again. Can keeps its record and having documentation potential. Finally, the activities are also participatory during the video playback sessions every one that is involved in the process has the opportunity to make individual contributors. Various studies related to the importance of video has been given below :

Alishan (1985) stated that video as a training tool has increased the flow of information directly to the farmers. It captures the attention of the audience

specially when the problem and the alternative are specific to the region. Video enhances training by visualizing a verbal message with motion, colour and in standardized form.

Venkateshwarlu (1985) pointed out that the video cassettes have a great future as they can offer a tremendous diversity of programmes. Growth of video in India shows that viewers find something of value that is not presently available over the All India Radio.

Aggarwal (1987) studied that use of video provide flexibility, learning at convenience at a pace by the learner.

Reddy and Rani (1987) reported that many experiments were conducted to use video as an educational tool and results were quite impressive. Further it was added that video technology which has high potentiality needs to be harnessed fully by the extension agencies for agricultural development in particular.

Bessette and Tighe (1988) reported that video can successfully be used for consolidation during the learning process, to present the subject of the training exercise, to demonstrate visually abstract ideas, to show how the skills acquired can be applied to different stages of learning.

Singh (1988) reported that video technology play an important role in agricultural development. These cassettes can be used to impart training to the

personnel attached to the agricultural institutions. To make it more meaningful need and interest based topics should be selected for the purpose.

Singh and Kumar (1988) suggested that video technology presents numerous possibilities for alternative usage, to help in education, strengthen neighbourhood groups, communities, serve cultural and other minorities.

Akhileshwari (1990) opined that video is another new medium. It has challenged the supremacy of TV both as a teacher and as a medium of education. Some industrial houses like voltas and Glaxo have been dispensed with their in-house magazine and switched over to video magazines since they make greater impact.

Ramesh (1989) revealed that audio-visual medium would be an ideal and effective way to inform the masses rather than other mass media channels.

Mukhopadhyay (1989) observed that very often communication for development aims at directing and controlling the activities of the target communities. Video, however, is an instrument of information and communication designed to enable communities to take their own decisions with regard to development, according to their own need and to promote dialogue and the exchange of experiences.

Kanupriya (1990) concluded that video was effective for post-exposure gain-in knowledge. However, at retention stage, the level of retained knowledge

can be enhanced by having group discussion after the video exposure or followed by other such methods.

Verma (1990) concluded that video was effective for imparting knowledge, while the level of knowledge can be enhanced by having group discussion after the video exposure, or followed by distribution of leaflets and pamphlets for ever lasting impact.

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.

Sauquet (1993) found video as a communication tool for creating awareness and aiding social organization. In Brazil the use of video has shown encouraging results and it should be exploited more frequently together with conventional means such as written word, slides, radio and film for economic development of rural masses.

Sethi (1993) revealed that video as medium for dissemination of animal rearing practices to rural women is very effective and further recommended that the state government/agricultural universities need to provide training funds to the field functionaries for use of media facilities for exposure to the rural masses.

Kumar (1995) opined that video make a positive dent in the present era of development efforts. Specific programmes for the identified target groups can be shown to motivate and arouse interest among them.

Hariharam and Rao (1996) revealed that by supplementing class-room teaching with audio-visual aids and multimedia would enhance quality of education.

Killough and Abbass (1996) indicated that in the Philippines, worried about cultural loss as youth become westernized, elders used participatory video to record and achieve indigenous knowledge. Within the rehabilitation community, participatory video could be used, for example, to document a rich history of advocacy or the growing self-advocacy of movement.

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

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.

Campbell (1998) found that video acts as a discussion promotor and training tool. Development of a video based training package was helpful in addressing problems for extension workers in Kenya.

Huber (1998) used portable video to capture concerns about local issues and provide opportunities for dialogue and problem solving that eventually resulted in co-operative community development. The subsequent formation of a fishery co-operative and the decreased unemployment rate on Fogo Island has been attributed to this particular use of video.

Rodriguez (1998) found that participatory video as a tool for peace in violent contexts. Though he reported that Canada is not war-torn, but people with developmental disabilities are vulnerable to violence.

Singh *et al.* (1999) revealed that there were lack of adequate facilities for audio-visual aids (100%) and literature at village level to maintain up to date knowledge regarding recent dairy farming technologies. All extension personnel were facing lot of problems regarding dissemination of improved dairy farming practices.

Okahashi (2000) found that participatory 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.

Yoon (2001) concluded that new technology, such as small format videos, have been used successfully. The most famous is the “Fogo process” where video is used as a “mirror” to reflect the issues and aspirations of people living in isolated communities. The people take an active part in planning and executing the production of a video of themselves.

Sharma (2003) conducted a study of development and effectiveness of video cassette 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.

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.

Therefore, it can be concluded from the above studies that video can be effectively used in the present era of rural development efforts. Specific programmes for the identified target group can be shown to motivate and arouse the interest of the beneficiaries. Videotapes are seen as an ideal medium to promote motivation, attitudinal change, behaviour reinforcement, community participation and entertainment. Using video as a training tool has increased the flow of information directly to the farm women. It captures the attentions of the audience specially when the problems and solutions/alternatives are shown.

2.2.3 Internet

The term internet has been coined from two terms, inter connection and network. A network is simply a group of computers that are connected together for sharing information and resources. Several such networks have been joined together across the world to form what is called as the internet thus, it is network of networks.

Negroponte (1995) revealed that world wide web is a powerful tool for collaboration and participation. At the same time, interactive multimedia application are redefining publishing and “reading”.

Anonymous (1996) highlighted that internet was by product of cold war when networks of computers were set up by military to ensure that communication did not break down in the event of war.

Karnik (1996) remarked that the development of low cost ‘network computers’ will make it possible for many households to have access to internet.

Richardson (1996) found that the internet is relatively cheap, powerful, decentralized and potentially an ideal platform to build a flexible and powerful environment for sharing and learning. The internet is the first communication tool that allows every user to be a sender, receiver, narrow caster and broadcaster in a global sphere.

Huber (1997) reported that the internet reached 50 million people in just 4 years. In comparison it took 38 years for radio and 14 years for TV to reach the number of target audience.

Mayadas (1997) emphasized advantages of internet courses first, it allows for constant personal interaction between the learner and instructor. Second, it allows much greater time flexibility than a televised real time instruction where learners must meet at a designated facility for scheduled instruction. Finally, it expands resource opportunities through access to the world wide web and the potential to communicate with specialists through out the world.

Owston (1997) highlighted that no other educational technology has been captured the imagination and interests of so many educators around the world simultaneously than world wide web. Similar results are reported by Gilbert (1996).

Siva Kumar (1997) reported that Agricultural Marketing Board has initiated activities to build a marketing information, systems 'AGRI MARKET' by using internet for providing international and domestic market information and agricultural commodities to farmers.

Aggarwal (1998) reported that the introduction of micro computers along with versatile and easy to use applications software and the availability of

electronic input and resources have made computer technology useful to students, teachers and teacher educators.

Robert and Plank (1998) reported the internet approach to instruction had tremendous potential for training county extension agents. They further revealed that internet training eliminates the need to travel to another location in a state or region, thus saving time and money. Most county extension offices now had in the process of acquiring internet access to world wide web and E-mail, which makes it a very attractive training tool for many topics.

Aderson *et al.* (1999) observed that new information and communications technologies (ICT) in particular the internet, offer a potentially powerful tool for contributing to rural development. An approach that incorporates the unique characteristics of ICTs with participatory communication and learning strategies can help to guide the contributions that telecentres can make to agricultural and rural development. In the absence of such an approach, the rush to “wire” rural areas may result in development “short circuits”.

Bazar and Singh (1999) highlighted that in terms of accessing information, the internet has exciting and far reaching possibilities.

Bhattacharya (1999) anticipated that the major benefit of present information explosion with the development of internet communication satellite

VSATS (very small aperture terminal) is the instant communication of facilities making the flow of information.

Brett (1999) highlighted that the “world is racing to the internet in a quest for free knowledge but is instead finding itself drowning in a sea of information and waves of data”.

Mehta (1999) concluded that internet can be used as the most effective tool for distance learning and spreading education. It provides immense opportunities for employment, larger number of women can work from home with the help of net. It also observed that internet facilitates e-governance or the transparent, user friendly and info-driven interface between government and citizens. Those who rank it above might want to like in the 20th century.

Naidu (1999) told that government has decided to establish an inter university net (IU net) all over the country in collaboration with inter university net U.S.

Rajan (1999) remarked that the internet as a resource of information was accessible to people across the world. It is not necessary that each of us is looking for volume of information every day. However, quite often it became imperative for us to reach out and find little bits of information that are critical for a task to be performed.

Sharma (1999) anticipated that internet become a new tool for empowerment, a vehicle for development and a potential means for effective, two way grass root communication.

Trehan (1999) revealed that the primary mission of the net is communication of ideas at work or play.

Weigeal (1999) reported that the internet has a better chance to succeed as a tool for development and participation if linked to existing communication or information experiences. The Sistema de information Rural (info Des) project in Peru has taken this into consideration when basing its information system on community libraries that were created in rural areas of Cajamarca thirty years ago.

Gupta (2000) stated that CD ROM is a vehicle for bringing our clients to a new level of acceptance for information. Similar views were given by Shahdara and Singhal (1999).

Chen (2001) said, "If you can say that books, radio and TV gave us a pair of feet to walk on the road to prosperity, then the internet has given us a pair of wings with which to fly".

Ghosh (2001) reported that internet service is becoming a tool for development communication. However, most rural communities are not yet able to take advantage of this new tool. An integrated approach to facilitating

internet services and application will benefit rural communities and agricultural organizations.

Midha (2001) developed software package in the form of CD for potential users on food safety. Content validity ratio of prepared CD was found to be significant for all the messages. The data base software was observed to be reliable on the basis of inter-consistency and inter observer reliability which ranged from 0.63 to 0.94.

Rogers (2001) remarked that CD-R technology offers a wonderful opportunity for presenting material such as “tree bytes”. One disc can spot large volume of text along with hundreds of high quality colour photograph.

Weisgerber and Robert (2001) found that with a computer and communication hardware and software they can independently access electronic buttetin boards, database, electronic-mail, discussion group and on-line services.

Cinthia (2002) revealed that websites are gaining importance in technology transfer. This affects the relative advantage, compatibility, complexity and triability in the technology that is transferred.

Yadav and Yadav (2002) reported that internet connection provides access to on-line data bases and technical subject matter which is of immense value to the policy maker, technical staff at state and district level and the farmers.

Yadav (2004) inferred that sufficient gain in knowledge and change in attitude was observed as a result of media exposure.

It can be inferred from the above literature that internet is a tool that gives access to a vast global information resource. Through internet dialogue among communities, planners, development agencies, researchers and technical experts can take place. It enables communities to receive information and assistance from other development organizations and offer opportunity for two-way communication and encourage community participation in decision-making and help agricultural researchers, extension managers, technical experts, farm women and others in sharing information.

2.3 Standardization of media package

Lawshe (1975) proposed the method for quantifying the degree of consensus by asking of an employment test. The so developed formula called the content validity ratio.

Malaviya *et al.* (1991) indicated that in order to communicate the message properly there is need to evaluate the media prepared, before it is used in the field in order to enhance its effectiveness. It was further suggested that how the message conveyed through media is decoded by viewers should be the ultimate goal of any programme. It was further observed that scientists have been contributing their best in information generation, information dissemination but the success ultimately depends upon effectiveness of media.

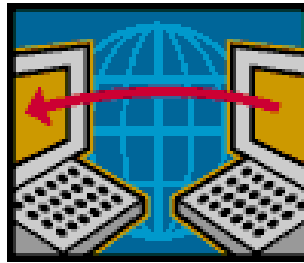
Frankel and Wallen (1996) concluded that validity refers to the appropriateness, meaningfulness and usefulness of the inferences a researcher makes. Reliability refers to the consistency of scores or answers. He also suggested that content validation should be done for both the content and format of the instrument. Format includes the things as the clarity of printing, size of typing, adequacy of work space, appropriateness of language, clarity of directions and so on.

Kumari (1998) standardized the social cognition tool through reliability and validity. The text revealed high internal consistency reliability and coefficient validity ratio of the tool was also established.

Dabas (2000) standardized the tool through reliability and validity. The findings revealed that content validity ratio of the tool was significant.

Sareen (2001) concluded that format of the educational package comprising of printed, language, illustrations was also found to be reliable and valid on the basis of given standards of reliability and validity.

Yadav (2004) found that inter consistency reliability and inter observer reliability for CD/printed material, video cassette was found to be statistically significant. The content validity ratio was also found to be significant.

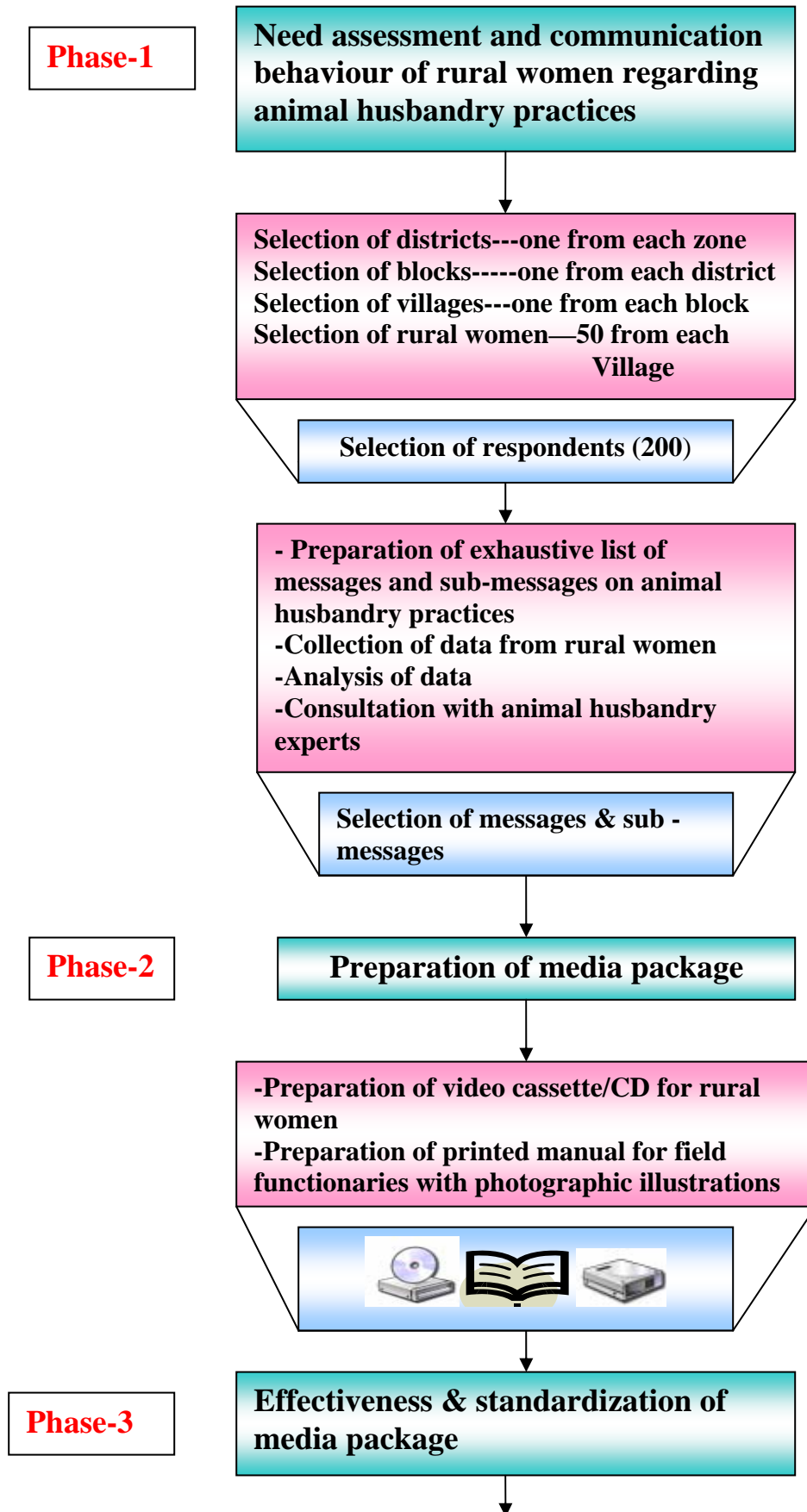


METHODOLOGY

3. METHODOLOGY

This chapter contains relevant information pertaining to the research design and other methodological steps required for present investigation. The research procedures followed (Fig. 1) have been distinctively described under the following four phases :

- Phase-I** (A) Assessment of information/media need and communication behaviour of rural women regarding animal husbandry practices
- (B) Finalization of messages and sub-messages with animal husbandry experts according to need of rural women
- Phase-II** Preparation of media package
- Phase-III** Effectiveness and standardization of media package
- Phase-IV** Impact of video cassette/CD on rural women
- Phase-I** Assessment of information/media need and communication behaviour of rural women regarding animal husbandry practices



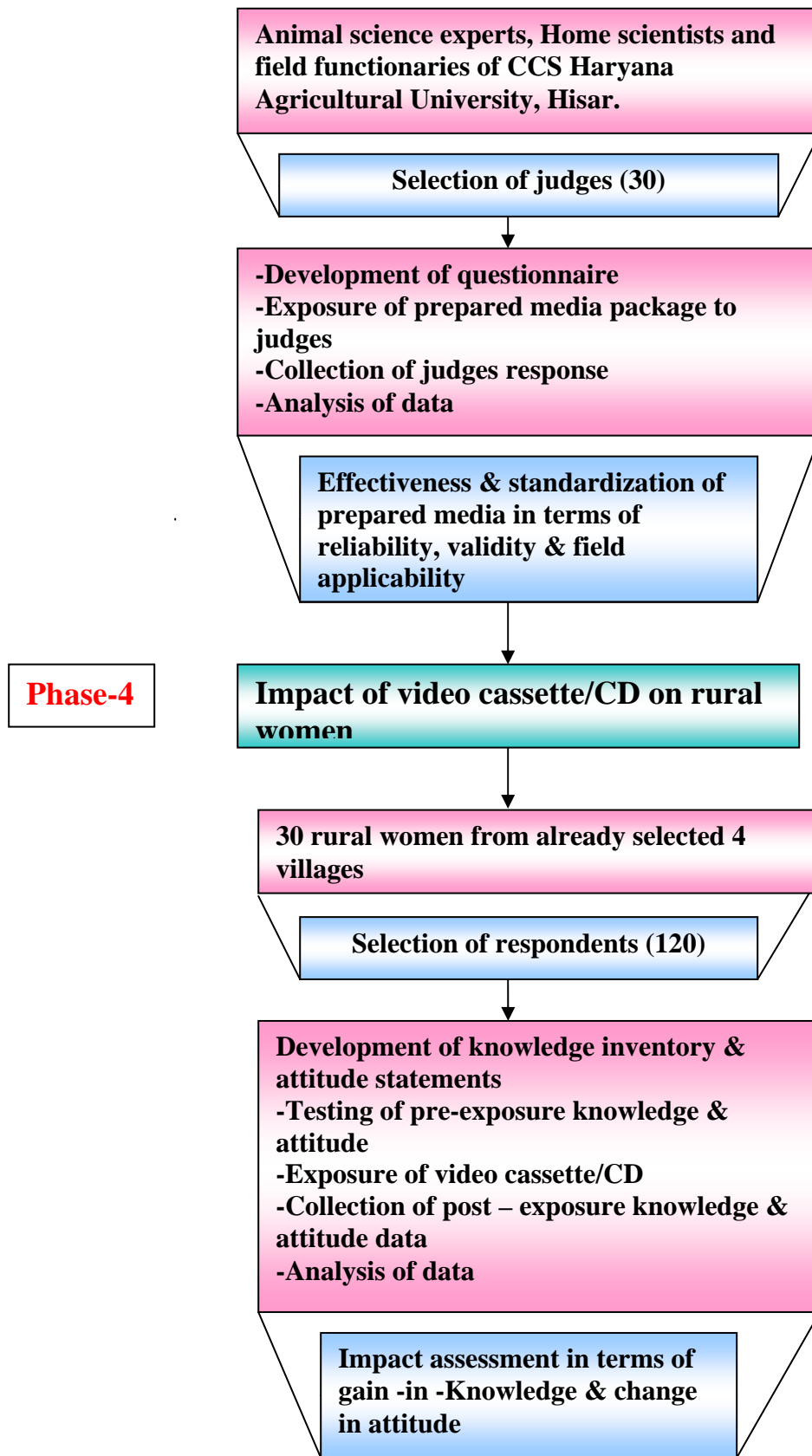


Fig. 1 Research Module of the Study

A. Assessment of information/media needs of rural women

To assess the need of rural women regarding animal husbandry practices following methodological steps were followed.

