



*Traditional migratory pastoralists were taught to respect environment and society*

# Surviving the winds of change

## *A shepherds dilemma*

**Nitya Sambamurti Ghotge**

In the information age replete with cell phones and the internet, traditional knowledge is not adequate to meet the challenges and changes happening at an alarming rate. Small farms and livestock holdings are severely affected and are disappearing at a bewildering rate unable to cope with such changes. A complete overhaul of the present extension and education system may be one of the solutions to help farmers cope with the fast changing external environment.

**K**handu Kolpe learnt shepherding from his father, he learnt about lamb care watching his mother tend to young ones as they were born. He also learnt by observing and helping his uncles and aunts and grand parents. He learnt about plants from the farmer in whose farm they would pen their sheep through the long summer. This was before there were extension and development workers, televisions or telephones. Khandu Kolpe cannot read or write. Whatever he knows is etched in his memory Khandu is a Dhangar, a member of a migratory shepherding community of Maharashtra in India. In India, till date, most sheep are farmed by migratory pastoralists pursuing livelihoods in a traditional way.

For hundreds of years his community has practiced shepherding. The collective knowledge and wisdom of the community is captured in their day to day practices, in their songs and dances and stories which they listen to from their village elders on special nights in an open class room lit by a thousand stars and a smiling moon. There are no books, records or papers documenting this knowledge, but knowledge is transmitted from generation to generation through years of practice, doing and observing. It is embedded in their culture, in the sheep they rear, in the blankets they weave, in the grasslands they inhabit.

Khandu has sent his sons to school. The older son was a good student and did well. He was encouraged to go to college and after graduating managed to get a job in the government. He does not help with sheep any more. The second son was not so bright in school and was encouraged to take up shepherding. Every now and then he attends training programmes at the nearest livestock extension centre and comes up with new ideas and plans. Some of these are at complete variance with Khandu's 50 years of shepherding knowledge and his communities, and traditional wisdom. It is modern and delivered in a class room lit by bright tube lights. Presentations are beamed on the wall and brightly coloured charts are used to teach the young students. They come home with pamphlets and brochures in attractive designs and colours.

Khandu reflects on modernity as he rests beneath a tamarind tree in the hot afternoon sun. For instance, last year some sheep died suddenly. When a post mortem was performed by Khandu and his fellow shepherds, they found the tell tale marks of leaf shaped liver flukes. While discussing why there were so many flukes this year a few elderly shepherds mentioned that a certain plant known for keeping flukes away was not to be seen these days. Rather than risk more deaths, efforts were made to try and find grazing grounds where these plants were still prevalent. But that was not easy to find. So many changes had happened to the environment in the recent past that valuable plants were disappearing rapidly from the ecosystem.

The second son had not agreed with the plan to shift grazing grounds. He came up with a bottle of deworming medicine which had been given to him at one of the trainings. Some of the other families whose sons had also attended the programme tried the medicine instantly. A few days later some of their sheep aborted. This was very unusual. There seemed to be a co-relation between the deworming medicine and the abortions. Nobody had mentioned anything about whether the medicine was safe for pregnant animals or not. Khandu forbade the use of the medicine on his sheep.

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That was the problem with modern solutions. They were not tested sufficiently and shepherds were expected to bear the burden of the loss. That is why shepherds these days were bringing their animals to the market early. They did not want to rear the animals for too long. Within 2-3 months they were ready for the market. However, the scientists in the extension department insisted that you must keep sheep for 9 months.

"But who listens to shepherds?" mused Khandu. Not the farmers who planted new varieties of cotton on their fields. Sheep while grazing on these fields faced problems which could not be cured with traditional remedies and the team of doctors could not diagnose the condition either. Eventually many sheep died. Instead of a cure for this strange disease the doctors were busy telling shepherds to change their breeds, spray insecticides, use deworming medicines. Were any of these been tested out adequately in field conditions? Could the new sheep migrate, face fodder shortages or disease?" Yes they put on weight alright but if they died on our hands whose loss would it be?" thought Khandu. The insecticides smelt poisonous. But who listens to an old shepherd who wears a turban and cannot read and write and barely knows how to use a mobile.

Today, his son wants gadgets, tractors, threshers, power tillers, motorcycles and of course mobiles which are a big hit. He even knows how to use a computer and access the internet. They receive messages on the weather and the market from the local extension office, but the message is quickly forgotten and difficult to recall when most needed. In the old days, important practices were imbued into people's lives, their culture and daily existence. They were told that the gods would be angry if they did not look after their sheep properly and in a specific way. They were taught to respect the environment and society. They could only begin migration after a special grass appeared in the fields. Khandu's son and his friends laugh at the elders in the community. They considered them not scientific, not modern, and ignorant.

