

SS1-LPR

RESEARCH IN GOATS AND SHEEP IN INDIA: SUGGESTIONS FOR THE FUTURE

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Most of the goats and sheep in India are owned by smallholder, unorganized owners who maintain their animals under an extensive, low-input system. Current scientific scenario of goat and sheep research in government scientific institutions and universities appears to consist of the following types of research: (1) Technically highly advanced but esoteric research without focus on a relevant goal and little applicability to practical issues/problems. (2) Imitative research using bio-technological tools such as marker genotyping in situations where phenotypic data available on genotyped animals are thoroughly inadequate or even nonexistent, leading the research to remain inconclusive and irrelevant. (3) Efforts and energy of worthy students being wasted on unimportant and irrelevant research topics due to lack of proper guidance. (4) A very small proportion of the research is focused, impact oriented and useful (e.g. the highly useful research on the development of an indigenous PPR vaccine which has benefited and is benefiting millions of goat and sheep owners every year). But the research outcomes do not always reach the end-users due to inadequacy of extension infra-structure and services. The facilities and resources available from tax-payer money are largely used for maintaining institutions and scientific personnel. Unfortunately, the scientific establishment has largely failed the smallholder goat and sheep owners who produce meat, milk, wool and manure by using available resources efficiently, under harsh and difficult circumstances. Scientists are many times motivated towards doing "cutting edge" science for the sake of it without regard to whether it has a useful outcome for the goat and sheep herders. Internationally, the norm for animal science research now is large, impact oriented research projects having the ultimate objectives of enhancing food security and sustainability, poverty alleviation and mitigating the effects of climate change, conducted by multi-institutional, multi-country, multi-disciplinary teams of high level scientists and funded by strong national or global funding institutions. Indian animal science research administrators and funding agencies therefore have the opportunity to bring about transformational impacts through a restructure of the whole system to make it meaningful and accountable. Some suggestions: (1) High level committees combining experienced scientists with field workers, both with a good track record of useful research and working closely with goat and sheep owners should be formed to identify broad research topics that address existing problems. These committees should also draw on international expertise to strengthen linkage with what is happening internationally. (2) These committees should identify the research groups spanning multiple research centres that have the expertise to carry out the required research and commission them. These projects need to have clear objectives, targets and measurable indicators and have to be outcome and impact oriented. Large numbers of students from different centres could then be attached to these large research projects, to work on different aspects of the project in fulfilment of their degree requirements. (3) Each university should draw up a list of research projects involving senior scientists and representatives of stakeholders so that students can select relevant research topics for Masters or PhD theses. Funding agencies giving research fellowships should also specify relevant research projects - especially for PhD studies. (4) Experienced scientists from research institutes should be affiliated formally to universities so that students should be able to benefit from their knowledge and expertise. Such an approach would be expected to: (A) Create long term drivers for restructuring of institutions and personnel towards a focus on impact, in line with global trends. (B) Increase the motivation of students through a more direct appreciation of the impact and relevance of their work and the difference it makes to the lives of livestock owners. (C) Lead to step changes in the productive efficiency of small ruminant farming systems alleviating poverty, empowering minorities and reducing pressure on urbanization. India cannot afford any longer the current divide between goat and sheep rearers and scientists. They need to work together to provide sustainable solutions to problems and constraints and carry out goals, outcomes and impact oriented research.