1. Locale of the study

The study was carried out in Haryana state.

2. Sampling procedure

(a) Selection of district

Haryana state has been divided into four agro-climatic zones i.e. East, West, North and South. East zone consists of Gurgaon, Faridabad, Sonapat, Rohtak and Panipat districts. Sirsa, Hisar, Fatehabad and Jind came in West Zone. Yamunanagar, Panchkula, Karnal, Kaithal and Kurukshetra districts came under North Zone whereas the districts fall in South Zone were Mahendergarh, Bhiwani, Rewari and Jhajjar. From each zone one district namely Kurukshetra from North Zone, Bhiwani from South Zone, Hisar from West Zone and Faridabad from East Zone were selected randomly.

(b) Selection of blocks

One block from each district viz., Pehowa block from Kurukshetra district, Bawani Khera block from Bhiwani district, Hisar-I block from Hisar district and Palwal block from Faridabad district were selected randomly.

(c) Selection of villages

From the selected blocks one village from each block i.e. Bhorsainda village from Pehowa block, Milkpur village from Bawani Khera block, Kaimari village from

HARYANA

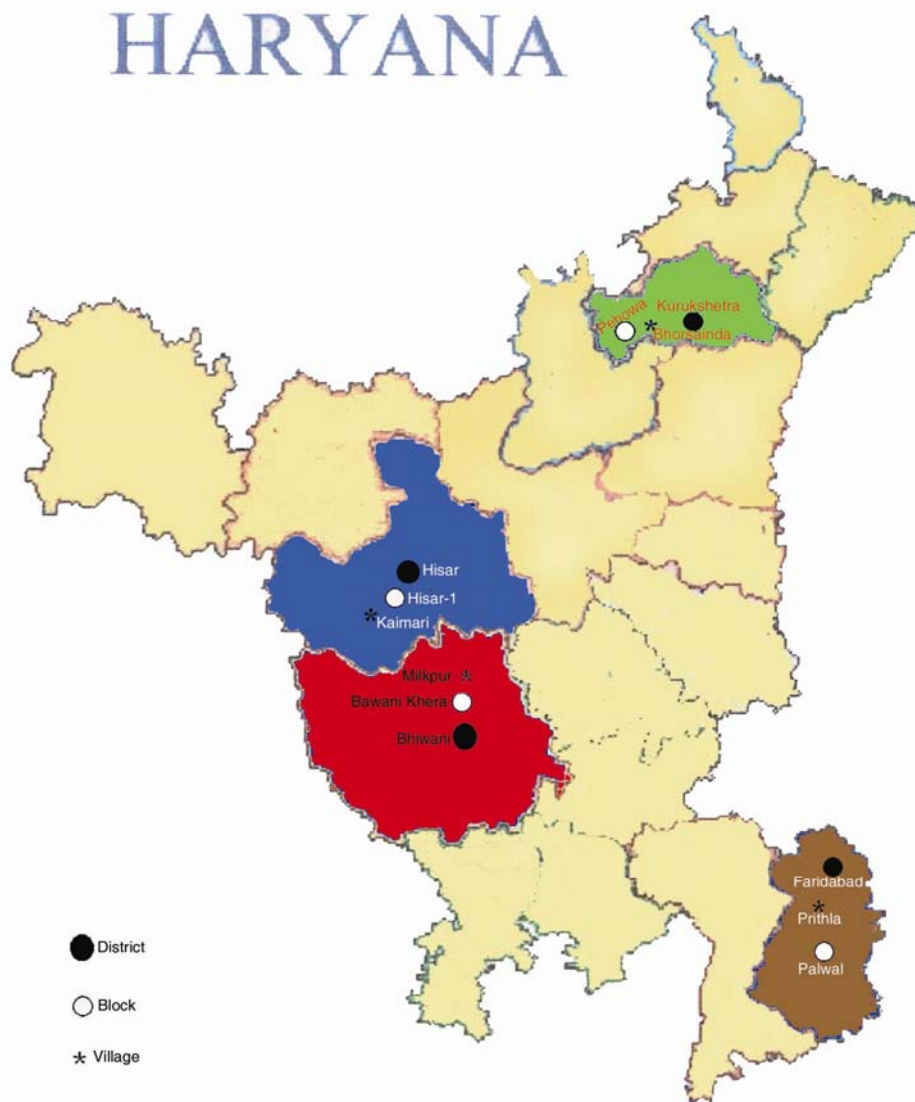


Fig. 2 A Map of Haryana showing the study area

Hisar-I block and Prithla village from Palwal block were selected randomly. The location of the villages have been depicted in the Map in Fig. 2.

(d) Selection of respondents

For Phase-I, 50 rural women who involved in dairy activities from each village were selected purposively, thus comprising a sample of 200 women.

(3) Variables and their measurement

Considering the relevancy of variables to the topic, a set of 16 independent variables and one dependent variables were selected for the present investigation which are presented in Table 3.1 (Annexure-I).

Table 3.1 Variables and their measurements

Independent variables

Socio-personal variables

1.	Age	Chronological age of the respondents in number of years
2.	Caste	Trivedi (1963)
3.	Education of respondents	Trivedi (1963)
4.	Family education	Trivedi (1963)
5.	Social participation	Trivedi (1963)
6.	Family type	Trivedi (1963)
7.	Family size	Trivedi (1963)
8.	House type	Trivedi (1963)

Economic variables		
9.	Occupation	Trivedi (1963)
10.	Land holding	Trivedi (1963)
11.	Gross income	Schedule developed for the purpose
12.	Material possession	Trivedi (1963)
13.	Farm powers	Trivedi (1963)
14.	Milch animals	Schedule developed for the purpose
Communication variables		
15.	Communication behaviour	Varma (1987)
16.	Media use	Schedule was developed
Dependent variables		
17.	Need assessment	Schedule developed for the purpose

The measurement procedure of selected variables are elaborated as under:

Age

Age was operationalised as chronological age of the respondents in years at the time of data collection. Scores assigned were as under :

Sr. No.	Category	Score
1.	Below 25 years	1
2.	25-50 years	2
3.	Above 50 years	3

Caste

Caste refers to the class or distinct hierarchial order of a family in society. The operational measures of caste was taken from the socio-economic status scale of Trivedi (1963). Caste was classified into low, middle and high category. The relative scores assigned were as follows :

Sr. No.	Category	Score
1.	Low	1
2.	Middle	2
3.	High	3

Dahama (1976) defined “Caste is a collection of families or a group of families bearing a common name, which usually denotes and is associated with a specific occupation, claiming common descent from a mythical ancestor, human or divine professing to follow the same calling and regarding by those who are competent to give an opinion as forming a single homogeneous community”.

Education

It refers to the academic qualification of the respondents acquired through formal schooling and training. The years of schooling of respondent was quantified by giving score as under :

Sr. No.	Category	Score
1.	Illiterate	0
2.	Can read only	1

3.	Can read and write	2
4.	Primary	3
5.	Middle	4
6.	High school	5
7.	Graduate	6
8.	Post graduate and above	7

Family education

It refers to the academic qualifications of all the family members acquired through formal schooling and training.

The years of schooling of different family members were quantified by giving scores as per socio-economic status of Trivedi (1963). First each eligible member of the family was given the education score and then overall educational level of the family was computed by using the formula :

$$\text{Family education score (FES)} = \frac{\text{Total education score of the family}}{\text{Total number of eligible members of the family}}$$

Social participation

It refers to the degree, with which the respondents were involved in formal organizations either as a member or as an office bearer and regularity in their attendance to meetings. Thus, social participation is a voluntary sharing in person to group and group to group relationships, beyond the immediate household. It was quantified on the basis of scoring system as given below :

Sr. No.	Category	Score
1.	No participation	0
2.	Member of one organization	1
3.	Member of more than one organization	2
4.	Office holder	3
5.	Wider public leader	6

Family type

Family type means whether family is nuclear or joint. A nuclear family is composed of members of only one person and include minors and dependents. A joint family refers to one which is constituted by members of more than one nuclear family.

The respondents family were categorized as under :

Sr. No.	Category	Score
1.	Nuclear	1
2.	Joint	2

Family size

It was operationalised as the total number of members in the family living together at the time of data collection. The respondents were divided into three categories by using the following scores pattern :

Sr. No.	Category	Score
1.	Small (up to 5 members)	1

2.	Medium (5-10 members)	2
3.	Large (>10 members)	3

Type of house

It refers to the type of house, the respondent possessed at the time of investigation. The weightage assigned as :

Sr. No.	Category	Score
1.	Katcha house	1
2.	Mixed house	2
3.	Pucca house	3

Economic variables

Occupation

Occupation refers to the respondent's means of livelihood. This was quantified on the basis of following categories :

Sr. No.	Category	Score
1.	Agricultural labour	1
2.	Caste occupation	2
3.	Business	3
4.	Service	4
5.	Cultivation	5
6.	Any other	6

Land holding

This refers to the area of cultivated land in acres possessed by the respondents.

The quantification of land holding was done on the basis of scoring pattern as follows:

Sr. No.	Category	Score
1.	No land	0
2.	Up to 5 acre	1
3.	5 to 10 acre	2
4.	10 – 15 acre	3
5.	Above 15 acre	4

Gross income

In the present investigation family income was referred to as the monetary income received by the respondent's family from agriculture, dairy and other sources and was operationally measured in terms of actual family income expressed in rupees per month.

Sr. No.	Category	Score
1.	Up to Rs. 5,000	1
2.	5,000 to 10,000	2
3.	10,000 to 15,000	3
4.	Above Rs. 15,000	4

Milch animals

It was operationalised as the number of milk yielding animals. The milch animals were categorized into three groups as follows :

Sr. No.	Category	Score
1.	Up to 2 animals	1
2.	3 to 4 animals	2
3.	Above 4 animals	3

Farm power

It refers to the actual animal draught power possessed by the respondent and used for various farm operations at her farm. The weightage assigned as follows :

Sr. No.	Category	Score
1.	1-2 draught animals	1
2.	3-4 draught animals	2
3.	5-6 draught animals	3
4.	Tractor	6

Material possession

In this study, material possession refers to the household appliances or items and prestige items possessed by a farm family.

Gross and Crandall (1963) stated that change in hand and body motions, change in work, storage space and equipment and change in product can improve one's method of doing work. The scoring system adopted was as follows :

Sr. No.	Household appliances	Score
i.	Normal household appliances, viz. cycle, radio, electric fan, coal iron, sewing machine, stove etc. The sum of scores of each item constituted the scores of an respondent for household appliances/items	1

- | | | |
|------|---|---|
| ii. | Prestige item : In the present study, the scores assigned to the prestige items are as : improved household items, viz., mixer blender/grinder, juicer, oven, food processor, toaster, electric iron, electric heater, immersion rod, pressure cooker, sofa set, dining set, double bed, knitting machine, tape recorder/record player, twin player cum recorder, scooter, motor-cycle etc. | 2 |
| iii. | High prestige items viz., refrigerator, cooler, washing machine, television, video cassette recorder, camera, geyser, car, jeep, motor, telephone, computer, microwave, vacuum cleaner etc. | 3 |

The sum of the scores of each item was considered the score of each respondent for material possession.

Communication behaviour

Communication behaviour was operationalised as behaviour of rural women for acquiring, processing and output of information. Communication behaviour included information input pattern, information processing pattern and information dissemination pattern. Communication behaviour was measured with the help of scale developed by Varma (1987).

Information input pattern

It refers to all the activities performed by an individual for acquiring information regarding animal husbandry practices from various sources and channels.

Information processing pattern

It refers to all the activities performed by rural women for evaluation, storage and transformation of information related to animal husbandry.

Information dissemination pattern

It refers to all the activities performed by an individual for communicating scientific and technical information related to animal husbandry practices to others.

Three point continuum was used with scores 3, 2, 1 respectively to measure all the three aspects of communication behaviour. Weighted mean score and ranking were also calculated.

Media use

Media used refers to the frequency with which rural women used various media for getting animal husbandry knowledge. It was categorized as follows :

Sr. No.	Category	Score
1.	Always	3
2.	Sometimes	2
3.	Never	1

Need assessment

Need was operationalized as the need of the each respondent related to selected animal husbandry practices.

B. Finalization of messages and sub-messages with animal husbandry experts according to need of the rural women

Involvement of rural women clientele in message designing and media production is of paramount importance in media production so that the message actually communicates. Media effectiveness can be enhanced only when the messages

are in tune with the need and interest of target audience. Therefore, in the present study attempts were made to select the messages and sub-messages according to the need of rural women in consultation with experts of animal science.

For assessing the need of the rural women an inventory pertaining to the critical messages and sub-messages was prepared in consultation with experts, relevant literature, library and package of practices. In this way total nine messages were listed. Each message was ascertained under three categories i.e. most needed, needed and least needed with scores 3, 2 and 1 respectively. Weighted mean scores were worked out for each of the nine messages and sub-messages separately. The ranks were assigned according to weighted mean score and fifty per cent of messages having top five ranks and 3 sub-messages from each selected messages got upper rank were finally selected for media preparation after consultation with animal science experts.

4. Tools and techniques of data collection

An inventory was prepared to assess the need and communication behaviour of the rural women regarding animal husbandry practices.

5. Data analysis

Statistical tools applied for Phase-I were as follows :

- (i) Frequency and percentages – To study the profile of the respondents

- (ii) Weighted mean scores and ranking – To assess the need and communication behaviour of rural women and for finalization of messages and sub-messages for media preparation.

Phase-II Preparation of media package

Media package involve designing, testing and refining the message professionally before their widespread use. If we want our clients or target audience to pay attention, understand, accept and act upon the communication messages, it is imperative that we understand the target audience and make relevant messages, professionally test and modifying them

Today, it is very difficult to open a magazine, read a newspaper, listen to the radio to get information regarding animal husbandry practices. To solve this problem the age of technologies has brought tremendous change and at the same time, tremendous potential for the extension education for the first time, educators have made available for every day use a collection of media to use in creating learning opportunities even for learners placed at a great distance.

To keep in mind this perspective media package on animal husbandry was developed in form of video cassette/CD (compact disc) and a manual was also developed on selected messages of animal husbandry practices. To increase its understandability related photographs and effective illustrations was also included.

Following steps were used for preparation of video cassette/CD.

- Planning
- Scripting

- Recording
- Editing and mixing
- Time estimation
- Review and fine tuning

The steps used for preparation of manual were as follows :

- Planning
- Research
- Treatment
- Outline
- Sequencing
- Review
- Publishing

Involvement of both the parties i.e. animal husbandry experts and rural women was ensured for all the stages of media production so as to meet the requirement of target group. Details of each step is explained in results and discussion.

Phase-III Effectiveness and standardization of media package

Effectiveness and standardization of prepared media package on animal husbandry was done with the help of questionnaire under following methodological steps.

1. Selection of judges

Thirty judges including animal husbandry experts, field functionaries and home scientists from CCS HAU, Hisar were contacted and prepared media package was administered to them. Their feedback regarding prepared media package on animal husbandry after exposing the package was recorded with the help of developed questionnaire.

2. Variables and their measurement

Considering the relevancy of variables to the topic, a set of 8 independent and one dependent variables were selected for the present investigation which are presented in Table 3.2 (Annexure-II).

Table 3.2 Variables and their measurements

Independent variables

1. Age
2. Background
3. Marital status
4. Educational qualifications
5. Nature of job
6. Field of specialization
7. Designation
8. Experience

Schedule was developed

Dependent variables

9. Media effectiveness
 - (a) Effectiveness of video cassette/CD Scale of Sethi (1993)
 - (b) Effectiveness of printed manual Scale of Midha (2001)

The methodological procedure as employed for the measurement of these variables is presented below :

Age

It refers to the chronological age of the respondents at the time of data collection. The range of age of the respondents obtained from data were divided into three categories.

Sr. No.	Category	Score
1.	20 – 30	1
2.	30 – 40	2
3.	40 and above	3

Background

Background means respondents place of birth and the area of her early childhood. Area falling under the jurisdiction of a municipality or corporation were categorized as urban and those falling under a village panchayat were categorized as rural.

Sr. No.	Category	Score
1.	Rural	1
2.	Urban	2

Marital status

Marital status shows whether the respondent is married, unmarried or divorced.

Sr. No.	Category	Score
1.	Married	1
2.	Unmarried	2
3.	Divorced	3

Educational qualification

Education was conceptualized as number of years of formal education attended by the respondents. Following categories of the respondents were made on the basis of education.

Sr. No.	Category	Score
1.	M.Sc./M.A.	1
2.	Ph.D.	2

Nature of job

Nature of job refers the present posting of judges under three identified areas of university. It was classified into following categories.

Sr. No.	Category	Score
1.	Teaching	1
2.	Research	2
3.	Extension	3

Department/field of specialisation

It refers to the parent department in which the respondent has done his/her masters/Ph.D. degree. It was classified into following categories.

Sr. No.	Category	Score
1.	Home Science Extension Education	1
2.	Family Resource Management	2
3.	Foods and Nutrition	3
4.	Livestock Production and Management	4

Designation

It was operationalized as the position acquired by the respondent in the organizational hierarchy on the basis of present position. They were classified as :

Sr. No.	Category	Score
1.	Professor/equivalent	4
2.	Associate Professor/equivalent	3
3.	Assistant Professor/equivalent	2
4.	TA/STA/RA/SRF	1

Experience

It refers to the total service experience on the present post in round numbers at the time of investigation. Relative scores assigned to different categories were as follows :

Sr. No.	Category	Score
1.	Less than 10 years	1
2.	11 – 20 years	2
3.	More than 20 years	3

Assessment of effectiveness by judges

The effectiveness of the prepared media package was assessed by showing them to 30 judges comprising of animal husbandry experts, home scientists and field functionaries. Assessment of effectiveness of video cassette/CD was done on selected parameters (Sethi, 1993) i.e. audio literacy, visual literacy, presentation of message, content importance and suitability, text and the overall performance of the video cassette/CD (Annexure-IIb). Effectiveness of printed manual was done on selected parameters i.e. accuracy, coverage, objectivity, content presentation, illustration, writing style and compatibility (Midha, 2001) (Annexure-IIa). All components had subcomponents which were scored on a three-point rating scale as high, moderate and low having scores of 3, 2, 1, respectively. Weighted mean scores of all the components were calculated.

Standardization of media

The tasks of Video cassette/CD and printed manual preparation does not cease at the preparation stage but how the message conveyed through media is decoded by viewers, is the ultimate goal. Therefore, it is imperative to standardize the media in order to enhance the decoding of message by the respondents in a correct way (Malaviya *et al.*, 1991).

Standardization implies uniformity of procedures in administering and conducting the test. A poorly standardized tool is unlikely to be reliable and valid. Standardized tool is the one in which the procedure, material and pattern has been fixed, so precisely that the same test can be applied at different times and places to different persons. Reliability and validity were determined to standardize the media package on animal husbandry practices.

Reliability

An important statistical property of any test is its reliability or the consistency with which it measures. A test/tool is called reliable when the results are stable and trustworthy. A test with high reliability is one that will produce the same results under different conditions or situations (Anastasi, 1954). Perfect reliability means absence of error of measurement, i.e. lesser the error greater the reliability. To establish the reliability of various media. Split half technique was used to assess the reliability of the media (Frankel and Wallen, 1996).

Split half technique

The reliability of the various media was tested with the application of split half technique by administering to 30 judges. The responses of the judges were marked 3, 2 and 1 for indicating to greater extent, to somewhat extent and not at all respectively. The zero order correlation coefficient between even and odd numbered items was calculated as a measure of reliability. Subsequently, the coefficients of reliability was computed with the help of spearman brown prophecy formula (Guliford and Fruchter, 1978).

Validity

Validity is a measure of the effectiveness of an instrument in accomplishing what it intends to assess. Validity of the developed media were established with content validity.

Content validity

It is the representativeness or sampling adequacy of the content, the substance, the matter, the topic of a measuring instrument (Kerlinger, 1973). Content validity of the media was measured on various parameters by providing the media to the respondents with a questionnaire which was developed to get judges opinion regarding whether the content of media is valid or not. The formula given by Lawshe (1975) was used to evaluate the content validity ratio (CVR). The main criteria of the content validity was matching the contents of inventory sample to the subject matter and important for the variables.

Perceived field applicability

This is defined as the extent to which users have perceived the animal husbandry messages on media as relative advantageous, physically compatible, culturally compatible, simple and triable. Perceived field applicability of media was measured through scale developed by Midha (2001).

