VETERINARY AND ANIMAL HUSBANDRY EXTENSION WARRANTS AS MUCH PREFERENCE AS GIVEN TO RESEARCH

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The acceptance or rejection of a new technology in Veterinary and Animal Husbandry Sector by the livestock rearing community depends upon the characteristics of that innovation, the quality and density of Veterinary Extension Personnel, the clientele knowledge, accessibility to technical inputs and services essential for adoption of technology (Rao *et al.,* 1995). The ultimate decision to adopt a particular technology depends to a great extent on the farmers' perceptions about the technology, socio-economic factors and the need for the technology. Veterinary Scientists time and again observed that, in the teeth of availability of ameliorated Animal Husbandry technologies, the speed of their adoption in the field is very slow. Lately, it has been realised that the lack of awareness on the part of the researchers regarding the farmers' perceptions and priorities, has led them to address the wrong problems resulting in technologies which are not suitable or relevant to the end users for whom the technologies were evolved. With the sequel, that most of the innovations developed through research remain in the laboratories without being utilised by the farming community. The researchers are given full credit to the inroads so far been made in the animal food production front and are called upon to further increase the production to meet the balance the needs of the growing population and their food habits.

Transfer of Technology from the lab to land is almost always considered the responsibility of the Extension personnel. They are also the target of blame for the failure of adoption of latest technologies by farmers in total disregard of the need to examine whether the claims of having improved technologies with the research stations are real and, if so why they have not enthused the farmers for field adoption. Cut from the same cloth, the most

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difficult and valuable services made by the Veterinary Extension personnel in disseminating information on new but viable technologies and motivating the livestock rearing farmers to adopt them in place of time-honoured practices and in carrying back field problems to research for further study go disregarded and unperceived by all, distinctly by the policy makers. The role played by the Veterinary Extensionists in propelling the white and brown revolutions and in organising millions of farmers through dairy co-operatives, Sheep, Goat and Poultry farms spread over the length and breadth of the country to go into action and achieve milk,meat, egg and wool production targets set during various plan periods is generally relegated to insignificance during evaluation. On the other hand the political leadership, bureaucrats do not fail to shower praises on the research community for achievements of the white and brown revolutions as if the veterinary and dairy extension personnel constituted only a submissive group in the entire spectrum and deserve only to be ignored. In general the people are made to believe that innovative technologies are getting accumulated in the lab without takers and that the weak veterinary extension network or the delinquency of the extension personnel is the factor at the helm for such on unwanted situation.

Stakes in Veterinary and Animal Husbandry Research:

The State Agricultural Universities (SAUs) are spending a meagre amount 5-6% of the total budget to the extension activities against to 40-45% to research (Arya, 1999 and Mehta, 1995). The ICAR contribution details to the SAUs reveal that out of the total ICAR contribution 71.9 per cent is for research, 16.4 per cent for education and only 11.4% for extension (Arya, 1999). The veterinary extension network of the country doesnot derive any benefit from the investment in Research & Development nor the backing of law makers. Contrary to this, the entire investment in R & D goes to research , the way of utilisation of which has been commented that not more than one third of the allotted funds become delineated for research with the balance going for campus modification and creation of facilities to staff which are not essential for explorative research. Also there is a dearth of Scientific temper in many of the research institutes with scientists who have a flair

to indulge in populist exercises at the cost of Scientific objectivity are found to receive recognition and admiration at different levels leading to frustration, embitterment and disillusionment among those who have dedicated themselves to the cause of Science. It is commonly observed that workshops, seminars and tours in the name of the research are yielding nothing except self projection and image building at the cost of R & D.

It is to be confessed that the role of Veterinary Extension in modernising the Animal Husbandry is as important and crucial as Veterinary Research in the country. But for the Policy Makers, the administration of Veterinary Extension and related services is no more important than dispensing any other administrative discipline of the government. The veterinary extension personnel having much exposure to field problems and wide practical experience in Animal Husbandry development are not considered appropriate to manage research in any capacity. On the other hand where extension personnel serve as the representatives of the government at the local level, they will largely be low level administrators, rather than educators. This type of non-extension assignments usually result in serious role conflicts to the determent of extension functions. Therefore, the extension organization fails to carry out the essential education and communication functions effectively that are necessary for the transfer of technology.

Lack of close links between research and extension in many developing countries including India was reported by International Service for National Agricultural Research (ISNAR, 1982). It was found that some research is carried out in isolation building up technical solutions, some of which are unusable or unavailable any research system that cannot transmit findings to the extension service and to farms makes little practical contribution, equally extension work that is not sustained by results obtained through research has little value and may even be detrimental.

Research Vs Extension Managed Trials in On-farm testing of technology

On farm research must be conducted to evaluate a technology's performance (Cumings, 1981). Once the on-farm trials have been planned and designed, the most crucial question is that of management. Often research staff attempt

to manage all trials but due to lack of understanding on socio-economic aspects of the clientele and their limited number in rural areas, the number of trial sites is severely curtailed. Management by livestock extension staff or even by farmers themselves offers an opportunity for a greater number of sites (Swanson, 1984) . Research managed trials tend to use more sophisticated methods as used in experimental stations, although non-experimental variables are generally set to represent farm conditions. They will often pay farmers for their labour and use of their land and livestock, so that the farmers do not suffer losses from poor experimental results (Raghavan, 1990). Further the necessity of researchers to visit the trials, at least on a fortnightly basis, severely restricts the number of trials managed by any individual researcher.