But what is scientific, what is modern what is knowledge and what is wisdom ... the special grass which keeps liver flukes away is seldom to be seen and so are many valuable grasses and medicinal plants. As medicines in bottles become more easily available the medicines from the environment become more and more rare. Everywhere you hear people talk of climate change and it is true it is becoming more and more difficult to predict the rain and the weather patterns. The usual patterns of movement where shepherds depended on certain signs are no more valid. Yes, perhaps traditional systems may no more work for the future but nor will the present modern system. Khandu is certain about this.

### Where does the problem lie?

The dilemma faced by shepherds like Khandu is faced by small shepherds the world over as well as small farmers and peasants. Especially, in emerging economies which have catapulted from a pre industrial society to a post modern information age replete with cell phones and the internet. Traditional knowledge is not adequate to meet the challenges and changes today. There are just too many changes happening simultaneously at different levels.



Small farms and livestock holdings are severely affected and are disappearing at a bewildering rate unable to cope. So where does the problem lie?

#### *Information content*

Agriculture and livestock care is in a sense the accumulated knowledge of humanity over thousands of years. New information and knowledge is continuously added. In the past, information travelled slowly, and many developing societies remained untouched by advances made by other societies, but today, that has changed. The information revolution has made a lot of current information available at the flick of a button. But it is impossible to absorb and practice all that is new and updated all the time. Small farms especially, find it very difficult.

#### *Information volume*

Farming communities are caught in a strange transition period where they are expected to constantly upgrade themselves to match the ever escalating demands of market and society. However, most farmers as well as development workers are overwhelmed by the sheer amount of information and have a problem separating useful and relevant information from non utilisable information.

*Small farmers and pastoralists are severely affected by the changes happening around*

#### *Source of Information exchange*

The sources of information have also increased in the recent past - development workers, NGO's, government extension workers, the radio, the TV, the internet, newspapers, journals, market representatives, mobile messages. However, this load of information does not necessarily translate into knowledge which is useful for farmers. They are also not sure which information is reliable and which one is not. Whom to believe, who is likely to mislead.

#### *Flow of information*

The flow of information is largely one way. It flows from the lab or research station or from the policy maker down to the farmer perhaps through an extension worker. There is a definite loss of content as the information flows from one person to the next. There is no proper feedback mechanism to take the spectrum of farmers problems in a coherent way, back to the field and to the policy makers.

It is a little wonder that many new programmes and schemes flounder, collapse and have a low success rate. This is very unfortunate as vast amounts of money has often been spent in initiating these programmes.

### Need for a change

The way ahead would need a complete overhaul of the present extension and education system, its aims and delivery mechanisms.

#### *Revising content*

This requires a fresh look at farming systems. It requires revisiting traditional practices which stand the danger of getting lost. Do they have answers to critical environmental and health concerns? What needs to be modified and what needs to be retained? As new knowledge is added to the cache, one needs to examine which modern practices are likely to stand the test of time? What practices will survive fluctuating markets and unpredictable weather? What fraction need to be sifted out and carefully synthesized to form a comprehensive body of knowledge which is available to those who need it, especially extension educators and farmers.

#### *Knowledge storage and retrieval*

From cloud technology to cold storage labs for genetic material, knowledge today is stored in very different ways from before. However, access and retrieval can be a problem for marginal societies. Public sources of information need to be created which are maintained in the public domain and which give a truthful unbiased and detailed view of different practices citing successes and failures of different programmes. Extension workers need to be directed to these sites from where they can share information with farming communities.

#### *Revisiting training approaches*

Different people learn in different ways. Culture plays an important role in determining how people learn. Considerable work has been done on this but more needs to be done as methods of knowledge sharing and flow rapidly change. While tailoring extension programmes to suit different groups it is important to bear in mind that farming communities learn by practice. Sufficient time has to be set aside for training to ensure these practices are carefully transmitted to the farming community along with possible side effects including environmental effects. Repeated visits to the farmers would be needed to identify genuine field problems in adopting these practices and these need to be documented and given as feed back to the laboratories which initiated the practice. Farmers also need to be informed about various sources of information and how these can be accessed. The internet is playing an important role but as mentioned before, too much information can be dangerous as well.

#### *Redirecting the flow of information*

The flow of information has to be more than just one way. One of the important roles of extension workers has been that they have been viewed as the agents of change, of taking new ideas from the lab to the field. However, a critical role that they could play in society has been critically ignored, that they could be valuable sources of carrying information from the field to the lab, of new

problems which affect farmers. They are the vital link, the feed back system between the community and scientists and policy makers and a key function of theirs should have been to record data in the field for analysis and action by professionals. This could include, mortality morbidity surveys, records of changes in the field, crop success and failure, uptake of new technology, management practices etc. By encouraging this, not only will their approach towards the society be different, but can actually play a far more critical role in an increasingly uncertain future.

There is much more to be done. As the winds of change sweep over societies they bring in their wake some damage, some succour and some hope. Inevitably, shepherds like Khandu will bend as these winds sweep over them. One only hopes that development efforts in the future provide more succour and hope than damage. And some of their accumulated knowledge and history will steer them safely through to the future.



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