Each message was separately tested for its perceived field applicability for these five attributes (Annexure-IIc).

1. Relative advantage

It has been taken as the degree to which an innovation is perceived as being better than the idea it supersedes in relation to animal husbandry information. The responses were obtained under three point rating scale.

Relative advantage	To greater extent profitable	Some extent profitable	Not at all profitable
Scores	3	2	1

2. Physical compatibility

It has been taken as the degree to which an innovation is perceived as consistent with the needs/situations of the receivers in relation to animal husbandry information. The responses were obtained under three point rating scale.

Physically compatible	To greater extent suitable	Some extent suitable	Not at all suitable
Scores	3	2	1

3. Cultural compatibility

It has been taken as the degree to which an innovation is perceived as consistent with the existing values of the receivers in relation to animal husbandry information. The responses were obtained under three point rating scale.

Cultural compatability	To greater extent suitable	Some extent suitable	Not at all suitable
Scores	3	2	1

4. Simplicity/complexity

It has been taken as the degree to which an innovation is perceived as relatively easy/difficult to understand and use in relation to animal husbandry information. The responses were obtained under three point rating scale.

Simplicity/complexity	To greater extent simple	Some extent simple	Not at all simple
Scores	3	2	1

5. Triability

It has been taken as the degree to which an innovation may be experienced on a limited basis in relation to animal husbandry information. The responses were obtained under three point rating scale.

Triability	To greater extent triable	To some extent triable	Not at all triable
Scores	3	2	1

These obtained scores for each message were put in the form of field applicability index. Thus, separate index was formulated for each message under study.

3. Tools and techniques of data collection

The questionnaire was prepared to get the judges feedback regarding prepared media package on animal husbandry practices.

4. Data analysis

Statistical tools applied for Phase-III were as follows :

- (i) Frequency and percentage – To study the profile of judges.
- (ii) Weighted mean scores – For assessing the effectiveness of prepared media package.
- (iii) Coefficient of reliability (split half technique)

It was used to assess the reliability of the media. Following formula was used :

$$rtt = \frac{2 rhh}{1 + rhh}$$

Where

rtt = Reliability of total test estimated

rhh = Correlation between halves

(iv) Content validity ratio

It was used to assess the validity of the media. Following formula was used

$$\text{CVR} = \frac{ne - N/2}{N/2}$$

Where

ne = Number of judges indicating on item essential

N = Total number of judges

(v) Perceived field applicability index

$$\text{PFAI} = \frac{E (\text{RA} + \text{PC} + \text{CC} + \text{SC} + \text{Tr})}{P (\text{RA} + \text{PC} + \text{CC} + \text{SC} + \text{Tr})} \times 100$$

Where

PFAI = Perceived field applicability index (for each message).

E = Extent to which message was rated field applicable by the respondents as regard to relative advantage (RA), physical compatibility (PC), cultural compatibility (CC), simplicity complexity (SC) and triability (Tr).

P = Maximum limit to which message was rated field applicable as regard to relative advantage (RA), physical compatibility (PC), cultural compatibility (CC), simplicity complexity (SC), and triability (Tr).

Phase-IV Impact of video cassette/CD on rural women

The following methodological steps were taken for impact of video cassette/CD on rural women.

1. Selection of respondents : For assessment of media impact 120 rural women from already selected villages and already selected respondents as selected in Phase I of the study (30 rural women each from Prithla, Milkpur, Bhorsainda and Kaimari villages) were selected.

2. Variables and their measurements

Considering the relevancy of the topic, a set of 12 independent variables and one dependent variables were selected for the present investigation which are presented in Table 3.3 (Annexure-III).

Table 3.3 Variables and their measurements

Independent variables

1.	Age	Chronological age of the respondents in number of years
2.	Caste	Trivedi (1963)
3.	Occupation	Trivedi (1963)
4.	Education	Trivedi (1963)
5.	Social participation	Trivedi (1963)
6.	Size of family	Trivedi (1963)
7.	Type of family	Trivedi (1963)
8.	Land holding	Trivedi (1963)

9.	Type of house	Trivedi (1963)
10.	Farm power	Trivedi (1963)
11.	Milch animals	Schedule was developed
12.	Material possession	Trivedi (1963)
Dependent variables		
1.	Impact assessment	
(a)	Knowledge gain	Inventory was developed
(b)	Attitude change	Attitude statements

The measurement procedures for selected independent variables were same as for Phase-I of the study.

Impact of video cassette/CD was measured in terms of knowledge gain and attitude change of the respondents for animal husbandry practices.

Knowledge gain

Knowledge is a body of understood information possessed by an individual.

Bloom *et al.* (1956) defined knowledge as “those behaviour and test situations which emphasize the remembering either by recognition or recall of ideas, material and phenomenon”. Therefore, knowledge was operationalized as the amount of adequate information acquired by the farm woman on animal husbandry practices.

The gain in knowledge refers to the difference between the knowledge regarding various aspects of animal husbandry practices possessed by the respondents before and after the exposure of video cassette/CD. In order to obtain the knowledge

scores, close ended knowledge inventory was prepared separately for all the five selected messages (Annexure-III).

The respondents were asked to reply on each of the items under the dichotomous response categories of correct/incorrect, agree/disagree. The correct replies were scored one and incorrect ones were given zero score. Aggregate scores were computed to find out the overall knowledge scores of each message separately. The pre-exposures and post exposures scores were computed separately. The difference between pre and post exposure scores so obtained were taken as gain in knowledge.

Attitudinal change

Attitude has been defined as the degree of positive or negative affect associated with some psychological object (Thurstone, 1946).

Attitude for the study has been operationalised as the consistent tendency of the respondents to evaluate the statements on different dimensions of animal husbandry negatively or positively. Attitude statements were developed on various messages for the study. A three point continuum was used and scores of 3, 2, 1 was given to strongly agree, agree and disagree to positive statements and 1, 2, 3 to the negative statements.

Mean scores of attitude statements at pre and post exposure were calculated and the difference of pre and post exposure mean score was calculated to measure attitudinal change.

Impact assessment index

Impact assessment index was worked out by taking into account two dimensions viz., knowledge acquired and attitudinal change. On three point continuum their respective frequencies were computed and presented in 3x3x3 table. The cell entries depict the scores obtained by subtracting pre from post exposure scores on all the three dimensions.

3. Tools and techniques of data collection

Knowledge inventory and attitude statements was developed.

4. Data analysis

Statistical tools applied were as follows :

Paired 't' test

Paired 't' test is a test of significance. It was used to measure significance of gain in knowledge and change in attitude of respondents at pre and post exposure stage following formula was used :

$$t = \frac{\bar{d}}{S/\sqrt{n}} \text{ with } (n-1) \text{ degree of freedom}$$

Where,

d = The mean of the difference of pre and post exposure scores

n = Number of observations

S = Standard deviation of the differences computed by usual formula

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

Impact assessment index (IAI)

The impact assessment index was thus computed with the help of formula given below:

$$IAI = \frac{f_i \times C_i}{N \times X \times Y} \times 100$$

Where,

IAI = Impact assessment index

f_i = Frequency in i^{th} cell

C_i = Cell scores of i^{th} cell

(product of corresponding scale value as presented in parantheses on two dimension in table).

N = Total number of respondents

X = Highest scale value on X dimension

Y = Highest scale value on Y dimension

Correlation coefficient

It was employed to find out the degree of relationship of dependent variable with the independent variable.

$$r = \frac{n \sum xy - (\sum x) (\sum y)}{\sqrt{[n \sum x^2 - (\sum x)^2] [n \sum y^2 - (\sum y)^2]}}$$

Where

- r = Correlation coefficient
- n = Number of respondents
- $\sum xy$ = Sum of product of x and y
- x and y = Dependent and independent variables
- $\sum x$ = Summation of overall dependent variables
- $\sum y$ = Summation of overall independent variables
- $\sum x^2$ = Sum of square of dependent variables
- $\sum y^2$ = Sum of square of independent variables



RESULTS & DISCUSSION

4. RESULTS AND DISCUSSION

The results of the present research in accordance with the objectives and derived through the use of prescribed methodology and standard tools, mentioned earlier, have been presented in this chapter. Following are the main sections, under which research results have been presented and discussed.

- 4.1 Assessment of information/media needs and communication behaviour of rural women regarding animal husbandry practices
- 4.2 Selection of messages
- 4.3 Preparation of media package
- 4.4 Effectiveness and standardization of media package
- 4.5 Impact of video cassette/CD on rural women
- 4.1 Assessment of information/media needs and communication behaviour of rural women regarding animal husbandry practices

Involvement of rural women clientele in message designing and media production is of paramount importance in media preparation to avoid any loss of communication. Media effectiveness can be enhanced only when the

messages selected are in tune with the need and interest of target audience. Therefore, in present study attempts were made to select the messages and sub-messages according to the need of the rural women in consultation with experts and relevant literature of animal husbandry.

In this way total nine messages viz., breeding, feeding, management of cattle shed, health care, preservation of green fodder, clean milk production, farm management and accounting, marketing, animal diseases and their prevention were listed and each message was further divided into sub-messages.

4.1.1 Background profile of rural women

Table 1 incorporates background profile of rural women in terms of age, caste, education of respondent, family education, social participation, family type, family size, type of house, occupation, land holding, gross income, material possession, farm powers and milch animals (Fig. 3).

4.1.1.1 Socio-personal variables

Age

Rural women profile in terms of age presented in Table 1 reveal that 44.50 per cent of the respondents were in age group between 25-50 years, whereas 31.50 per cent belonged to above 50 years, rest of them 24 per cent were found to be below 25 years of age group.

Caste

Caste wise distribution of respondents reveal that 47.50 per cent belonged to high caste category, 34.50 per cent were from medium caste and 18 per cent belonged to low caste category.

Education of respondent

Most of the respondents 78.50 per cent were found to be illiterate. However, one fifth of the respondents were educated up to high school and only 1.50 per cent of rural women possessed graduation degree.

Education of family

The data regarding family education are presented in Table 1. The data further point to the fact that majority of the respondents families (75%) were having low education level whereas, one fifth of them were having education up to medium level and only 4.50 per cent were possessed education up to high level.

Social participation

A perusal of Table 1 reveal that the social participation of women respondents were negligible whereas, only two per cent of respondents were found to be member of one organization as they participated in Village Mahila Mandal.

Family type

Majority of the women respondents 67.50 per cent belonged to nuclear families and rest of the women respondents 32.50 per cent were from joint families.

Family size

A large majority of respondents (70.50%) were having family size up to five members whereas, rest of the respondents (29.50%) were having family size above 5 members.

Type of house

An overwhelming majority of the respondents (61%) had mixed type house. On the other hand, one third of respondents (32%) had pucca house and very few respondents (7%) had katcha house.

4.1.1.2 Economic variables

Occupation

More than 50 per cent of respondents had cultivation as their main occupation, whereas, 35.50 per cent respondents were found to be agricultural labourers. Very few respondents (6%) were having service followed by business (4.50%) and caste occupation (3.50%) respectively as their main occupation.

Table 1. Background profile of rural women**N=200**

S.No.	Variables	Category	Frequency	Percentage
Socio-personal variables				
1.	Age	Below 25 years	48	24.00
		25-50 years	89	44.50
		Above 50 years	63	31.50
2.	Caste	Low	36	18.00
		Medium	69	34.50
		High	95	47.50
3.	Education of respondents	Illiterate	157	78.50
		Can read and write	4	2.00
		Primary	14	7.00
		Middle	12	6.00
		High School	10	5.00
		Graduate	3	1.50
4.	Education of family	Low	150	75.00
		Medium	41	20.50
		High	9	4.50
5.	Social participation	No participation	198	99.00
		Member of one organization	2	1.00
6.	Family type	Nuclear	135	67.50
		Joint	65	32.50
7.	Family size	Up to 5 members	141	70.50
		Above 5 members	59	29.50
8.	Type of house	Katcha	14	7.00
		Mixed	122	61.00
		Pucca	64	32.00

Economic variables

9.	Occupation	Agril. Labourer	71	35.50
		Caste occupation	7	3.50
		Business	9	4.50
		Service	12	6.00
		Cultivation	101	50.50
10.	Land holding	No land	75	37.50
		Up to 5 acre	52	26.00
		5 to 10 acre	28	14.00
		10 to 15 acre	40	20.00
		Above 15 acre	5	2.50
11.	Gross income	Up to Rs. 5,000	40	20.00
		5,000 to 10,000	55	27.50
		10,000 to 15,000	70	35.00
		Above Rs. 15,000	35	17.50
12.	Material possession	Low	66	33.00
		Medium	92	46.00
		High	42	21.00
13.	Farm powers	1-2 draught animals	22	11.00
		3-4 draught animals	126	63.00
		Tractor	52	26.00
14.	Milch animals	Up to 2 animals	133	66.50
		3-4 animals	58	29.00
		Above 4 animals	9	4.50

Land holding

More than one third of the respondents (37.50%) were landless whereas, one fourth of respondents had land up to 5 acre. It is further pointed out that one fifth of the respondents had land between 10 to 15 acres. Only few respondents (2.50%) were having land more than 15 acres.

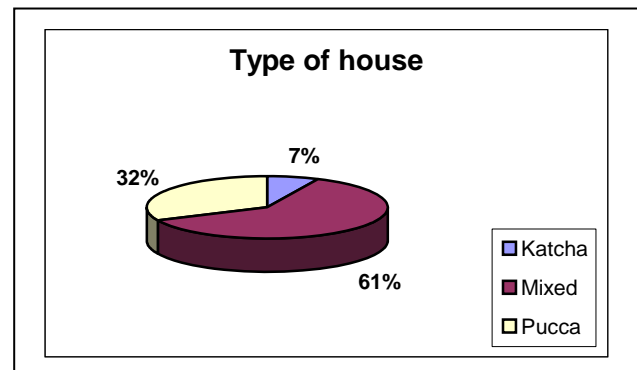
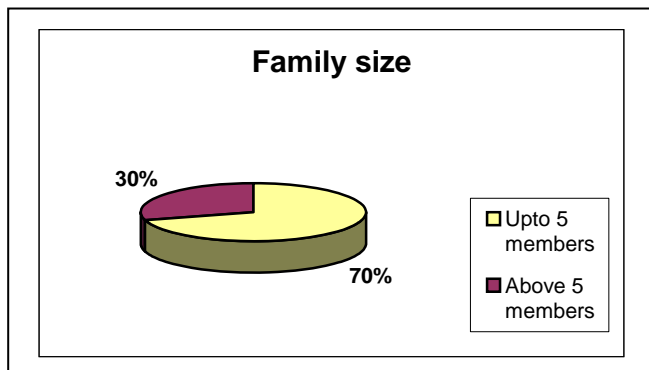
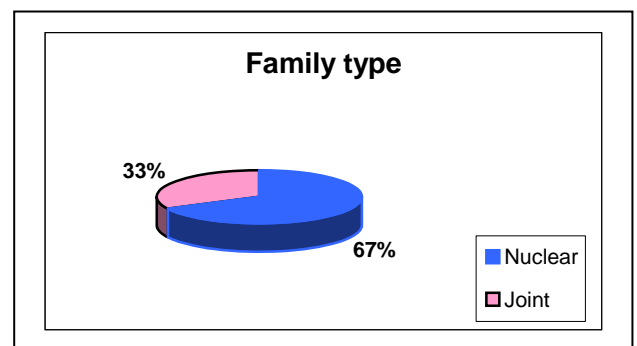
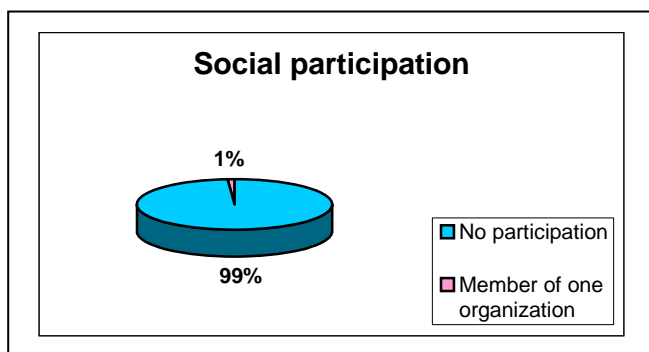
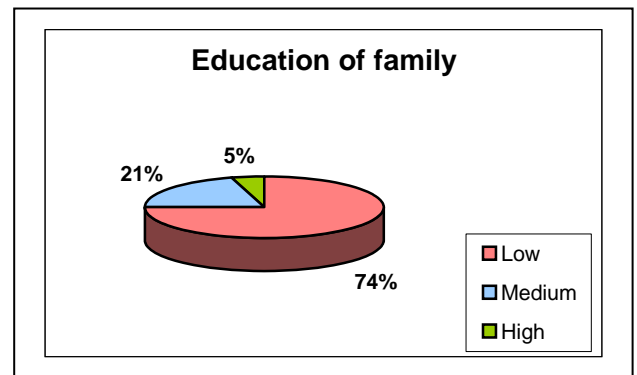
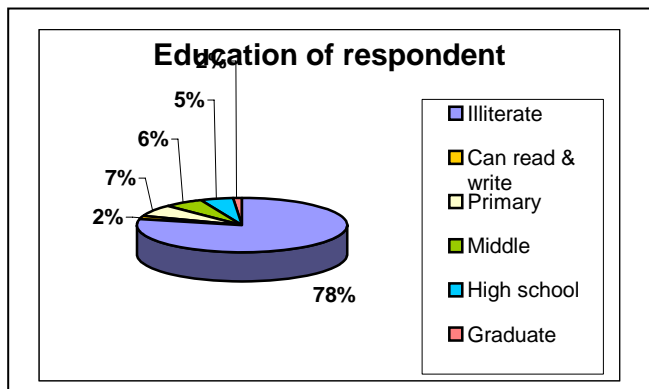
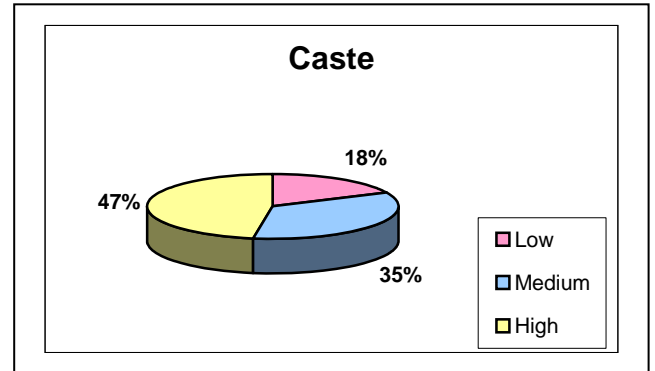
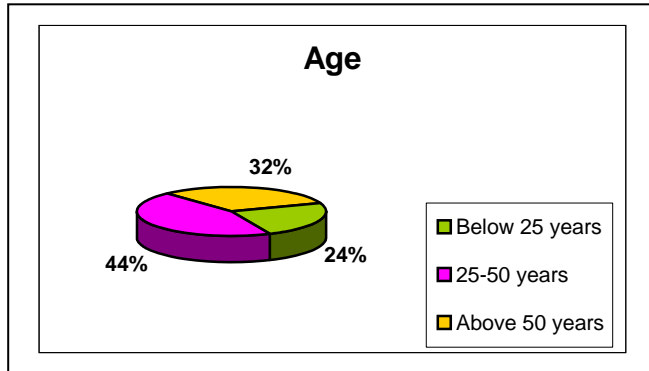
Gross income

The data regarding gross income from all the sources has been reported in Table 1 clearly depict that almost one third of the respondents (35%) had monthly income Rs. 10,000 to 15,000 followed by 27.50 per cent who had monthly income between Rs. 5000 to 10,000 whereas, one fifth of the respondents (20%) had family income below Rs. 5,000 per month. Only 17.50 per cent respondents had family income above Rs. 15,000 per month.

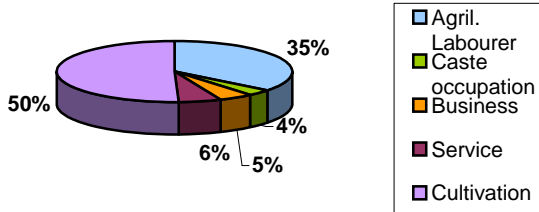
Material possession

The data pertaining to material possession have been reported in Table 1 bring to light that majority of the respondents (46%) had medium material possession followed by the respondents who had low and high material possession i.e. 33 and 21 per cent, respectively.