On contrast with research managed trials, extension managed trials do not use experimental techniques typical of the experimental station, nor, do they generally pay farmer for their labour or the use of their land and livestock. Extension managed trials attempt only to control a limited number of experimental variables, although their level of control is usually higher than that of farmer managed trials. By focussing on farmer conditions, the results of extension managed trials provide a much better indication about how farmers will respond to new technologies than do research managed trials. Even though these trials are less complex than research managed trials, extension managed trials can be operated at a low level of complexity but higher than farmer managed trials. As the extension worker is stationed and working in the area, it is possible for extension staff to manage a large number of trials than can be managed by researchers alone.

Role of Livestock Extension system in the Technology Development Process (TDP).

If technology adoption is to be at a faster rate, the livestock extension system must be taken into confidence during entire process of technology development, the research and extension staff must make joint diagnostic surveys by field visits to farmers to investigate either responsiveness to current technologies or reasons for adoption or non adoption. There is a need

to identify specific responsibilities for both scientists and extension workers. The first step is on- farm testing of the technology which should be the major responsibility of the researchers in consultation with the extension system which is the ultimate agency responsible for the technology transfer to the end users. Secondly once the technology is tested and perfected demonstrations on a wider scale should be the responsibility of extension system under the technical guidance of scientists. The various roles that could be played by livestock extension system should be clearly spelt out in an unambiguous terms for increasing the quality of technology which will end up with increased adoption rate (Sabharatnam, 1987).

Integrating livestock extension with research in TDP

Integrating extension system with the research system in the process of technology development ensure the technologies released from research projects are useful technologies. Steps in integrating extension system with research system in TDP as suggested by Sabharatnam, (1999) is as follows:

- The livestock extension system can educate the farming community about farm universities, the different disciplines of Veterinary Science and Animal Husbandry and their importance which would facilitate the farmers to send their children to Veterinary Colleges and Polytechnics.
- Identification of field problems in Animal Husbandry for which there is no technology and discussing these problems with concerned disciplinary scientists by taking them to the field indicating their relative importance. This would enable the researcher to plan need based research. The researcher should take the guidance of extension personnel to choose the right type of research thrust which reflects the problems of majority of farmers..
- Researcher should consult the extension system in formulating the objectives, hypothesis and strategy of the research by making more and more detailed field observation to elicit the minute aspects of the problems. The field experience of the extension system should be

utilised by the research system in identifying the related disciplines to be involved in TDP, the location for on-farm trials and the selection of the farmers for trials.

- There should be a research policy that no research project will be approved unless the representatives of the extension system are satisfied with the usefulness of the project from the end users point of view.
- Extension system should be allowed to prepare audio visual aids like photographs, films etc. during on-station research which can be utilised effectively for convincing the farmers for on-farm research and to motivate them for adoption at the time of technology dissemination.
- The extension system should have a strict vigil and monitor the research process to avoid manipulation of data and verify the original literature with which comparisons of the present project is done as a countercheck. Both extension and research personnel should sign the relevant records for documentation.
- The results of on-station and on-farm verification trials, verification ratios, feasibility ratios etc., should be indicated and included at the time of official press release of technology developed.
- The extension system must see that the findings are treated properly before their publication in scientific journals. The publication must reach the end users in the form of outreach articles without any time lag, which is the responsibility of the extension system.
- The researcher should provide the needed coordination and linkage to the extension personnel throughout the TDP and it should be made mandatory for the research system to include a member of the extension system in the evaluation team.

A National Organisation for Veterinary Extension Personnel:

The Veterinary Extension functional role and its importance must not be allowed to fade out. National centre for Veterinary Extension with state level chapters shall be created to provide an appropriate forum for ventilating and

projecting field problems requiring administrative and research support and for evaluating the impact of innovations already transferred. These organizations shall promote harmony and better understanding between research and extension and to lend support to and get involved in all the major national programmes for Veterinary and Animal Husbandry development. The deliberations and recommendations of these organizations shall retrieve veterinary extension from the present state of subservience to a more honourable and respectable position.

Conclusion

New technologies are of little use in increasing livestock productivity unless they represents the perceived needs of the end users. The feed back given by Veterinary Extension Personnel will further aid in improving the technologies. In many cases researchers have limited knowledge about important problems that are confronting the farmers. There is often little information about the physical, economic and socio-cultural factors which create the environments within which farmers operate. New technology as adopted and managed by farmers often doesnot perform as well as expected and additional adoptation may be necessary. Many of these problems can be elevated by developing and or strengthening extension activities in their interaction with researchers and farmers. Integrating extension system with research system during the process of Technology Development led to the higher adoption rates of the technology by the end users.

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