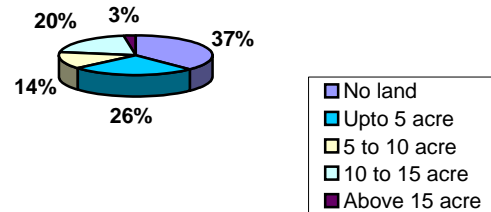
Fig.3 Background Profile of Rural Women



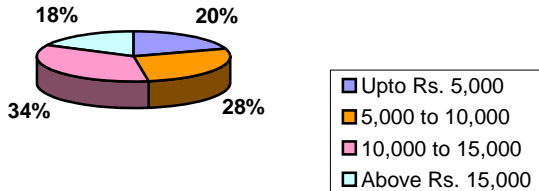
Occupation



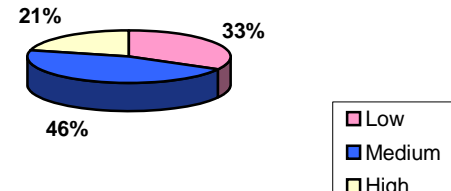
Land holding



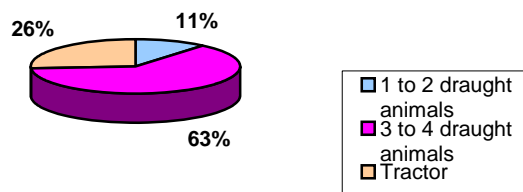
Gross income



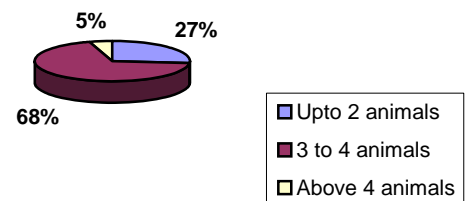
Material possession



Farm powers



Milch animals



Farm powers

The results of possession of farm power and tractor by respondents have been presented in Table 1. It unfolds the fact that about two third of the respondents (63%) had 3-4 draught animals. More than one fourth of the respondents (26%) had a tractor for cultivation and transportation purpose. Only 11 per cent of respondents possessed 1-2 draught animals.

Milch animals

Majority of the respondents (66.50%) had milch animals up to two. More than one fourth of respondent possessed milch animals between 3-4 and rest of the respondents (4.50%) had milch animals more than 4.

Thus, data on profile of rural women indicated that most of the respondents were in the age group between 25-50 years, of high caste, being illiterate, had low family education status and negligible social participation, belonged to nuclear family, having family size up to 5 members, possessing mixed type house, have cultivation as their main occupation, landless, gross monthly income between Rs. 10,000 to 15,000, with medium material possession, having 3-4 draught animals and milch animals up to two.

4.1.2 Communication behaviour of rural women

Communication behaviour of rural women was measured in terms of information input pattern, information processing pattern and information dissemination pattern.

4.1.2.1 Information input pattern of rural women

Data presented in Table 2 on the basis of weighted mean scores and ranks indicate that local leaders (I, 2.56) were the most frequently used localite sources followed by family members/husband (II, 2.47), friends/neighbours (III, 2.39) and panchayat members (IV, 2.20). Supervisor/CDPO (I,2.43) was the most frequently consulted cosmopolite sources followed by DRDA officials (II,2.20) and university District Extension Specialists (III, 1.98). Under mass media exposure, radio was the most frequently used source (I, 2.60) followed by TV/video (II, 2.55), magazines, newspapers (III, 1.60), film (IV,1.25) and other printed circulated material (V, 1.04). Overall input level in case of localite source was of high extent while it was medium in case of cosmopolite and mass media sources.

4.1.2.2 Information processing pattern of rural women

Data presented in Table 3 indicate the information processing pattern of rural women explored under various parameters of assessment. Rankwise distribution of the respondents as per weighted mean score indicated that economic aspects of information (I, 2.78) were the main consideration by

Table 2. Information input pattern of rural women

S. No.	Source	Extent of information (mean score)	Rank
1.	Localite		
a)	Family members/husband	2.47	II
b)	Friends/neighbours	2.39	III
c)	Local leaders (female) of Mahila Mandal/ Anganwadi Workers/Craft Center	2.56	I
d)	Panchayat members	2.20	IV
	Overall mean score	2.41	
2.	Cosmopolite		
a)	Supervisor/CDPO	2.43	I
b)	University DES	1.98	III
c)	DRDA officials	2.20	II
	Overall mean score	2.20	
3.	Mass media		
a)	Radio	2.60	I
b)	T.V./Video	2.55	II
c)	Magazines/Newspapers	1.60	III
d)	Other printed circulated materials	1.04	V
e)	Films	1.25	IV
	Overall mean score	1.81	

Low : 1 – 1.66
Medium : 1.67 – 2.32
High : 2.33 – 3.00

maximum number of the respondents as it was accorded first rank, followed by discussion with family members (II, 2.74), consider the availability and other facilities (III, 2.70), discussion with friends/neighbours (IV, 2.50), discussion with experienced village women (V, 2.48), adoption by other villagers (VI, 2.12), discussion with extension workers (VII, 1.86) and the technical problems were ranked lastly by rural women. Overall information processing pattern of rural women was found to be of high level. Similar results were reported by Yadav (2004).

4.1.2.3 Information dissemination pattern of rural women

The data presented in Table 4 reveal that most of the women disseminated information among the women of their locality/neighbourhood (I, 2.02). Second rank was given to information dissemination within the village but outside locality/neighbourhood (1.98). Very few women went out of village to disseminate information and those who did so, they could cover nearby villages only. The overall information dissemination of rural women was found to be of medium level.

4.1.2.4 Mass media possessed by rural women

Mass media possessed by the respondents have been presented in Table 5. The results highlighted that majority of the women (84%) had radio followed by T.V. which was possessed by 76.00 per cent women. Cable TV connection was possessed by 54.5 per cent whereas tape recorder was possessed by 48.00

Table 3. Information processing pattern

S. No.	Method of assessment	Mean score	Rank
1.	Discussion with family members	2.74	II
2.	Discussion with friends/neighbours	2.50	IV
3.	Discussion with experienced village women	2.48	V
4.	Discussion with extension personnel like AWS, craft teachers, supervisors, DES etc.	1.86	VII
5.	Consider the economic aspects	2.78	I
6.	Consider the technical problems	1.80	VIII
7.	Consider the availability and other facilities	2.70	III
8.	Adoption by other villagers	2.12	VI
	Overall mean score	2.37	

Low : 1 – 1.66

Medium : 1.67 – 2.32

High : 2.33 – 3.00

Table 4. Information dissemination pattern of rural women

S. No.	To whom	Mean score	Rank
1.	Among the women of locality/ neighbourhood	2.02	I
2.	Within the village		
i)	Outside locality/neighbourhood	1.98	II
3.	Outside the village		
i)	Nearby village	1.80	III
	Overall mean score	1.93	

Low : 1 – 1.66
 Medium : 1.67 – 2.32
 High : 2.33 – 3.00

Table 5. Mass media possessed by rural women

S. No.	Name	Possessed	Percentage	Not possessed	Percentage
1.	Radio	168	84.00	32	16.00
2.	T.V.	152	76.00	48	24.00
3.	Cable T.V.	109	54.50	91	45.50
4.	Newspapers	48	24.00	152	76.00
5.	Computer	2	1.00	198	99.00
6.	Internet	2	1.00	198	99.00
7.	Tape-recorder	96	48.00	104	52.00
8.	Magazine	42	21.00	158	79.00
9.	VCD	20	10.00	180	90.00

per cent of rural women. Computer and internet connection was available only in one per cent cases.

Pushpa and Sheela (1997) revealed that radio and contact with extension personnel were more popular in rural than in urban area respectively. However, it is heartening to note that modern means of mass media have started penetrating rural homes and more women are getting acquainted to the technologies.

4.2 Selection of messages

Media effectiveness can be enhanced only when the messages selected are in tune with the need and interest of the rural women. In present study, attempts were made to select the messages and sub-messages on the basis of need of rural women of Haryana after consulting the animal husbandry experts.

4.2.1 Selection of messages related to animal husbandry practices

Nine messages identified for the present study were breeding, balanced feeding, management of cattle shed, health care, preservation of green fodder, clean milk production, farm management and accounting, marketing and animal diseases and their prevention (Table 6). It revealed that out of these five messages i.e. clean milk production, balanced feeding, preservation of green fodder, breeding and animal diseases and their prevention had above 2.46 weighted mean scores and ranked I to V respectively. Thus these five messages were selected for media preparation, identified as most needed messages by

Table 6. Selection of the messages according to the need of the rural women regarding animal husbandry practices

S. No.	Messages	Most needed	Needed	Least needed	Total weighted mean score	Rank
1.	Breeding	105	84	11	2.47	IV
2.	Balanced feeding	131	68	1	2.65	II
3.	Management of cattle shed	11	153	36	1.87	VI
4.	Health care	20	78	102	1.59	VII
5.	Preservation of green fodder	109	78	13	2.48	III
6.	Clean milk production	175	25	0	2.87	I
7.	Farm management and accounting	10	80	110	1.50	IX
8.	Marketing	4	95	101	1.51	VIII
9.	Animal diseases and their prevention	116	61	23	2.46	V

rural women (Fig. 4). Similar findings were reported by Manjusha (1990), Sheela and Swamy (1993), Prakash *et al.* (1995) and Singh *et al.* (2001).

The sub-messages selected under the main messages are described in following tables.

4.2.1.1 Selection of sub-messages related to clean milk production (M₁)

The first selected message viz. clean milk production was again divided into seven sub-messages which were fat testing at home, cleaning before milking, right method of milking, usefulness of clean milk production, care to be taken after milking, health symptoms for decline in milk and prevention of damage of teats.

Data presented in Table 7 reveal that the sub-messages which got first three ranks were retained. These were cleaning before milking with weighted mean score 2.65 and rank I followed by right method of milking with weighted mean score 2.56 and ranked II and usefulness of clean milk production and care to be taken after milking both were ranked III with weighted mean score 2.53 were finally selected for media preparation.

These all the four sub-messages are crucial as per opinion of experts and thus retained for further investigation.

Table 7. Selection of sub-messages related to clean milk production (M₁)

S. No.	Sub-Messages	Most needed	Needed	Least needed	Weighted mean score	Rank
1.	Fat testing at home	105	60	35	2.20	V
2.	Cleaning before milking	138	53	9	2.65	I
3.	Right method of milking	127	59	14	2.56	II
4.	Usefulness of clean milk production	113	81	6	2.53	III
5.	Care to be taken after milking	113	81	6	2.53	III
6.	Health symptoms for decline in milk	109	71	20	2.44	IV
7.	Prevention of damage of teats	61	78	61	2.00	VI

4.2.1.2 Selection of sub-messages related to balanced feeding (M₂)

Out of eight sub-messages related to balanced feeding, all sub-messages having ranked from I to III were retained. Three messages i.e. feeding of pregnant cow, feeding management of milch animals and feeding of pregnant heifers got ranked second with weighted mean score 2.34. Two messages i.e. changes required in feeding of animals before and after parturition/calving ranked third with weighted mean score 2.29. Essential nutrients in animal feed with weighted mean score 2.49 got ranked first thus, total of six sub-messages were included under balanced feeding for media preparation (Table 8).

4.2.1.3 Selection of sub-messages related to preservation of green fodder (M₃)

In this message only two sub-messages were included. Out of which silage making were got ranked I with weighted mean score 2.29 and hay making (2.19) got ranked second. Both the sub-messages were therefore, included under preservation of green fodder message for media preparation after consultation with experts (Table 9).

Table 8. Selection of sub-messages related to balanced feeding (M₂)

S. No.	Sub-Messages	Most needed	Needed	Least needed	Weighted mean score	Rank
1.	Essential nutrients in animal feed	115	69	16	2.49	I
2.	Feeding of pregnant cow	99	71	30	2.34	II
3.	Feeding management of milch animals	98	73	29	2.34	II
4.	Feeding of pregnant heifers	99	71	30	2.34	II
5.	Change required in feeding of animals before and after parturition/ calving	105	48	47	2.29	III
6.	Calf feeding	103	52	45	2.29	III
7.	Balanced ration and its composition	89	60	51	2.19	V
8.	Mineral mixture feeding	72	96	32	2.20	IV

Table 9. Selection of sub-messages related to preservation of green fodder (M₃)

S. No.	Sub-Messages	Most needed	Needed	Least needed	Weighted mean score	Rank
1.	Silage making	105	48	47	2.29	I
2.	Hay making	89	60	51	2.19	II

4.2.1.4 Selection of sub-messages related to breeding (M₄)

The fourth message i.e. breeding was again divided into ten sub-messages viz., symptoms of heat, heat cycle and time of breeding, pregnancy diagnosis, artificial insemination, time of insemination, importance of insemination, care during pregnancy, care during parturition, care after parturition and calf care.

Data presented in Table 10 highlight that the sub-message i.e. time of insemination got rank first with weighted mean score 2.15 and the sub-message symptoms of heat got rank second with weighted mean score 2.19 while three sub-messages care during pregnancy, care during parturition and calf care got rank third with weighted mean score 2.07 that is why five sub-messages were retained for media preparation after consultation with animal husbandry experts.

4.2.1.5 Selection of sub-messages related to animal diseases and their prevention (M₅)

The sub-messages covered under animal diseases and their prevention are furnished in Table 11. Total 20 sub-messages were included under this category and only three were finally retained. The messages which got first three rank was foot and mouth disease (I, 2.69), mastitis (II, 2.20) and pneumonia (III, 2.14). These three diseases are very common in rural areas and

Table 10. Selection of sub-messages related to breeding (M₄)

S. No.	Sub-Messages	Most needed	Needed	Least needed	Weighted mean score	Rank
1.	Symptoms of heat	74	84	46	2.14	II
2.	Heat cycle and time of breeding	65	73	62	2.01	VII
3.	Pregnancy diagnosis	54	84	62	1.96	VIII
4.	Artificial insemination	64	85	51	2.06	IV
5.	Time of insemination	79	71	50	2.15	I
6.	Importance of insemination	61	84	55	2.03	VI
7.	Care during pregnancy	68	78	54	2.07	III
8.	Care during parturition	68	78	54	2.07	III
9.	Care after parturition	67	76	57	2.05	V
10.	Care of calf	68	78	54	2.07	III

Table 11. Selection of sub-messages related to animal diseases and their prevention (M₅)

S. No.	Sub-Messages	Most needed	Needed	Least needed	Weighted mean score	Rank
1.	Diarrhoea	64	78	58	2.03	IV
2.	Constipation	52	83	65	2.01	V
3.	Repeat breeding	61	79	60	2.00	VI
4.	Retained placenta	52	79	69	1.91	XI
5.	Abortion	47	85	68	1.89	XII
6.	Ectoparasite infestation	52	83	65	2.01	V
7.	Wound	41	102	57	1.92	X
8.	Intoxication	53	78	69	1.93	IX
9.	Endoparasite infestation	57	73	70	1.94	VIII
10.	Pneumonia	91	46	63	2.14	III
11.	Cow pox	47	91	62	1.93	IX
12.	Coughing	64	78	58	2.03	IV
13.	Foot and mouth disease	155	29	16	2.69	I
14.	Tuberculosis	49	78	73	1.87	XIII
15.	Tail necrosis	39	86	85	1.82	XV
16.	Anestrus	43	85	72	1.85	XIV
17.	Milk fever	53	83	64	1.94	VII
18.	Tympany/bloat	18	88	94	1.62	XVII
19.	Mastitis	83	69	48	2.20	II
20.	Haemorrhagic septicemia (HS)	17	94	89	1.64	XVI

the people were not aware about their symptoms and causes. Therefore, the rural population is required to be educated about these diseases.

4.3 Preparation of media package

Based on the need of rural women video cassette/CD for rural women and printed manual for field functionaries were developed in Hindi entitled “Pashu Palan Hetu Takniki Jankari”.

4.3.1 Preparation of video cassette/CD

Today, instructional video has become the inevitable component of self learning systems both in education and extension education. However, instructional video is one such tool which has not yet been fully exploited in our country in these contexts despite the fact that this media has ability to overcome limitations of space, illiteracy and time besides providing rich visual and oral experience in the description of a subject (Fig. 5).

Various steps involved in preparation of a video cassette/CD on animal husbandry are –

1. Planning

If a video cassette/CD i.e. its images and sound are to fulfill the required communication purpose, it needs to be organized properly to convey the meaning. Hence, planning in terms of who will be the learners? What are the aims and objectives? What will be the subject contents? What is the learning

PREPARATION OF VIDEO CASSETTE/CD



Fig. 5 Steps in preparation of video cassette/CD

assessment criteria? How the subject be sequenced? What will be the treatment given to the message, is very important. Therefore, it was planned to prepare video cassette/CD for rural women with an objective to give them necessary critical information on animal husbandry.

2. Scripting

While preparing a script various stages were involved. These were :

a) Research

Keeping the objectives of video cassette/CD in mind, information regarding the subject i.e. animal husbandry messages were collected with the help of concerned literature, animal science experts from CCS HAU, Hisar. The messages were prepared according to the need of the rural women.

b) Treatment

Treatment of the subject is an important part of effective communication process and for this very purpose, besides straight narration with visuals, shots of actual working and activities were taken. The language of the script was purposively in Hindi so as to facilitate learning by the rural women.

c) Outline

After research and treatment decision, a rough outline of details of the cassette/CD was worked out i.e. five animal husbandry messages, viz., clean milk production, balanced feeding, preservation of green fodder, breeding and

animal diseases and their prevention were included based on need of the rural women and expert's consensus.

d) Sequencing

Once the outline was prepared, the sequencing of the subject matter was done to make the video cassette/CD coherent, informative and also interesting.

e) Special effects

To convey the idea effectively, special effects like computerized write-up, fade in and fade out, long shot, medium shot, close-up and extreme close-up shots were decided upon and written in the script.

f) Story board

After writing, to help the camera man and special effects man, story boards, where in each shot indicated by drawing, were prepared.

g) Review

After completing writing of the video script, it was reviewed by animal husbandry experts and projectionist of the department of Home Science Extension Education, CCS HAU, Hisar, to make improvement.

For ease of working, the proforma used for sequencing the video cassette/CD was divided into the following columns :

Shot No.	Type of shot long/medium close up	Video	Audio	Duration
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3. Recording

Recording is the stage where all visual and oral elements described in the script are collected. Before starting the recording, survey was done to select the venue for taking shots as well as permission of concerned personnel. Time was also taken from the rural women of Arya Nagar, Hisar. Recording for the CD and video cassette/CD was done in Arya Nagar, animal farm of CCS HAU, Hisar, multimedia lab, HSEE, CCS HAU, Hisar, with the help of projectionist, cameraman and animal science expert. The visual portions concerning clean milk production, balanced feeding, preservation of green fodder, breeding and animal diseases and their prevention were recorded as per convenience and availability of shots not necessarily in order in which it was written in the script.

4. Editing and mixing

Video-editing is a highly creative process, it is not a mechanical process of just joining the different scenes. Sequence of the visual scenes was arranged as per the script. Editing and mixing, to make the video film educative as well as interesting was done at the computerized editing and mixing in Home Science Extension Education Department, COHS, CCS HAU, Hisar. Commentary as per script was dubbed so as to match with the visual scenes. Light background music was also dubbed to give pleasant hearing to the audience.

5. Time estimation

Preparation of instructional video cassette/CD is incomplete without estimation of time. It is equally important as the previous steps. The prepared video cassette/CD is of 24 minutes duration giving approximately 5 minutes to each message. Names, acknowledgements were highlighted in the beginning of the script visual.

6. Review and fine tuning

Based on the results from the testing process, the video cassette/CD were fine tuned by incorporating the feedback.

4.3.2 Preparation of printed manual

Following steps were used for preparation of printed manual (Fig. 6).

1. Planning

Planning is the most important part of any communication process and to make printed manual most effective due consideration was given from the infancy stage. At this stage planning was done regarding format, title, number of pages, number of photographs etc. It was decided to prepare manual in powerpoint presentation form.

2. Research

After planning stage, research was conducted to collect information regarding the subject. Staff from animal science college, CCS HAU, Hisar

PREPARATION OF PRINTED MANUAL

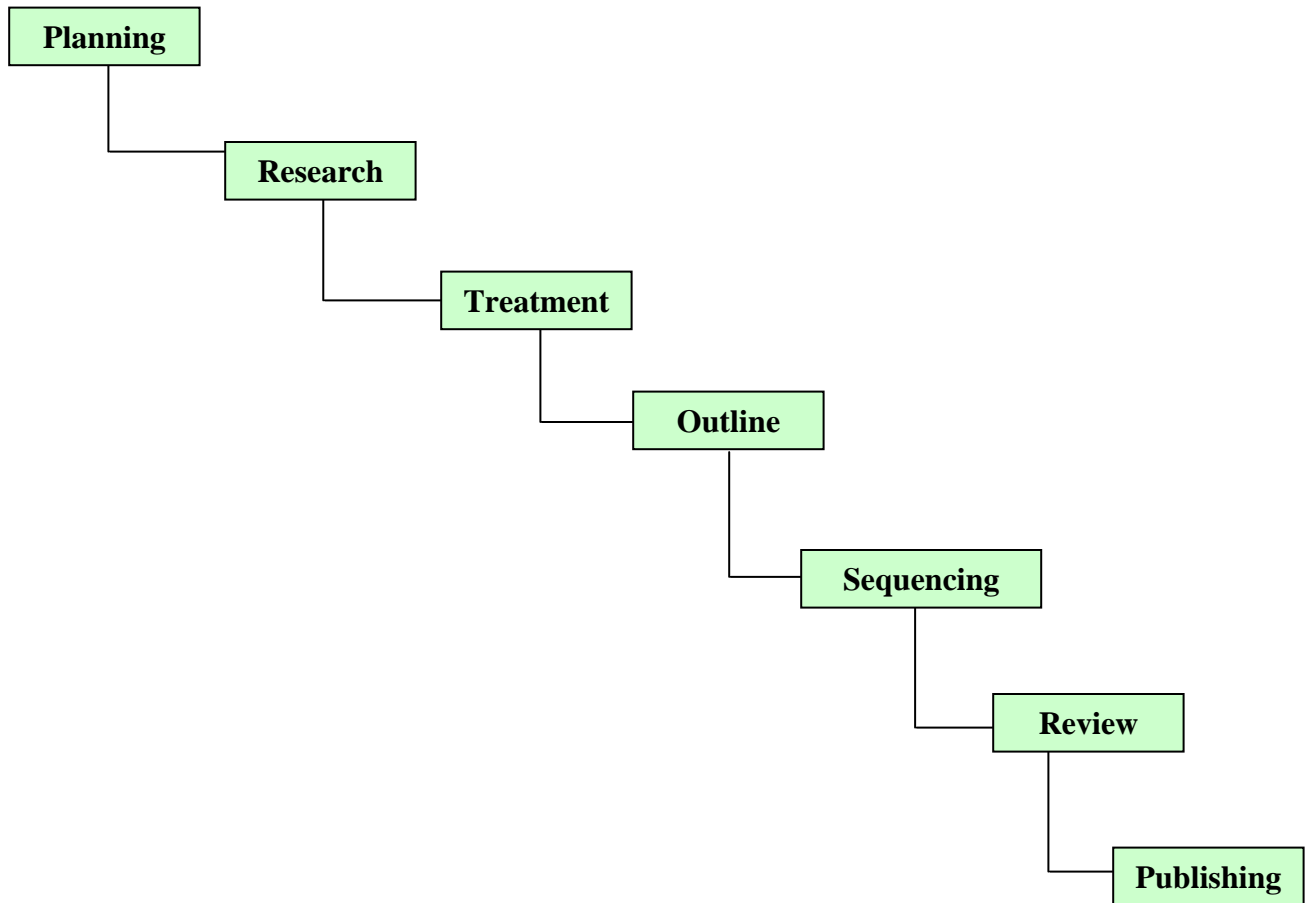


Fig. 6 Steps in preparation of printed manual

Library, package of practice and internet were explored to gather relevant information.

3. Treatment

Printed manual was prepared in the form of powerpoint slides.

4. Outline

Only after gathering whole information and final decision about treatment, rough outline was prepared. Five messages – Clean milk production, balanced feeding, preservation of green fodder, breeding and animal diseases and their prevention were selected.

5. Sequencing

Once outline was prepared, then sequencing was worked out to introduce the subject to reader and take him step by step towards the end. Photographs were inserted wherever required to make the manual more meaningful and understandable.

6. Review

To make improvements in the text and photographs, it was given to animal husbandry experts and scientists of COHS, CCS HAU, Hisar for reviewing.

7. Publishing

Only after reviewing and corrections, the final text was published in manual form (sample of manual given in Annexure-IV).

The cover page of printed manual included the title, the name of authors, name of department and institution. This manual included detailed subject matter on selected five messages along with relevant literature and photographs. This manual consisted of 74 pages and 78 scanned photographs and placed under respective items (Table 12).

It is evident from the Table 13 that description of each message related to “clean milk production” incorporate introduction, care before milking, care during milking, care after milking and usefulness of clean milk production. In total message 1 contained eleven pages and 15 pictures which make the chapter more interesting and understandable.

The first submessage the “introduction” contained only one page and one picture. Second sub-message care before milking further included four sub-messages i.e. cleaning of animal, cleaning of milking place, cleaning of milker’s hand, nails and clothes and cleaning of milking pail having 6 pages and 9 pictures. Third sub-message contained 2 pages and 3 pictures. Fourth sub-message i.e. care after milking contained only one page and 2 pictures whereas fifth sub-message usefulness of clean milk having no picture.

Table 12. An overview of the manual entitled “Pashu Palan Hetu Takniki Jankari”

Sr. No.	Messages	Pages	Pictures
1.	Clean milk production	4-15	15
2.	Balanced feeding	16-33	18
3.	Preservation of green fodder	34-46	14
4.	Breeding	47-59	10
5.	Animal diseases and their prevention	60-74	21

Table 13. An overview of the coverage on clean milk production in printed manual

Sr. No.	Messages/Sub-messages	Page	Pictures
1.	Clean milk production		
a)	Introduction	4	1
2.	Care before milking	5	-
a)	Cleaning of animal	6-7	3
b)	Cleaning of milking place	8	1
c)	Cleaning of milker’s hand, nails etc.	9-10	3
d)	Cleaning of milking pail	11	2
3.	Care during milking	12-13	3
4.	Care after milking	14	2
5.	Usefulness of clean milk	15	-

Table 14 indicate the details of second message “balanced feeding” under which ten sub-messages were included containing 18 pages and 18 pictures. Second sub-message on essential nutrients in animal feeding was again divided into five categories with 6 pages and 11 pictures. The sub-message No. 8, 9 and 10 had no picture whereas message No. 1, 3, 4, 5 and 7 contained only one picture each whereas message No. 6 changes required in feeding of animals before and after parturition had two pictures.

It is clear from the Table 15 that preservation of green fodder message under which 3 sub-messages were included. This message contains 13 pages and 14 pictures to make the message simple and easy to learn. Second sub-message was again had 5 categories which had 5 pages and 6 pictures whereas, third sub-message “Hay making” which included four sub-messages contained 5 pages and 5 pictures.

Table 16 clearly brings to light that the details of message M₄ animal breeding, under which seven sub-messages were included. This message contains 13 pages and 10 pictures. In sub-messages time of first pregnancy, time for insemination and care during pregnancy there was no pictures. But in care of calf there was 3 pages of text and 4 pictures while in introduction of animal breeding and heat symptoms there was 3 and 2 pictures respectively.

Indicated in Table 17 are details of message M₅ animal diseases and their prevention. Four sub-message under message five was introduction, foot and

Table 14. An overview of the coverage on balanced feeding in printed manual

S.No.	Message/sub-message	Pages	Picture
I.	Balanced feeding	16-17	1
a)	Introduction	18	-
2.	Essential nutrients in animal feed		
a)	Protein	19	2
b)	Carbohydrates	20	3
c)	Minerals	21	3
d)	Vitamins	22	1
e)	Water	23	2
3.	Feeding management of milch animals	24	1
4.	Feeding management of pregnant animals	25	1
5.	Feeding management of pregnant heifers	26	1
6.	Changes required in feeding of animals before and after parturition/calving	27	2
7.	Method of preparing concentrate for common animals	28	1
8.	Method of preparing concentrates for milch animals	29	-
9.	Points to be kept in mind while preparing feed	30-32	-
10.	Usefulness of balanced feeding	33	-

Table 15. An overview of the coverage on preservation of green fodder in printed manual

S. No.	Message/sub-message	Pages	Picture
I.	Introduction	34-35	2
2.	Silage making		
a)	Introduction	36	1
b)	Method of silage making	37-38	2
c)	How to give silage to animals	39	1
d)	Precautions	40	2
e)	Usefulness	41	1
3.	Hay making		-
a)	Introduction	42	1
b)	Method of hay making	43-44	2
c)	Usefulness of hay	45	1
d)	Precautions	46	1

Table 16. An overview of the coverage of animal breeding in printed manual

S. No.	Message/sub-message	Pages	Picture
I.	Animal Breeding		
a)	Introduction	47-48	3
2.	Time of first pregnancy	49	-
3.	Symptoms of heat	50-51	2
4.	Time for insemination	52	-
5.	Care during pregnancy	53-55	1
6.	Care during parturition	56	-
7.	Care of calf	57-59	4

mouth diseases, mastitis and pneumonia which were further categorized into 1, 5, 4 and 3 sections, respectively. Introduction of the message contain two pages and two pictures. In sub-message two there are 6 pages and 7 pictures. In sub-message Mastitis there was 4 pages and 9 pictures and in last sub-message there was 3 pages and 3 pictures. In this message maximum number of pictures were incorporated so that rural women could understand the message easily and effectively. This message was very important for rural women so that they know the symptoms and causes of these diseases and prevent their animals from these dangerous diseases.

4.4 Effectiveness and standardization of media package

The media so prepared were subjected to 30 judges to assess their effectiveness in terms of several parameters selected separately for video cassette/CD and printed manual as described in methodology. The findings are presented as below :

4.4.1 Profile of judges

Details of the personal profile of the judges, with respect to age, background, marital status, educational qualification, designation, experience, nature of job, have been incorporated in Table 18 and Fig. 7.

Table 17. An overview of the coverage of animal diseases and their prevention in printed manual

S. No.	Message/sub-message	Pages	Picture
1.	Introduction	60-61	2
2.	Foot and mouth disease		
a)	Introduction	62	-
b)	Reasons for spread of disease	63	1
c)	Symptoms	64-65	6
d)	Treatment	66	-
e)	Prevention	67	-
3.	Mastitis		
a)	Introduction	68	1
b)	Reasons for disease	69	2
c)	Symptoms	70	3
d)	Prevention	71	3
4.	Pneumonia		
a)	Introduction	72	-
b)	Reasons	73	1
c)	Prevention	74	2

Age

Age wise distribution of the respondents revealed that majority of the judges were of high age group (66.67%) followed by the age group of 30 to 40 years of age (33.33%).

Background

Majority of the judges (73.33%) belonged to rural areas, whereas only 26.67 per cent belonged to urban areas.

Marital status

Most of the judges (83.33%) were married. 13.33 per cent were unmarried while only 3.33 per cent judges were found to be divorced.

Educational qualification

On the basis of educational qualification it is apparent from the Table 18 that 56.67 per cent of judges were highly qualified i.e. Ph.D. degree holders whereas 43.33 per cent possessed M.Sc. degree in different fields.

Field of specialization

Majority of the judges were having Home Science Extension Education as their field of specialization (66.67%) followed by animal husbandry (16.67%), Foods and Nutrition (10.00%) and only 6.66 per cent judges were having Family Resource Management as their field of specialization.

Table 18. Profile of judges**N=30**

S. No.	Variables	Frequency	Percentage
1.	Age (years)		
i)	20-30	00	0.00
ii)	30-40	10	33.33
iii)	40 and above	20	66.67
2.	Background		
i)	Rural	22	73.33
ii)	Urban	08	26.67
3.	Marital status		
i)	Married	25	83.33
ii)	Unmarried	04	13.33
iii)	Divorced	01	3.33
4.	Educational qualifications		
i)	M.Sc./M.A.	13	43.33
ii)	Ph.D.	17	56.67
5.	Field of specialization		
i)	Home Science Extension Education	20	66.67
ii)	Foods and Nutrition	03	10.00
iii)	Animal Husbandry	05	16.67
iv)	Family Resource Management	02	6.66
6.	Designation		
i)	Senior Research Fellow/Technical Assistant/Senior Technical Assistant/Research Associate	16	53.33
ii)	Assistant Professor/equivalent	04	13.33
iii)	Associate Professor/equivalent	08	26.67
iv)	Professor	02	6.67
7.	Experience (years)		
i)	1-10	15	50.00
ii)	11-20	10	33.33
iii)	21 and above	05	16.67
8.	Nature of job		
i)	Teaching	05	16.67
ii)	Research	16	53.33
iii)	Extension	09	30.00

Designation

As far as cadre/designation was concerned, out of total more than fifty per cent of the judges were Senior Technical Assistant/Technical Assistant/Senior Research Fellow/Research Associate followed by Associate Professors and equivalent (26.67%), Assistant Professor or equivalent (13.33%) and only 6.67 per cent were Professor/equivalent.

Experience

Number of years spent by the judges in job were found to be less than 10 years in fifty per cent of cases followed by 11-20 years (33.33%) and more than 20 years (16.67%).

Nature of job

Nature of job of judges were research, extension and teaching (53.33, 30.00 and 16.67%) respectively.

4.4.2 Effectiveness of printed manual

The effectiveness of printed manual was measured by scale of Midha (2001). The weighted mean scores were computed from the thorough evaluation done by the judges for all the messages on various parameters.

4.4.2.1 Accuracy of various messages related to animal husbandry manual perceived by judges

Accuracy of animal husbandry messages was assessed under six attributes of accuracy. Table 19 indicate that accuracy in terms of understanding of the title, repetition of information, clarity of printing, size of typing, appropriateness of language and free from grammatical spelling and other typographical errors were perceived to be high for all the messages viz., clean milk production, balanced feeding, preservation of green fodder, breeding and animal diseases and their prevention.

Overall weighted mean score shows that accuracy of manual was perceived to be highest for the message M_1 (clean milk production) and M_2 (balanced feeding) followed by M_4 (breeding), M_5 (animal diseases and their prevention) and M_3 (preservation of green fodder).

4.4.2.2 Coverage of various messages related to animal husbandry manual perceived by judges

The data presented in Table 20 show that coverage of information on animal husbandry was high for all the messages and the weighted mean score for five messages ranged between 2.80 to 2.90. Thus it clearly indicates that contents related to these messages were covered properly.

Table 19. Accuracy of various messages related to animal husbandry manual perceived by judges

Attributes of accuracy	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
Understanding of the title	3.00	3.00	3.00	3.00	2.97
Free from grammatical spelling and other typographical errors	2.80	2.80	2.77	2.80	2.80
Repetition of information	2.93	2.87	2.90	2.87	2.93
Clarity of printing	2.93	2.97	2.93	2.97	2.90
Size of typing	2.90	2.90	2.87	2.83	2.87
Appropriateness of language	2.90	2.93	2.83	2.93	2.90
Overall mean score	2.91	2.91	2.88	2.90	2.90

Maximum mean score is 3.00

Low - 1 – 1.66
 Medium - 1.67 – 2.32
 High - 2.33 – 3.00

4.4.2.3 Objectivity of various messages related to animal husbandry manual perceived by judges

The data presented in Table 21 reveal that objectivity of the printed manual was perceived to be high for all the messages and the overall mean score for all the five messages was high. Thus, it clearly indicate that write up of all the messages was clearly stated, self explanatory and information appeared to be valid and well researched.

4.4.2.4 Writing styles of various messages related to animal husbandry manual perceived by judges

Regarding writing style it can be observed from Table 22 that majority of the judges were of the opinion that main points in manual were more emphasized and all the messages and main headings are differentiated from each other. It might be due to the reason that all the headings and subheadings were in different colours resulting in ease in searching the related contents. Majority of the judges perceived that repetition of words was avoided carefully and informations are very simple in nature and had no doubts for all the five messages. The overall mean score for writing style was perceived to be high for all the five messages which clearly indicates that all the messages were very clear in writing.

Table 20. Coverage of various messages related to animal husbandry manual perceived by judges

Attributes of coverage	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
Message cover all the necessary information	2.90	2.90	2.83	2.80	2.90
Overall mean score	2.90	2.90	2.83	2.80	2.90

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

Table 21. Objectivity of various messages related to animal husbandry manual perceived by judges

Attributes of objectivity	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
Write up of all messages clearly stated/self explanatory	2.90	2.90	2.87	2.90	2.93
Information appear to be valid and well researched	2.96	2.90	2.93	2.96	2.93
Overall mean score	2.93	2.90	2.90	2.93	2.93

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

Table 22. Writing styles of various messages related to animal husbandry manual perceived by judges

Attributes of writing style	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
The main points were more emphasized	2.97	2.97	2.97	2.97	2.97
All the messages/ main headings are differentiated from each other	2.87	2.87	2.87	2.87	2.87
Information of messages are complex in nature and having some doubts	2.93	2.93	2.93	2.93	2.93
Some words repeated again and again which creates boredom	2.90	2.87	2.90	2.87	2.87
Overall mean score	2.92	2.97	2.92	2.97	2.91

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

4.4.2.5 Content presentation of various messages related to animal husbandry manual perceived by judges

Overall mean score related to content presentation are presented in Table 23. The data clearly indicate that as far as judges opinion on its attributes was concerned it was reported that the material managed in a logical sequence and in proper grouping. Usefulness of the information was perceived to be high because this parameter attain highest mean score for the message M₅ (animal diseases and their prevention), followed by M₁ (clean milk production), M₂ (balance feeding), M₄ (breeding) and M₃ (preservation of green fodder). This may be due to the reason that all the work related to animal husbandry are performed by rural women in Haryana and that is the reason that the information was found useful for them.

4.4.2.6 Illustrations of various messages related to animal husbandry manual perceived by judges

Table 24 clearly indicate that effectiveness in terms of illustrations of various messages related to manual was perceived to be high for all the messages. Thus, it is clear from the table that layout of the picture was accurate as per content for all the five messages.

Table 23. Content presentation of various messages related to animal husbandry manual perceived by judges

Attributes of content presentation	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
Material managed in logical sequence and grouping	2.97	2.93	2.93	2.93	2.93
Technical terms	2.80	2.73	2.77	2.70	2.73
Usefulness of the information	2.97	2.97	2.87	2.97	3.00
Completeness of message	2.77	2.77	2.80	2.80	2.80
Ease in reading	2.93	2.97	2.93	2.93	2.93
Length of message	2.87	2.93	2.90	2.90	2.90
Overall mean score	2.89	2.88	2.87	2.88	2.89

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

Table 24. Illustration of various messages related to animal husbandry manual perceived by judges

Attributes of illustration	Weighted Mean Score				
	Messages				
	M₁	M₂	M₃	M₄	M₅
Layout of the pictures/illustration/graphics is accurate to per content	2.90	2.90	2.90	2.90	2.90
Overall mean score	2.90	2.90	2.90	2.90	2.90

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

Table 25. Compatibility of various messages related to animal husbandry manual perceived by judges

Attributes of Compatibility	Weighted Mean Score				
	Messages				
	M₁	M₂	M₃	M₄	M₅
Presentation of material of various messages is according to audience background	2.87	2.97	2.93	2.87	2.97
Overall mean score	2.87	2.97	2.93	2.87	2.97

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

4.4.2.7 Compatibility of various messages related to animal husbandry manual perceived by judges

The results presented in Table 25 clearly show that the compatibility of printed manual was also found to be high for all the messages. Thus, it clearly indicate that presentation of material on various messages was according to audience background needs, interest, customs and value system.

4.4.3 Effectiveness of video cassette/CD ROM

Effectiveness of video cassette/CD ROM entitled, “Pashu Palan Hetu Takniki Jankari” was assessed through judges on selected parameters like audio quality, visual quality, presentation of message, content and text. The weighted mean scores were computed from the thorough evaluation done by the judges for all the messages.

4.4.3.1 Audio quality of various messages related to animal husbandry video cassette/CD perceived by judges

The audio quality of video cassette/CD ROM was assessed through 10 criteria given in Table 26. It is clear from the table that audio quality in terms of voice, pitch of voice, interest orientation, language, comprehension, accuracy, sequence, understandability, music, was found to be high by most of the judges. None of the judge evaluated low on any aspect of audio quality. Overall mean score was found to be highest in case of clean milk production (2.60). It was therefore concluded that audio rating of the video cassette/CD prepared on various husbandry messages was quite high and can be used successfully for extensive exposure.

Table 26. Audio quality of various messages related to animal husbandry video cassette/CD perceived by judges

Attributes of audio quality	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
Voice	2.47	2.47	2.53	2.50	2.43
Pitch of voice	2.53	2.47	2.47	2.47	2.50
Interest orientation	2.63	2.57	2.57	2.53	2.50
Languge	2.60	2.63	2.67	2.60	2.60
Comprehension	2.60	2.53	2.50	2.63	2.60
Accuracy	2.53	2.60	2.50	2.47	2.53
Sequence	2.67	2.60	2.70	2.70	2.70
Understandability	2.67	2.67	2.60	2.67	2.67
Obstructions (background)	2.60	2.60	2.53	2.60	2.60
Music	2.67	2.63	2.63	2.63	2.63
Overall mean score	2.60	2.58	2.57	2.58	2.58

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

4.4.3.2 Visual quality of various messages related to animal husbandry video cassette/CD perceived by judges

Table 27 illustrates the visual quality testing in terms of eleven parameters as evaluated by the judges. It is evident from the table that visual quality in terms of clarity of pictures, perception, interest orientation, attention catching, self explanation, sequence, general set up, colour, tuning with commentary, impressive was found to be high in the opinion of most of the judges. Only one parameter size of illustration was perceived to be moderate for all the messages. It can therefore be inferred that the visual status of the prepared video cassette/CD has been rated to be of good quality.

4.4.3.3 Presentation of various messages related to animal husbandry video cassette/CD perceived by judges

Various parameters related to presentation of message on video cassette/CD along with their weighted mean score by judges are furnished in Table 28. It is clear from the table that most of the judges evaluated the video cassette/CD high in terms of speed of presentation, simplicity, style of presentation, explaining ideas and message treatment for all the messages. None of the judge perceived any of the parameters as low in video cassette/CD. The overall mean score showed that M₃ (preservation of green fodder) was perceived to be high for presentation (2.68) followed by clean milk production (2.64), balanced feeding (2.63), animal diseases and their prevention (2.61) and breeding (2.60)

Table 27. Visual quality of various messages related to animal husbandry video cassette/CD perceived by judges

Attributes of visual quality	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
Clarity of pictures	2.73	2.70	2.67	2.60	2.63
Size of illustration	2.33	2.37	2.33	2.33	2.33
Perception	2.63	2.60	2.57	2.53	2.63
Interest orientation	2.77	2.73	2.70	2.67	2.70
Attention catching	2.77	2.77	2.73	2.80	2.83
Self explanation	2.70	2.70	2.63	2.57	2.60
Sequence	2.60	2.57	2.53	2.60	2.57
General set up	2.60	2.47	2.50	2.50	2.50
Colour	2.63	2.57	2.53	2.50	2.47
Tuning with commentary	2.47	2.50	2.47	2.50	2.43
Impressive	2.50	2.53	2.57	2.47	2.53
Overall mean score	2.61	2.59	2.57	2.55	2.57

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

Table 28. Presentation of various messages related to animal husbandry video cassette/CD perceived by judges

Attributes of presentation	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
Speed of presentation	2.67	2.63	2.60	2.63	2.63
Simplicity	2.67	2.67	2.67	2.60	2.67
Style of presentation	2.57	2.53	2.57	2.53	2.53
Explaining ideas	2.67	2.67	2.67	2.67	2.67
Message treatment	2.63	2.60	2.57	2.57	2.57
Overall mean score	2.64	2.62	2.68	2.60	2.61

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

as against a maximum of 3.0 indicating thereby that desired message on animal husbandry had been well organized and presented well in the video cassette/CD.

4.4.3.4 Content of various messages related to animal husbandry video cassette/CD perceived by judges

Table 29 reveal that content importance of video cassette/CD was perceived high by most of the judges in terms of all the five attributes i.e. informativeness, technical terms, coverage, relevancy and usefulness for all the five messages. The overall mean score of all the messages were also perceived to be high ranging from 2.59 to 2.65 indicating that the quality of content coverage and its relevance and appropriateness to the subject was quite high.

4.4.3.5 Text of various messages related to animal husbandry video cassette/CD perceived by judges

The data presented in Table 30 highlight that text given in video cassette/CD was perceived to be high by most of the judges in terms of both the attributes clarity of text and size of text for all the five messages. The overall mean score of all the messages were also perceived to be high ranging from 2.55 to 2.57 indicating that the clarity of text and size of text is appropriate and it was clearly visible.

Banarjee (1976) also indicated that video film met the local requirements than broadcast on television. Srivastava (1981), Bhatnagar *et al.* (1987), Dubey and Bhanja (1987), Singh (1987), Kumar and Singh (1988), Sethi (1993), Sharma (2003) and Yadav (2004) also observed similar perception about video

Table 29. Content of various messages related to animal husbandry video cassette/CD perceived by judges

Attributes of content	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
Informativeness	2.70	2.67	2.67	2.63	2.53
Technical terms	2.63	2.57	2.57	2.53	2.53
Coverage	2.57	2.60	2.63	2.60	2.70
Relevancy	2.67	2.67	2.67	2.60	2.70
Usefulness	2.70	2.70	2.67	2.57	2.67
Overall mean score	2.65	2.64	2.64	2.59	2.63

***Maximum mean score is 3.00**

Low - 1 – 1.66

Medium - 1.67 – 2.32

High - 2.33 – 3.00

cassettes developed and tested by them. It can be concluded that the quality parameters of video cassette/CD prepared on “animal husbandry practices” have been perceived quite high by a large majority of judges.

4.4.4 Standardization of manual and video cassette/CD

Two major characteristics of a standardized tool are the reliability and validity of its items. Reliability and validity of printed manual and video cassette/CD were evaluated to standardize the same. Field applicability of various animal husbandry messages incorporated in printed manual and video cassette/CD was also tested. A number of studies cited by Kumari (1998), Dabas (2000), Midha (2001), Sareen (2001) and Yadav (2004) have also reported standardization in terms of reliability, validity as well as field applicability. The results of the study are presented under following sub-headings.

4.4.4.1 Validity of the printed manual and video cassette/CD

Validity indicates the accuracy with which the package measures what it intends to measure. Evidence of content validity which were used to determine the validity of the developed media are presented as under. Content validity is partly a matter of determining if the contents and format (clarity of printing, size of typing, adequacy of work space) that the package contains is an adequate sample of the domain of concept it is supposed to represent (Frankel and Wallen, 1996).

Table 30. Text of various messages related to animal husbandry video cassette/CD perceived by judges

Attributes of text	Weighted Mean Score				
	Messages				
	M ₁	M ₂	M ₃	M ₄	M ₅
Clarity of text	2.57	2.60	2.60	2.57	2.57
Size of text	2.53	2.53	2.50	2.53	2.53
Overall mean score	2.55	2.57	2.55	2.55	2.55

***Maximum mean score is 3.00**

Low - 1 – 1.66
 Medium - 1.67 – 2.32
 High - 2.33 – 3.00

Table 31. Content validity ratio (CVR) for printed manual perceived by judges

Sr. No.	Attributes	Messages				
		M ₁	M ₂	M ₃	M ₄	M ₅
1.	Accuracy	0.82*	0.82*	0.78*	0.80*	0.79*
2.	Objectivity	0.90*	0.83*	0.83*	0.90*	0.90*
3.	Coverage	0.87*	0.87*	0.73*	0.70*	0.87*
4.	Content presentation	0.78*	0.78*	0.75*	0.75*	0.78*
5.	Writing style	0.83*	0.81*	0.85*	0.85*	0.83*
6.	Compatibility	0.73*	0.93*	0.87*	0.73*	0.93*
7.	Illustration	0.80*	0.80*	0.80*	0.80*	0.80*

***Significant at 5% level of significance.**

4.4.4.1.1 Content validity ratio for printed manual perceived by judges

Table 31 indicate the value of the content validity ratio (CVR) for all attributes of content and format in term of accuracy, objectivity, coverage, content presentation, writing style, illustration and compatibility (Fig. 8).

It was observed that for all the messages viz., clean milk production, balanced feeding, preservation of green fodder, breeding and animal diseases and their prevention, content validity ratio was found to be significant as calculated values exceed the tabulated values ranging from 0.70 to 0.93.

Minimum CVR recommended at 5 per cent level for 30 judges is 0.40 (Lawshe, 1975). Therefore, it may be concluded that all the attributes of content and format for all the messages were valid to be included in printed manual.

4.4.4.1.2 Overall content validity ratio (CVR) for printed manual

Perusal of data in Table 32 indicate that the overall content validity ratio (CVR) values for printed manual in terms of accuracy, coverage, objectivity, content presentation, illustration, writing style and compatibility was perceived to be significant (0.82) at 5 per cent level of significance (as per Lawshe, 1975). Thus, it can therefore be concluded that judges approved the content and format for all the messages to be included in printed manual.

4.4.4.1.3 Content validity ratio related to attributes of video cassette/CD perceived by judges

Table 33 reveals that the value of the content validity ratio (CVR) for all attributes in terms of visual quality, audio quality, presentation of message,

Table 32. Overall content validity ratio (CVR) for printed manual perceived by judges

Attributes	CVR value
Overall rating of manual for accuracy, objectivity, coverage, content presentation, writing style, compatibility and illustration	0.82*

***Significant at 5% level of significance.**

Table 33. Content validity ratio (CVR) related to attributes of video cassettes/CD perceived by judges

Sr. No.	Attributes	Messages				
		M ₁	M ₂	M ₃	M ₄	M ₅
1.	Visual quality	0.76*	0.78*	0.72*	0.76*	0.74*
2.	Audio quality	0.70*	0.74*	0.70*	0.70*	0.70*
3.	Content importance and suitability	0.82*	0.80*	0.79*	0.73*	0.78*
4.	Presentation of message	0.80*	0.84*	0.82*	0.80*	0.80*
5.	Text	0.75*	0.72*	0.73*	0.79*	0.79*

***Significant at 5% level of significance.**

content importance and suitability and text (Fig. 9). It was observed that for all the messages viz., clean milk production, balanced feeding, preservation of green fodder, breeding and animal diseases and their prevention CVR was found to be significant. Calculated value exceeds the tabulated values ranging from 0.70 to 0.84.

Minimum CVR recommended at 5 per cent level for 30 judges is 0.40 (Lawshe, 1975). Therefore, it may be concluded that all the attributes of messages were valid to be included in video cassette/CD.

4.4.4.1.4 Overall content validity ratio (CVR) for video cassette/CD perceived by judges

Perusal of data in Table 34 indicates that the overall content validity ratio (CVR) for video cassette/CD in terms of visual quality, audio quality, content importance and suitability, presentation of message and text was perceived to be significant (0.79) at 5 per cent level of significance (as per Lawshe, 1975). Thus, it can be concluded that judges approved the messages to be included in video cassette/CD.

4.4.4.2 Reliability of printed manual and video cassette/CD

Reliability refers to the consistency of the scores obtained. Inter consistency reliability was estimated and reported for the printed manual and prepared video cassette/CD.

Table 34. Overall content validity ratio (CVR) for video cassette/CD perceived by judges

Attributes	CVR value
Overall rating of Video cassette/CD for visual quality, audio quality, presentation of message, content importance and suitability and text	0.79*

***Significant at 5% level of significance.**

Table 35. Reliability coefficients of printed manual perceived by judges

Attributes of content and format	Reliability	M₁	M₂	M₃	M₄	M₅
Accuracy, coverage, objectivity, content presentation, illustrations, writing style and compatibility	Inter consistency methods (split half technique)	0.70*	0.74*	0.82*	0.70*	0.73*

***Significant at 5% level of significance.**

4.4.4.2.1 Reliability coefficients of printed manual

Split half technique was used as measure of inters consistency and it was depicted in Table 35 along with reliability (r) values. It is found high for all the messages covered under printed manual i.e. cleaning milk production (0.70), balanced feeding (0.74), preservation of green fodder (0.82), breeding (0.70) and animal diseases and their prevention (0.73). All the values of reliability coefficient was found to be statistically significant at 5 per cent level (Fig. 10).

4.4.4.2.2 Overall reliability of the printed manual

Overall inter consistency reliability (0.73) as depicted in Table 36 for printed manual was found to be statistically significant at 5 per cent level of significance.

Thus, it may be concluded that inter consistency reliability for all the messages covered in printed manual as well as individual messages of manual was found to be statistically high at 5 per cent level of significance, which shows that all the attributes of content and format were found to be suitable to be included in manual. Frankel remarked in 1996 that for research purposes, thumb rule is that reliability should be at least 0.70 and preferably higher.

4.4.4.2.3 Reliability coefficient of the video cassette/CD

Split half technique was used as a measure of inter consistency. Inter consistency reliability of video cassette is depicted in Table 37 which was quite high for all the messages covered under video cassette/CD i.e. clean milk production (0.79), balanced feeding (0.74), preservation of green fodder (0.70),

Table 36. Overall reliability of printed manual perceived by judges

Attributes	<i>Split half techniques</i>
Overall rating of manual in terms of accuracy, coverage, objectivity, content presentation, illustration, writing style and compatibility	0.73*

***Significant at 5% level of significance.**

Table 37. Reliability coefficients of video cassette/CD perceived by judges

Attributes of content and format	Reliability	M₁	M₂	M₃	M₄	M₅
Visual quality, audio quality, presentation of message, content importance and suitability and text	Inter consistency methods (split half technique)	0.79*	0.74*	0.70*	0.72*	0.80*

***Significant at 5% level of significance.**

breeding (0.72) and animal diseases and their prevention (0.80). Calculated 'r' values indicates high degrees of inter consistency towards various messages included in video cassette/CD (Fig. 11).

4.4.4.2.4 Overall reliability of the video cassette/CD

Data presented in Table 38 show that overall inter consistency reliability (0.75) for video cassette/CD was found to be statistically significant at 5 per cent level of significance. Thus, it may be concluded that overall reliability for all the messages covered in video cassette/CD was found to be statistically high which shows that all the attributes of content and format were found to be suitable to be included in video cassette/CD.

4.4.4.3 Perceived field applicability of messages by judges

Field applicability perceived by the judges for various messages have been presented in Table 39.

The data show that the 'clean milk production' [weighted mean score (WMS) – 2.91, Perceived Field Applicability Index (PFAI)– 97.00] and balanced feeding (WMS 2.91, PFAI 97.00) was perceived highly applicable followed by preservation of green fodder and animal diseases and their prevention (WMS – 2.89, PFA I – 96.33) in both the cases and breeding (WMS – 2.87, PFA I – 95.67). This might be due to the fact that judges were quite convinced about all the animal husbandry messages for the rural women (Fig. 12).

Table 38. Overall reliability of the video cassette/CD perceived by judges

Attributes	Reliability coefficient (split half techniques)
Overall rating of video cassette/CD (audio quality, visual quality, presentation of message, content importance and suitability and text)	0.75*

*Significant at 5% level of significance.

Table 39. Field applicability of various messages related to animal husbandry for rural women perceived by judges

Sr. No.	Attributes of field applicability	Weighted mean score				
		Messages				
		M ₁	M ₂	M ₃	M ₄	M ₅
1.	Relative advantage	2.93	2.90	2.87	2.87	2.87
2.	Cultural compatibility	2.97	2.93	2.90	2.93	2.93
3.	Physical compatibility	2.90	2.93	2.93	2.87	2.93
4.	Simplicity/complexity	2.97	2.97	2.97	2.93	2.93
5.	Triability	2.80	2.80	2.80	2.73	2.80
	Overall weighted mean score	2.91	2.91	2.89	2.87	2.89
	Perceived field applicability index	97.00	97.00	96.33	95.67	96.33

Maximum mean score is 3.00.

Low : 1 – 1.66
 Medium : 1.67 – 2.32
 High : 2.33 – 3.00

It was also observed that for all the messages relative advantage was found to be high for clean milk production (2.93) followed by balanced feeding (2.90), preservation of green fodder, breeding and animal diseases and their prevention (2.87). Cultural compatibility was perceived to be high for clean milk production (2.97), balanced feeding, breeding, animal diseases and their prevention (2.93) and preservation of green fodder (2.90).

Physical compatibility, simplicity/complexity and triability was also perceived to be high in all the messages.

4.5 Impact of video cassette/CD on rural women

Impact of prepared video cassette/CD was assessed in term of gain in knowledge and change in attitude. Assessment of pre exposure scores for both the attributes was done before the introduction of video cassette/CD. The post exposure scores were measured after seven days of exposure of the video cassette/CD. The results have been presented under following heads :

4.5.1 Gain in knowledge of rural women regarding animal husbandry practices

4.5.2 Change in attitude of rural women regarding animal husbandry practices

4.5.3 Impact assessment of video cassette/CD

4.5.1 Gain in knowledge of rural women regarding animal husbandry practices

The pre-exposure and post-exposure mean scores and 't' test were computed for all the selected messages of animal husbandry practices in all the

four districts viz., Kurukshetra, Bhiwani, Faridabad and Hisar districts of Haryana state.

The pre-exposure and post-exposure mean scores and 't' test were computed for all the messages of animal husbandry practices of village Bhorsainda are presented in Table 40. It is evident that respondents succeeded in acquiring knowledge at the post-exposure level. Sufficient gain in knowledge regarding animal husbandry practices was recorded for each messages viz., clean milk production, balanced feeding, preservation of green fodder, breeding and animal diseases and their prevention. The overall knowledge show sufficient increase in knowledge regarding animal husbandry practices after exposing through video cassette/CD (Fig. 13). Thus, it may be inferred that exposure to video cassette/CD had succeeded in gaining sufficient level of knowledge by respondents for all the messages of animal husbandry practices.

The data presented in Table 41 clearly points to the fact that respondents succeeded in acquiring knowledge at post exposure level (Fig. 14). Sufficient gain in knowledge was recorded for all the messages viz. clean milk production, balanced feeding, preservation of green fodder, breeding and animal diseases and their prevention of animal husbandry practices in Milkpur village of Bhiwani district. Thus, it may be inferred that exposure to video cassette/CD had increased the knowledge of rural women regarding animal husbandry practices.

Table 40. Gain-in knowledge of rural women regarding animal husbandry practices in Bhorsainda village of Kurukshetra district

Sr. No.	Messages	Pre-exposure (Mean score)	Post-exposure (Mean score)	Gain-in knowledge (Mean score)	't' values
1.	Clean milk production	0.50	14.00	13.50	32.36*
2.	Balanced feeding	0.86	16.66	15.80	39.33*
3.	Preservation of green fodder	0.60	9.50	8.90	31.07*
4.	Breeding	0.63	8.66	8.03	41.25*
5.	Animal diseases and their prevention	1.40	24.03	22.63	39.68*
6.	Overall knowledge	3.99	72.85	68.86	60.29*

***Significant at 5% level of significance.**

Table 41. Gain-in knowledge of rural women regarding animal husbandry practices in Milkpur village of Bhiwani district

Sr. No.	Messages	Pre-exposure (Mean score)	Post-exposure (Mean score)	Gain-in knowledge (Mean score)	't' values
1.	Clean milk production	2.33	15.13	12.80	24.97*
2.	Balanced feeding	1.26	19.46	18.20	28.66*
3.	Preservation of green fodder	0.03	9.36	9.33	39.45*
4.	Breeding	0.83	8.89	8.06	23.11*
5.	Animal diseases and their prevention	2.03	24.09	22.06	25.57*
6.	Overall knowledge	6.48	76.93	70.45	44.14*

***Significant at 5% level of significance.**

It is evident from the data in Table 42 that there was sufficient difference between pre-exposure and post-exposure knowledge of respondents for animal husbandry practices. Sufficient gain in knowledge for all the selected messages of animal husbandry practices was recorded (Fig. 15). Thus, it may be concluded that knowledge of respondents had increased to significant level after exposure of video cassette/CD in village Prithla of Faridabad district.

It is evident from Table 43 that respondents succeeded in acquiring knowledge at the post-exposure level. Sufficient gain-in knowledge regarding animal husbandry practices was recorded for all the selected messages in village Kaimari of Hisar district (Fig. 16). Thus, it may be inferred that exposure to video cassette/CD had succeeded in gaining the sufficient level of knowledge of rural women regarding animal husbandry practices.

Pre-exposure, post-exposure and gain-in knowledge mean scores of respondents were computed for all the selected messages of animal husbandry practices and have been incorporated in Table 44. It clearly point to the fact that respondents of all districts viz., Kurukshetra, Bhiwani, Faridabad and Hisar succeeded in acquiring knowledge at post-exposure level. Sufficient gain-in knowledge was recorded for all the messages in all the four districts viz. Kurukshetra, Bhiwani, Faridabad and Hisar district (Fig. 17).

Thus, it may be inferred that exposure to video cassette/CD had succeeded in gaining sufficient level of knowledge by rural women regarding animal husbandry practices in all the four selected districts of Haryana state.

Table 42. Gain-in knowledge of rural women regarding animal husbandry practices in Prithla village of Faridabad district

Sr. No.	Messages	Pre-exposure (Mean score)	Post-exposure (Mean score)	Gain-in knowledge (Mean score)	't' values
1.	Clean milk production	3.10	16.60	13.50	44.67*
2.	Balanced feeding	2.53	20.46	17.93	24.49*
3.	Preservation of green fodder	0.30	10.63	10.33	33.87*
4.	Breeding	2.56	10.73	8.17	20.35*
5.	Animal diseases and their prevention	1.66	23.96	22.30	20.05*
6.	Overall knowledge	10.15	82.38	72.23	39.36*

***Significant at 5% level of significance.**

Table 43. Gain-in knowledge of rural women regarding animal husbandry practices in Kaimari village of Hisar district

Sr. No.	Messages	Pre-exposure (Mean score)	Post-exposure (Mean score)	Gain-in knowledge (Mean score)	't' values
1.	Clean milk production	2.00	14.80	12.80	21.30*
2.	Balanced feeding	1.60	19.43	17.83	36.99*
3.	Preservation of green fodder	0.00	9.33	9.33	29.57*
4.	Breeding	1.30	9.96	8.66	32.26*
5.	Animal diseases and their prevention	2.53	24.00	21.47	29.35*
6.	Overall knowledge	7.43	77.52	70.09	30.56*

***Significant at 5% level of significance.**

4.5.2 Change in attitude of rural women regarding animal husbandry practices in selected district of Haryana state

The pre-exposure, post-exposure and change in attitude mean scores along with 't' values have been presented in Table 45. It is evident from the results that respondents had succeeded in changing their attitude at the post-exposure level. Significant change in attitude regarding all the selected messages of animal husbandry practices was observed in all the selected districts of Haryana state (Fig. 18).

Thus, it may be inferred that exposure to video cassette/CD had changed the attitude of rural women to significant level in all the four selected districts viz., Kurukshetra, Bhiwani, Faridabad and Hisar of Haryana state.

4.5.3 Impact assessment of video cassette/CD

For determining the actual impact of video cassette/CD, indices were prepared and results obtained have been presented in ensuing tables. The impact percentages have been divided into three categories viz., <33 low impact; 33-66 moderate impact and >66 high impact.

The impact assessment of video cassette/CD regarding animal husbandry practices on rural women of Bhorsainda village of Kurukshetra district were presented in Table 46 indicates the calculated impact was found to be 69.26 per cent which is more than 66 per cent and of high level. Thus, it may be inferred that women respondents after exposing through video cassette/CD could acquire knowledge and change their attitude to the extent of high level.

Table 44. Gain-in knowledge of rural women regarding animal husbandry practices in selected districts of Haryana state

Sr. No.	Messages	Pre-exposure (Mean score)	Post-exposure (Mean score)	Gain-in knowledge (Mean score)	't' values
1.	Clean milk production	1.98	15.13	13.15	55.94*
2.	Balanced feeding	1.56	19.00	17.44	58.43*
3.	Preservation of green fodder	0.23	9.70	9.47	64.13*
4.	Breeding	1.33	9.62	8.29	52.70*
5.	Animal diseases and their prevention	1.89	24.00	22.11	52.97*
6.	Overall knowledge	6.99	77.39	70.40	80.40*

***Significant at 5% level of significance.**

Table 45. Change in attitude of rural women regarding animal husbandry practices in selected districts of Haryana state

Sr. No.	Name of districts	Pre-exposure (Mean score)	Post-exposure (Mean score)	Change in attitude (Mean score)	't' values
1.	Kurukshetra	14.33	29.73	15.40	32.19*
2.	Faridabad	13.60	33.36	19.76	30.59*
3.	Bhiwani	14.76	32.32	17.56	28.71*
4.	Hisar	14.36	29.02	14.66	32.53*
5.	<i>Overall</i>	14.26	31.11	16.85	51.28*

***Significant at 5% level of significance.**

Table 46. Impact assessment index of video cassette/CD on gain in knowledge and change in attitude of rural women in Bhorsainda village of Kurukshetra district

<i>Attitude</i> \ <i>Knowledge</i>	High (3)	Medium (2)	Low (1)	Total
Highly favourable (3)	12x3x3 108	6x2x3 36	3x1x3 9	21
Favourable (2)	3x2x3 18	1x2x2 4	1x2x1 2	5
Not favourable (1)	3x1x3 9	0x1x2 0	1x1x1 1	4
Total	18	7	5	30

Percentage impact = 69.26 (High).

Table 47. Impact assessment index of video cassette/CD on gain in knowledge and change in attitude of rural women in Milkpur village of Bhiwani district

<i>Attitude</i> \ <i>Knowledge</i>	High (3)	Medium (2)	Low (1)	Total
Highly favourable (3)	5x3x3 45	1x2x3 6	0x1x3 0	6
Favourable (2)	10x2x3 60	3x2x2 12	0x2x1 0	13
Not favourable (1)	8x1x3 24	2x1x2 4	1x1x1 1	11
Total	23	6	1	30

Percentage impact = 57.77 (Moderate).

The impact assessment of video cassette/CD regarding animal husbandry practices on rural women of Milkpur village of Bhiwani district have been presented in Table 47. It clearly indicates that the calculated impact was found to be 57.77 per cent. Thus, it may be inferred that women respondents succeeded in acquiring knowledge and change their attitude to moderate extent after exposing to video cassette/CD.

The impact assessment of video cassette/CD regarding animal husbandry practices on rural women of Prithla village of Faridabad district presented in Table 48 shows that the calculated impact was found to be 61.11 per cent. This means that women respondents after exposing through video cassette/CD could acquire knowledge and change their attitude to the extent which was less than 66 per cent but of moderate level.

The impact assessment of video cassette/CD regarding animal husbandry practices on rural women of Kaimari village of Hisar district presented in Table 49 shows that the calculated impact was found to be 62.90 per cent. This speaks of the fact that farm women succeeded in acquiring knowledge and change their attitude to moderate level after exposing to video cassette/CD.

The impact assessment of video cassette/CD regarding animal husbandry practices on rural women of selected districts of Haryana state were presented in Table 50 speaks of the fact that calculated impact was found to be 62.40 per cent which is less than 66 per cent and of moderate level. Thus, the fact that

Table 48. Impact assessment index of video cassette/CD on gain in knowledge and change in attitude of rural women in Prithla village of Faridabad district

<i>Attitude</i> \ <i>Knowledge</i>	High (3)	Medium (2)	Low (1)	Total
Highly favourable (3)	8x3x3 72	4x2x3 24	0x1x3 0	12
Favourable (2)	6x2x3 36	3x2x2 12	2x2x1 4	11
Not favourable (1)	4x1x3 12	2x1x2 4	1x1x1 1	7
Total	18	9	3	30

Percentage impact = 61.11 (Moderate).

Table 49. Impact assessment index of video cassette/CD on gain in knowledge and change in attitude of rural women in Kaimari village of Hisar district

<i>Attitude</i> \ <i>Knowledge</i>	High (3)	Medium (2)	Low (1)	Total
Highly favourable (3)	5x3x3 45	3x2x3 18	0x1x3 0	8
Favourable (2)	13x2x3 78	5x2x2 20	2x2x1 4	20
Not favourable (1)	1x1x3 3	1x1x2 2	0x1x1 0	2
Total	19	9	2	30

Percentage impact = 62.90 (Moderate).

Table 50. Impact Assessment Index of video cassette/CD on gain in knowledge and change in attitude of rural women of Haryana state

<i>Knowledge</i> <i>Attitude</i>	High (3)	Medium (2)	Low (1)	Total
Highly favourable (3)	30x3x3 270	14x2x3 84	3x1x3 9	47
Favourable (2)	32x2x3 192	12x2x2 48	5x2x1 10	49
Not favourable (1)	16x1x3 48	5x1x2 10	3x1x1 3	24
Total	78	31	11	120

Percentage impact = 62.40 (Moderate).

women respondents after exposing through media exposure succeeded in gain-in knowledge and change their attitude to the extent of moderate level.

4.5.4 Relationship between socio-personal and economic variables with knowledge and attitude of the respondents

In order to find out the relationship between socio-personal and economic variables with knowledge and attitude of the respondents, Pearson product correlation coefficient was applied. The data pertaining to these aspects have been presented in following Tables.

It is evident from the Table 51 that none of the variables were found to be significant with knowledge acquisition and attitudinal change in Bhorsainda village of Kurukshetra district.

Data presented in Table 52 indicate that milch animals and material possession had positive and significant relationship with respondent's gain-in knowledge in Milkpur village of Bhiwani district. It is further clear from the Table that all other variables were found to be non significant with knowledge acquisition. It may be inferred, therefore, that respondents had large milch animals and high material possession had acquired more knowledge through video cassette/CD exposure regarding animal husbandry practices.

Only one variable occupation had positive and significant influence on attitudinal change of respondents ($r = 0.372^*$) regarding animal husbandry practices, whereas all other variables were found to be non-significant. It may,

Table 51. Relationship between socio-personal and economic and variables with gain-in knowledge and change in attitude of rural women regarding animal husbandry practices in Bhorsainda village of Kurukshetra district

N=30

S. No.	Independent variables	Knowledge 'r' value	Attitude 'r' value
1.	Age	.048	.167
2.	Caste	.281	-.009
3.	Occupation	.054	-.008
4.	Education	-.110	.002
5.	Social participation	.252	-.087
6.	Size of family	-.037	.037
7.	Type of family	.006	.102
8.	Land holding	.168	-.053
9.	Type of house	.258	-.088
10.	Farm power	.003	-.289
11.	Milch animals	.302	.014
12.	Material possession	.102	-.276

Table 52. Relationship between socio-personal and economic variables with gain-in knowledge and change in attitude of rural women regarding animal husbandry practices in Milkpur village of Bhiwani district

N=30

S. No.	Independent variables	Knowledge 'r' value	Attitude 'r' value
1.	Age	-.009	-.137
2.	Caste	-.090	-.048
3.	Occupation	-.110	.372*
4.	Education	-.014	-.302
5.	Social participation	-	-
6.	Size of family	-.078	.306
7.	Type of family	-.214	.257
8.	Land holding	-.175	.125
9.	Type of house	.154	-.077
10.	Farm power	-.065	-.129
11.	Milch animals	.375*	-.040
12.	Material possession	.375*	-.144

*Significant at 5% level of significance.

therefore, be inferred that respondents having higher occupation showed more favourable attitude towards animal husbandry practices after exposure to video cassette/CD in Milkpur village of Bhiwani district.

The data presented in Table 53 indicate that none of the variables were found to be significant with knowledge acquisition in Prithla village of Faridabad district. As far as attitudinal change was concerned two variables land holding ($r = 0.450^*$) and material possession ($r = 0.369^*$) had significant and positive relationship in Prithla village of Faridabad district.

It may be said, therefore, that respondent having high land holding and high material possession had favourable attitude towards media exposure regarding animal husbandry practices in Prithla village of Faridabad district.

Relationship between socio-personal and economic variables with gain-in knowledge and change in attitude of rural women regarding animal husbandry practices in Kaimari village of Hisar district are presented in Table 54. The data presented in Table 54 reveal that size of family and number of milch animals had positive and significant relationship with knowledge acquisition of rural women ($r = 0.529^{**}$ and $r = 0.466^{**}$ respectively). Further probe into the data indicated that variables like age, caste, occupation, education, social participation, type of family, land holding, type of house, farm power and material possession were found to be non-significant with knowledge acquisition regarding animal husbandry. It implies that respondents

Table 53. Relationship between socio-personal and economic variables with gain-in knowledge and change in attitude of rural women regarding animal husbandry practices in Prithla village of Faridabad district.

N=30

S. No.	Independent variables	Knowledge 'r' value	Attitude 'r' value
1.	Age	-.146	.136
2.	Caste	-.080	-.323
3.	Occupation	-.077	-.249
4.	Education	.145	-.189
5.	Social participation	.156	.255
6.	Size of family	.135	.052
7.	Type of family	.108	-.137
8.	Land holding	.010	.450*
9.	Type of house	.010	-.320
10.	Farm power	.080	-.343
11.	Milch animals	.140	-.089
12.	Material possession	.035	.369*

*Significant at 5% level of significance.

Table 54. Relationship between socio-personal and economic variables with gain-in knowledge and change in attitude of rural women regarding animal husbandry practices in Kaimari village of Hisar district.

N=30

S. No.	Independent variables	Knowledge 'r' value	Attitude 'r' value
1.	Age	-.119	.199
2.	Caste	.289	-.007
3.	Occupation	.273	.031
4.	Education	.212	.262
5.	Social participation	.098	.187
6.	Size of family	.529**	-.228
7.	Type of family	.097	-.282
8.	Land holding	.341	.071
9.	Type of house	.338	-.230
10.	Farm power	.273	.031
11.	Milch animals	.466*	.287
12.	Material possession	.301	.192

*Significant at 5% level of significance.

**Significant at 1% level of significance.

with large family size and who had more milch animals had acquired more knowledge regarding animal husbandry practices after exposure to video cassette/CD. None of the variables were found to be significant with attitudinal change of rural women in Kaimari village of Hisar district.

The data presented in Table 55 bring to light the relationship between socio-personal and economic variables with gain-in knowledge and change in attitude of rural women regarding animal husbandry practices in selected districts viz., Kurukshetra, Bhiwani, Faridabad and Hisar of Haryana state stated that milch animals ($r = 0.286^{**}$) and material possession ($r = 0.211^{**}$) had positive and significant relationship with knowledge acquisition regarding animal husbandry practices. It implies that respondents having large number of milch animals and high material possession had acquired more knowledge regarding animal husbandry practices after exposure to video cassette/CD.

Attitudinal change of rural women was found to be positively and significantly related with occupation ($r = 0.265^{**}$), land holding ($r = 0.194^*$), farm power ($r = 0.245^{**}$) and material possession ($r = 0.181^*$). It could be generalized, therefore, that respondents who had high occupation, large land holding, high farm power and high material possession had favourable attitude regarding animal husbandry practices after exposure to video cassette/CD.

Table 55. Relationship between socio-personal and economic variables with gain-in knowledge and change in attitude of rural women regarding animal husbandry practices in selected districts of Haryana state

N=30

S. No.	Independent variables	Knowledge 'r' value	Attitude 'r' value
1.	Age	-.051	-.052
2.	Caste	.101	.118
3.	Occupation	.068	.265*
4.	Education	.083	.146
5.	Social participation	.147	.007
6.	Size of family	.091	.164
7.	Type of family	-.041	.014
8.	Land holding	.056	.194*
9.	Type of house	.139	-.118
10.	Farm power	.028	.245**
11.	Milch animals	.286**	-.055
12.	Material possession	.211**	.181*

*Significant at 5% level of significance.

**Significant at 1% level of significance.



SUMMARY & CONCLUSION

5. SUMMARY AND CONCLUSION

The media is playing an important role in passing on meaningful information at a faster rate to the large number of farm women in our country. It has emerged as one of the powerful sources of seeking relevant scientific information by our farm women, therefore, tapping and utilizing media for transferring the newly generated technologies in agriculture and animal husbandry among the Indian farm women is crucial and of significant importance. This is mainly due to the fact that the vast majority of our farm women inhabiting in remote rural areas where facilities could not be arranged for sustainable individual or group approaches of technology transfer as it could be highly expensive and difficult in managing information infrastructure, therefore, responsibility and intervention of media in rural transformation is becoming more imperative and challenging. Undoubtedly, contribution of media in crop enterprise is noteworthy but relatively little efforts have been made to disseminate the scientific know-how amongst the livestock owners in general and rural women in particular. With the technological breakthrough in

animal husbandry, too much know-how is now available which needs to be transferred to the users to cope up with a pace of progress and time.

There is urgent need to develop the media package on animal husbandry messages to strengthen the technical know-how. Therefore, the present study was planned to develop the media package on animal husbandry messages so that the rural women can be sensitized for self-reliance.

Objectives

1. To assess information/media needs of the farm women regarding animal husbandry practices.
2. To develop and standardize media package on need based messages on animal husbandry practices.
3. To study the impact of media package on rural women for its effectiveness.

Methodology

The study was conducted in four phases, each phase having distinct methodology.

In the first phase information/media need and communication behaviour of rural women was assessed. For this four districts, one from each zone east, west, north and south were selected. 200 rural women from Bhorsainda, Milkpur, Prithla and Kaimari villages of Kurukshetra, Bhiwani, Faridabad and Hisar districts, respectively were selected randomly. For assessing the need of the rural women, an inventory pertaining to critical messages and sub-messages

was prepared and categorized under three categories most needed, needed and least needed with scores 3, 2 and 1, respectively. Weighted mean scores were worked out and ranks were assigned. Messages having top five ranks and three sub-messages from each selected messages got upper rank were finally selected for media preparation after consultation with animal science experts.

In phase two, media in the form of video cassette/CD for rural women and printed manual for field functionaries was prepared on selected messages. Standard procedures for preparation of media were adopted.

In the third phase prepared media was administered to 30 judges including animal husbandry experts, field functionaries and home scientists for effectiveness and feedback. Standardization was done in terms of reliability, validity and field applicability.

In the fourth phase, video cassette/CD was exposed to 120 rural women of four already selected villages i.e. 30 rural women from each village. The impact of media was assessed in terms of gain-in knowledge and change in attitude of rural women.

Major findings

1. Assessment of information/media needs and communication behaviour of rural women regarding animal husbandry practices

- Most of the respondents were in age group between 25-50 years, belonged to high caste, illiterate, had low family education status, negligible social participation, belonged to nuclear family, had family size up to 5 members, possessed mixed type house, had cultivation as

their main occupation, landless, gross monthly income between Rs. 10,000 to 15,000, possessed medium material possession, had 3-4 draught animals and possessed milch animals up to two.

- Regarding information input pattern, use of localite sources was of high level while cosmopolite and mass media sources were used to a medium extent.
- Information processing pattern of rural women was found to be of high level whereas, it was found to be of medium level in information dissemination pattern.
- Majority of the respondents possessed radio, two-third of them possessed T.V., half of them possessed cable T.V. and tape recorder, computer and internet connection were available only in one per cent cases.

2. Finalization of messages and sub-messages with animal husbandry experts according to need of rural women

- Five messages and 20 sub-messages were selected on the basis of weighted mean scores and ranks-after consultation with animal husbandry experts.

3. Preparation of media package

- Two media formats were prepared viz., video cassette/CD for rural women and printed manual for field functionaries.

4. Effectiveness and standardization of media package

- The effectiveness of printed manual was assessed through several parameters. Overall weighted mean scores revealed 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 message, content importance and suitability and text was rated as high. The overall effectiveness of the video cassette/CD was also high indicating thereby the cassette was quite effective in educating the respondents.
- The content validity ratio for all attributes in video cassette/CD and printed manual was found to be significant.
- Inter consistency reliability for video cassette/CD and printed manual was found to be statistically significant at 5 per cent level of significance.

5. Impact of video cassette/CD on rural women

- There was significant difference in the knowledge of rural women at pre and post-exposure stage for all the messages in the selected districts of Haryana state. The 't' values for all the messages were found to be significant.

- Significant change in attitude regarding all the selected messages of animal husbandry practices was observed in all the four selected districts of Haryana state.
- The impact assessment of video cassette/CD regarding animal husbandry practices on rural women speaks of the fact that calculated impact was found to be between 57.77 per cent to 62.90 per cent in three districts viz., Hisar, Bhiwani and Faridabad districts which is of moderate level. The impact was assessed to be high i.e. 69.26 per cent in Kurukshetra district which is of high level.
- Regarding relationship between socio-personal and economic variables with gain-in knowledge and change in attitude of rural women regarding animal husbandry practices in selected districts of Haryana state stated that milch animals ($r = 0.286^*$) and material possession ($r = 0.211^*$) had positive and significant relationship with knowledge acquisition. Attitudinal change of rural women was found to be positively and significantly related with occupation ($r = 0.265^{**}$), land holding ($r = 0.194^*$), farm power ($r = 0.245^{**}$) and material possession ($r = 0.181^*$).

Suggestions

1. It is quite encouraging to record that majority of the respondents were illiterate, yet succeeded in gaining sufficient level of knowledge and change in attitude after the media exposure. This highlights the

importance of media exposure which could further be tried on other messages for the transfer of technology in agriculture and allied fields.

2. The developed video cassette/CD needs to be standardized in consideration with specific needs of other states through Home Science Colleges, Krishi Vigyan Kendras as student research or research projects to make it area specific.
3. The parameters identified for need assessment, media development and standardization can be given wide circulation to other disciplines for guidelines in bringing out educational package on different aspects.
4. A website can be launched for field functionaries/extension specialists where related information can be contributed by experts. A website can be visited by concerned users/extension specialists for dissemination to the target group.
5. Since computers have started reaching rural areas, and these are the media of future, more and more CD ROM packages in Hindi/ colloquial language can be developed on for educating rural masses.
6. Resource centers/library in rural areas should be established by field functionaries having media package in the form of compact disc, audio-video cassette and printed material for further transmission to rural women.



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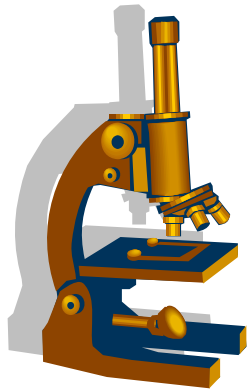
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ANNEXURES

Family type

Nuclear	1
Joint	2

Family size

Small (up to 5 members)	1
Medium (5-10 members)	2
Large (above 10 members)	3

Type of house

Katcha	1
Mixed	2
Pucca	3

Occupation

Agricultural labourer	1
Caste occupation	2
Business	3
Service	4
Cultivation	5
Any other	6

Land holding

No land	0
Up to 5 acre	1
5-10 acre	2
10-15 acre	3
above 15 acre	4

Gross income

Up to Rs. 5,000	1
5,000 to 10,000	2
10,000 to 15,000	3
Above Rs. 15,000	4

Material possession

Low Prestige Items

Stove	1	Coal iron	1
Sewing machine	1	Electric Fan	1
Cycle	1	Radio	1
Any other	1		

Medium Prestige Items

Electric iron	2	Electric Heater	2
Mixer blender/Grinder	2	Food processor	2
Juicer	2	Toaster	2
Oven	2	Immersion Rod	2
Pressure Cooker	2	Improved Storage Bins	2
Gobar Gas Plant	2	Solar Cooker	2
Sofa Set	2	Double Bed	2
Knitting Machine	2	Tape Recorder/Record player	2
Player	2	Twin-Player cum Recorder	2
Scooter/Motor Cycle	2	Dinning set	2
		Any other	2

High Prestige Items

Refrigerator	3	Cooler	3
Washing Machine	3	T.V.	3
V.C.R.	3	Camera	3
Geysers	3	Car/Jeep/Metador	3
Microwave	3	Vacuum Cleaner	3
Computer	3	Telephone	3
		Any other	3

Farm powers

1-2 draught animals			1
3-4 draught animals			2
5-6 draught animals			3
Tractor			6

Milch animals

Up to 2 animals			1
3-4 animals			2
Above 4 animals			3

B. Communication behaviour pattern of rural women**(a) Information input pattern**

S. No.	Source	Extent of use		
		Mostly (3)	Sometimes (2)	Never (1)
1.	Localite			
a)	Family members/husband			
b)	Friends/neighbours			
c)	Local leaders (female) of Mahila Mandal/Anganwadi Workers/Craft center			
d)	Panchayat members			
e)	Any other			
	Total Score			
2.	Cosmopolite			
a)	Supervisor/CDPO			
b)	University DES			
c)	DRDA officials			
d)	Any other			
	Total score			
3)	Mass Media			
a)	Radio			
b)	T.V./Video			
c)	Magazine/Newspapers			
d)	Other printed circulated materials			
e)	Films			
f)	Any other			
	Total scores			

(b) Information processing pattern

Sr. No.	Method of assessment	Frequency		
		Mostly (3)	Sometimes (2)	Never (1)
1.	Discussion with family members			
2.	Discussion with friends/neighbours			
3.	Discussion with experienced village women			
4.	Discussion with extension personnel like Aws, Craft teachers, supervisors, DES etc.			

5.	Consider the economic aspects			
6.	Consider the technical problems			
7.	Consider the availability and other facilities			
8.	Adoption by other villagers			
	Total score			

(c) Information dissemination pattern

Sr. No.	To whom	Frequency		
		Mostly (3)	Sometimes (2)	Never (1)
1.	Among the women of locality/ neighbourhood			
2.	Within the village			
3.	Outside locality/ neighbourhood			
4.	Outside the village			
i)	Nearby village			
ii)	Nearby city			
iii)	Far off city			

Mass media possessed by respondents

S. No.	Name	Possessed	Not possessed
1.	Radio		
2.	T.V.		
3.	Cable T.V.		
4.	Newspapers		
5.	Computer		
6.	Internet		
7.	Tape-recorder		
8.	Magazine		
9.	VCD		

Need assessment of rural women regarding animal husbandry practices

S. No.	Messages	Most needed (3)	Needed (2)	Least needed (1)
1.	Breeding			
i	Symptoms of heat			
ii	Heat cycle and time of breeding			
iii	Pregnancy diagnosis			
iv	Artificial insemination			
v	Time of insemination			
vi	Importance of insemination			
vii	Care during pregnancy			
viii	Care during parturition			
ix	Care after parturition			
x	Care of calf			
2.	Balanced feeding			
i	Essential nutrients in animal feed			
ii	Feeding of pregnant cow			
iii	Feeding management of milch animals			
iv	Feeding of pregnant heifers			
v	Change required in feeding of animals before and after parturition/claving			
vi	Calf feeding			
vii	Balanced ration and its composition			
viii	Mineral mixture feeding			
3.	Management of cattle shed			
i	Location and structure of dairy building			
ii	Advantages of loose housing system			
iii	Recommended areas per animals			
4.	Health care			
i	Vaccination of animals			
ii	Prevention against worms in animals			
iii	Career of diseases in animals			
iv	Disinfecting the naval of newly born calf			
v	Prevention against parasites on animals			
vi	Deworming of calf			
5.	Preservation of green fodder			
i	Silage making			
ii	Hay making			

6.	Clean milk production			
i	Fat testing at home			
ii	Cleaning before milking			
iii	Right method of milking			
iv	Usefulness of clean milk production			
v	Care to be taken after milking			
vi	Health symptoms for decline in milk			
vii	Prevention of damage of teats			
7.	Farm management and accounting			
i	Credit facilities			
ii	Insurance			
iii	Training			
iv	Record keeping			
8.	Marketing			
i	Purchase of milch animals			
ii	Purchase of feed ingredients			
iii	Sale of animals			
iv	Sale of produce			
v	Sale of produce			
vi	Characteristics of Murrah buffalo			
Vii	Age estimation of animals from teeth			
9.	Animal diseases and their prevention			
i	Diarrhea			
ii	Constipation			
iii	Repeat breeding			
iv	Retained placenta			
v	Abortion			
vi	Ectoparasite infestation			
vii	Wound			
viii	Intoxication			
ix	Endoparasite infestation			
x	Pneumonia			
xi	Cow pox			
xii	Coughing			
xiii	Foot and mouth disease			
xiv	Tuberculosis			
xv	Tail necrosis			
xvi	Anestrus			
xvii	Milk fever			
xviii	Tympany/bloat			
xix	Mastitis			
xx	Haemorrhagic Septicemia (HS)			

ANNEXURE-II(a)

Questionnaire for effectiveness and standardization of media package on animal husbandry practices

Personal Information

Name :

Age :

Background :

Marital Status :

Educational Qualification :

Department :

Designation :

Experience (years) :

Nature of job :

Assessment of Manual

A. Accuracy

(i) Understanding of the title	Easy to understand	Understand with difficulty	Could not understand
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(ii) Free from grammatical spelling and other typographical errors	To great extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

(iii) Repetition of information	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iv) Clarity of printing	Very appropriate	Somewhat appropriate	Not appropriate
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(v) Size of typing	Very appropriate	Somewhat appropriate	Not appropriate
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(vi) Appropriateness of language	Very appropriate	Somewhat appropriate	Not appropriate
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

B. Coverage

(i) Message cover all the necessary information	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

C. Objectivity

(i) Write up of all messages clearly stated/self explanatory	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(ii) Information appeared to be valid and well researched	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

D. Writing Styles

(i) The main points were more emphasized	Clearly emphasized	Somewhat emphasized	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(ii) All the messages/main headings are differentiated from each other	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iii) Information of messages are complex in nature and having some doubts	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

(iv) Some words repeated again and again which creates boredom	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

E. Content presentation

(i) Material managed in logical sequence and grouping	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(ii) Technical terms	Very easy to understand	Easy to understand	Difficult to understand
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iii) Usefulness of the information	Very much useful	Somewhat useful	Not useful
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iv) Completeness of message	Very much complete	Complete	Not at all complete
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

(v) Ease in reading	Very easy in reading	Somewhat difficult in reading	Very difficult in reading
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(vi) length of message	Appropriate	Somewhat appropriate	Not at all appropriate
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

F. Illustrations

(i) Layout of the pictures/ illustrations/graphic is accurate to per content	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

G. Compatability

(i) Presentation of material of various messages is according to readers background	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

ANNEXURE-II(b)

Assessment of Video Cassette/Compact Disc

A. Visual Quality

(i) Clarity of pictures	Very clear	Clear	Not clear
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(ii) Size of illustration	Highly appropriate	Appropriate	Not at all appropriate
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iii) perception	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iv) Interest orientation	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(v) Attention catching	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(vi) Self explanation	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

(vii) Sequence	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(viii) General set up	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(ix) Colour	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(x) Tuning with commentary	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(xi) Impressive	Highly impressive	Impressive	Not at all impressive
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

A. Audio Quality

(i) Voice	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

(ii) Pitch of voice	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iii) Interest orientation	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iv) Language	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(v) Comprehension	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(vi) Accuracy	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(vii) Sequence	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(viii) Understandability	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

(ix)Obstructions (background)	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(x) Music	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

C. Content

(i) Informativeness	Very informative	Informative	Not informative
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(ii) Technical terms	Very easy to understand	Easy to understand	Not easy to understand
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iii) Coverage	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iv) Relevancy	Very relevant	Relevant	Not relevant
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

(v) Usefulness	Very useful	Useful	Not useful
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

D. Presentation of message

(i) Speed of presentation	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(ii) Simplicity	Very simple	Simple	Not simple
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iii) Style of presentation	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(iv) Explaining ideas	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(v) Message treatment	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

E. Text

(i) Clarity of Text	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			
(ii) Size of text	Very good	Good	Bad
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

ANNEXURE-II(c)

Perceived field applicability of selected animal husbandry messages

A. Relative advantage

(a) Media package on animal husbandry improves the health of animals and increase milk production	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

B. Cultural Compatibility

(a) Media package is according to users existing cultural values	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

C. Physical Compatibility

(a) Media package is according to needs of users/ working conditions	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

D. Simplicity/Complexity

(a) Media package is providing information is understandable and in simple manner/relatively is easy to understand	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

E. Triability

(a) Knowledge imparted through manual and video cassette/CD can be tried/experienced on a limited basis	To greater extent	To some extent	Not at all
M1 :			
M2 :			
M3 :			
M4 :			
M5 :			

ANNEXURE-III

Knowledge Inventory to assess the impact of video cassette/CD on rural women

S. No.	Clean Milk Production	Pre-exposure	Post-exposure
1	Which is the best method of milking?		
a	Full hand method		
b	Stripping method		
c	Knuckling method		
2.	Precautions before clean milk production		
a	Cleaning of cattle shed and place of milking		
b	Cleaning of udder and whole body		
c	Cleaning of milking utensils		
d	Cleaning of milker's hand		
3.	Precautions during clean milk production		
a	Milking should be done by full hand method		
b	Milking should be done at regular interval		
c	Do not pull the teats with force		
d	Do not left milk in the udder		
e	Milking should be done quickly and quietly		
4.	Precautions to be taken after milking		
a	Milking pail should be kept covered to avoid dirt, insects etc		
b	Kitchen utensils should be kept separate from milking pail		
c	Empty milking pail should be washed immediately		
d	Milking pail should be washed with detergent and hot water after use		
5.	What are the uses or importance of clean milk production?		
a	It is best for health		
b	It can kept for long hours without spoilage		

c	It gives better return		
d	Products like ghee and butter make from clean milk is of high quality		

S. No.	Feeding	Pre-exposure	Post-exposure
1.	Requirement of feeds for milch animals		
a	Green fodder (30-40 kg)		
b	Concentrate (on the basis of milk production)		
c	Dry fodder (maximum 5-8 kg)		
2.	Importance of green fodder for feeding of animals		
a	Increase milk production		
b	Helps in digestion		
c	Useful for animals		
d	It prevents from constipation		
e	Reduces the cost of milk production		
3.	On which basis change in concentrate mixture in feed is done?		
a	For maintenance of good health		

b	To increase the milk production		
c	During pregnancy for development of foetus		
d	For recovery of health after illness		
4.	How much concentrate should be fed to the pregnant animals?		
a	1-2 kg/day		
b	1-2 kg/day		
c	2-4 kg/day		
d	3-4 kg/day		
e	On the basis of milk production		
5.	What are the importance of balanced feeding?		
a	It is tasty and nutritious		
b	Keep animal healthy		
c	Helps in digestion		
d	Prevent from illness		
e	Reduces the cost of milk production		
f	Help in increasing milk production and ghee		
g	Reduce the dry period		
6.	Do you know the quantity of ingredients in concentrate of milking cow/buffalo?		

a	Wheat/barley/maize seeds - 27 kg		
b	Mustard/ground nut/cotton seed/sunflower cake-25 kg		
c	Wheat/rice bran/rice polish etc. - 45 kg		
d	Salt - 1 kg		
e	Mineral mixture - 2 kg		
S. No.	Preservation of Green Fodder	Pre-exposure	Post-exposure
1.	Which are the methods for preservation of green fodder?		
a	Silage making		
b	Hay making		
c	No knowledge		
2.	Do you know the method of silage making? Yes/No		
3.	Do you know the method of Hay making? Yes/No		
4.	What precautions should be taken during preparation of Silage?		
a	Silage crop should be cut at proper stage		
b	Air gap should not be there while ensiling		
c	Silage pit should be covered properly		
d	Silage pit should be covered 1-2' higher than the ground level		

5.	What precautions should be taken while making Hay?		
a	Hay crop should be cut at proper stage		
b	Hay crop should be spread on flat and clean surface for drying		
c	Turning of harvested fodder should be done at the interval of 2-3 hours for fodder drying		
d	To prevent loss during hay making 2-3 days dried materials should be collected and keep the same in the heap form		
S. No.	Breeding	Pre-exposure	Post-exposure
1.	Do you know the symptoms of heat detection?		
a	Bellowing		
b	Swelling on the lips of vaginae		
c	White mucus discharge		
d	Off feed		
e	Reduced milk production		
f	Allow other animals to mount upon her		
g	Frequent urination		
h	Doka		
i	Restlessness		
j	Keep herself away from the rest of the animals		

k	Any other symptoms		
2.	When the animal should be inseminated after heat detection?		
a	Immediately		
b	Within 12 hours		
c	12-24 hours		
d	After 24 hours		
S.No.	Animal Diseases and Their Prevention	Pre-exposure	Post-exposure
Foot and Mouth Disease			
1.	Do you know what is foot and mouth disease? Yes/No		
2	Do you know the symptoms of this disease?		
i.	Animal's temperature goes up to 104 or 105°F (40-40.6°C)		
ii.	Discharge of liquid from mouth		
iii.	Wounds on foot		
iv.	Less milk production		
v.	Off feed		
vi.	Lameness		
3.	Do you know how you can prevent animals from this disease?		

i.	Vaccination should be done twice in a year		
ii.	Diseased animals should be kept separate from healthy animals		
iii.	Urine, left over feed, water and living place of diseased animals should be disinfected with 4% solution of sodium carbonate		
4.	Do you know the treatment of animals suffering from foot and mouth disease?		
i.	In case of fever of animal contact the doctor		
ii.	Treat mouth wound with		
a.	Boric acid (15 gm/litre of water)		
b.	Potassium permagnate (1 g per liter of water)		
c.	Campher (5 g per liter of water)		
iii.	Wash wound of foot with		
a.	Phenyl (40 ml/liter water solution)		
b.	Use the antiseptic cream on foot wound		
5.	Do you know the time of vaccination of animals to prevent foot and mouth disease?		
i.	April – May		
ii.	October – November		

S.No.	Mastitis	Pre-exposure	Post-exposure
1.	Do you know what is mastitis? Yes/No		
2.	Do you know the reason for it?		
a.	Wrong method of milking		
b.	Incomplete milking		
c.	Prevalence of unhygienic conditions during milking		
3.	Do you know the symptoms of mastitis?		
a.	Swelling on teats		
b.	Painful and hard teats		
c.	Milk becomes watery		
d.	Outflow of milk reduced		
e.	Knots appear in the teats		
4.	Do you know how you can prevent your animal from this disease?		
a.	Milking should be done with full hand method		
b.	Cleanliness should be maintained during the process of milking		
c.	Teats should be fully empty during milking		
d.	After milking udder and teats should be washed and disinfected with weak antiseptic solution		

Attitude Statements Regarding Animal Husbandry Practices

Pre-exposure

Post-exposure

Agree	Dis-agree	Un-decided	S. No.		Agree	Dis-agree	Un-decided
3	2	1	1.	Milk yield in recent time has gone up due to improved milking method	3	2	1
1	2	3	2.	Traditional practices in animal husbandry are as good as improved one's require no change	1	2	3
3	2	1	3.	Feed if given according to scientists are better for animal health	3	2	1
1	2	3	4.	Silage making is just wastage of time as it is harmful for animal health	1	2	3
1	2	3	5.	Full hand method of milking is a difficult method of milking, so we should not go for it	1	2	3
3	2	1	6.	To get green fodder round the year we must store it by 'silage' or 'Hay' making	3	2	1
3	2	1	7.	Balanced feeding is necessary for good health of animals	3	2	1
1	2	3	8.	It is not necessary to give colostrums to calf	1	2	3
3	2	1	9.	Colostrums should be fed to new born calf to reduce mortality and immunity to calf	3	2	1
3	2	1	10.	We must go for vaccine the animals twice in a year to avoid from foot and mouth diseases	3	2	1
3	2	1	11.	We should kept in mind the cleaning points to avoid mastitis	3	2	1
1	2	3	12.	Mastitis is not a harmful disease for animal teats	1	2	3

ABSTRACT

Title of Research Project	:	Development and standardization of media package on animal husbandry practices for rural women of Haryana
Full name of degree holder	:	Vinita Jain
Admission No.	:	2001HS88D
Title of degree	:	Doctor of Philosophy
Name of Discipline	:	Home Science Extension Education
Name and address of Major: Advisor	:	Dr. (Mrs.) Shashi Kanta Varma, Professor and Head, Department of Home Science Extension Education, CCS Haryana Agricultural University, Hisar-125 004 (India)
Degree awarding University:/ Institute	:	CCS Haryana Agricultural University, Hisar-125 004 (India)
Year of award of degree	:	2005
Major subject	:	Home Science Extension Education
Total Number of pages in the thesis	:	106+xii
Number of words in abstract:	:	250 Approx.

The present study was conducted in Haryana state. Fifty rural women from each Kurukshetra, Bhiwani, Faridabad and Hisar districts were selected randomly for assessing information/media needs of rural women regarding animal husbandry practices. On the basis of weighted mean scores and ranks messages having high five ranks and three sub-messages from each selected messages got higher rank were finally selected for media preparation. Selected messages were clean milk production, balanced feeding, preservation of green storage, breeding, animal diseases and their

prevention. Standard procedure for development of media were followed. The effectiveness of printed manual was assessed through several parameters. Overall weighted mean scores revealed 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 message, content importance and suitability and text was rated as high. The content validity ratio for all the attributes of video cassette/CD and printed manual was found to be significant (as per Lawshe, 1975). Inter consistency reliability for video cassette/CD and printed manual was found to be statistically significant at 5 per cent level of significance. Field applicability was also found to be quite high for all the messages. The impact of video cassette/CD was found to be significant for gain in knowledge and change in attitude. The impact of video cassette/CD on rural women was found to be 62.40 per cent which is of moderate level. Milch animals ($r=0.286^*$) and material possession ($r=0.211^*$) had positive and significant relationship with knowledge acquisition. Attitudinal change of rural women was found to be positively and significantly related with occupation ($r=0.265^{**}$), land holding ($r=0.194^*$), farm power ($r=0.245^{**}$) and material possession ($r=0.181^*$). Therefore, it can be concluded that rural women who had large number of milch animals had high material possession gained more knowledge and rural women who had cultivation as their major occupation, large land holding, high farm power and high material possession had favourable attitude towards animal husbandry practices after exposing through video cassette/CD.

MAJOR ADVISOR

DEGREE HOLDER

HEAD OF THE DEPARTMENT