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REALITIES, CHALLENGES AND ACTION PLANS FOR THE SMALLHOLDER DAIRY FARMER IN AFRICA

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Abstract

Africa is a fascinating region with many diverse cultures. What is common to the region is the passion the people have for owning livestock and cattle in particular. If meat and milk production are going to be improved, to meet the needs of an expanding population, there needs to be interventions that appreciate the Realities and Challenges in Africa as well as the required Actions required to bring this about.

1. REALITIES:

- Communal land ownership.
- Heavily stocked.
- Fodder and feed limited.
- Low production.
- Unsuitable breeds.
- Communications poor (Roads).
- Markets distant.
- Traditional subsistence upbringing.
- Lack of entrepreneurial spirit.
- Weak support systems.
- Unhygienic conditions for milk production.
- Political instability.

2. CHALLENGES:

- Communal land ownership.
- In African countries, as in the majority of countries with smallholder farmers, the land tenure system that has evolved over many generations has resulted in smallholder farmers having the right to utilize their own small piece of cultivated land, but the grasslands are communally grazed. This leads to high stocking rates that reach a plateau at a level that is approximately 300% more than commercially practiced. This level of stocking, which is often referred to as “The Tragedy of the Commons”, leads to a change in grass species that are adapted to heavy stocking but are less palatable than previous grass species. After a period of time these grasses can be destroyed by the stock, eventually leading to a total loss of grass cover and inevitably erosion and the loss of biodiversity.
- Heavily stocked.
- While the grazing land is communally owned it will be heavily stocked.
- Fodder and feed is limited.
- With the heavy stocking rate, fodder is short and supplementing the livestock with feedstuffs, own or purchased, is generally not possible because the feed produced on the farm is for human consumption and there is not a cash economy to be able to purchase feed for the livestock.
- Low production.
- The potential production capacity of the livestock is reduced considerably by the limited amount of fodder and feed that is available.
- Unsuitable breeds.
- Africa has evolved small breeds that require low maintenance requirements and yet large breeds that are not adapted to the local environment are being widely introduced into the smallholder herds. The desirable small and adapted dual purpose breeds are not available to these farmers.
- Communications poor.
- The road systems are generally in poor condition in smallholder farming areas. This makes transactional costs very high and consequently importing inputs and exporting produce in and out of the area leads to a very low profit margin for the products.

- *Markets distant.*
 - *The rural areas are usually far from the high demand markets in the towns and cities. Selling in these high demand markets involves a high transport cost which is aggravated by poor road structure. Maintaining the cold chain, necessary for delivering hygienic milk, will be lost over long distances and will also be expensive.*
 - *Traditional subsistence upbringing.*
 - *The traditional way of life that is common to the majority of smallholder farmer's results in these farmers being extremely risk averse. Moving into a commercial environment requires input costs to increase production which exposes them to risk. Risk is common to entrepreneurs. However, it is difficult for those farmers with a traditional background to develop the mindset required to become entrepreneurs outside of their 'risk free environment'.*
 - *Lack of entrepreneurial spirit.*
 - *There are obviously those within the smallholder community who have entrepreneurial spirit. This has been estimated to be 3% in most rural population groups. However, the entrepreneurial spirit alone cannot make the farmer enter the commercial world of risk and reward and succeed. There are many other factors involved in this process including the threat of ostracism when the individual succeeds in a community, and also the lack of resources of all kinds.*
 - *Weak support systems.*
 - *Many smallholder farmer groups do not have the support structures required to meet their entrepreneurial needs. A primary reason for this is that smallholder farmers are far more expensive to support individually than a few large commercial producers. The large commercial farmers generally have their own support structures like access to funds, inputs and markets.*
 - *Unhygienic conditions for milk production.*
 - *The smallholder farmers often live in conditions where water is scarce. Clean milk production depends on a good supply of clean water for washing teats, cleaning cans and also for maintaining personal hygiene. This results in a high level of bacterial count in their milk. This is generally unacceptable to the larger markets which demand low bacterial counts.*
 - *Political instability.*
 - *In many of the countries, where there are a large proportion of smallholder farmers, there is often a level of political instability. This increases the risk to anyone who tries to move out of the subsistence existence into an entrepreneurial based business, and thus reduces the incentive to develop their milk production enterprise.*
3. **ACTION PLAN**
- *Communal land ownership.*
 - *The action plan could easily be "Ensure that all land is owned by someone who is now responsible for that land". This responsibility implies that the smallholder farmer will respond positively by reducing his stock numbers and thereby conserving his natural environment. Possibly the 3% with a strong entrepreneurial spirit will respond positively, but what of the others? Through strong and expensive support structures, using experienced extension officers, the 3% could be doubled or trebled over the years. This is still relatively insignificant. There are however, many success stories of smallholder farmers in Africa, where crops have been successfully developed communally like Cotton in Uganda, Tobacco in Zimbabwe and Malawi, Coffee in Ethiopia and Tea in Kenya and Tanzania.*
 - *The common denominator with these crops is that they are products that have a long shelf life, unlike milk, which has a very short shelf life unless treated in a very sophisticated process.*
 - *With communal land ownership being a given amongst subsistence stockowners, it may be necessary to accept the status quo and work within it.*
 - *ACTION: Accept the status quo regarding land ownership and meet the challenges within this scenario?*
 - *Heavily stocked.*
 - *The cow is the productive unit that calves and creates milk for the calf or milk for sale. Presently the productive cow forms only 20% of the herd. By reducing the herd to productive cows alone or at the level of 80% of the herd then there will be far more fodder available for the cow herd*

and hence for milk production.

- *ACTION: Reduce stock that are not productive milk producers.*
- *Fodder and feed limited.*
- *ACTION: Reduce unproductive stock numbers and increase use of fodder crops or crop residues.*
- *Low production.*
- *ACTION: Reduce unproductive stock and select the ideal breed suited to the fodder supplies.*
- *Unadapted breeds.*
- *ACTION: make available, through breeding programs, crossbred or purebred dairy stock that are suited to all three types of dairy producers found amongst the smallholder farmers. Firstly, the local Zebu cross Jersey that is fed on available fodder, secondly, the same cross that is better fed and thirdly, a purebred Jersey or Holstein that is well managed.*
- *Communications poor.*
- *ACTION: Improve road structures and electronic communication.*
- *Markets distant.*
- *ACTION No.1: In rural areas encourage local production, sale and consumption. Milk produced today will be drunk today without all the costs of cooling and pasteurization.*
- *ACTION No.2: Encourage the development of larger dairies near the main towns where the market is close.*
- *Traditional subsistence upbringing.*
- *ACTION: Identify those smallholders exhibiting entrepreneurial spirit and give them the support structures they require to succeed. Thereafter use them to encourage other smallholders, who are risk averse, to try the new systems in use.*
- *Lack of entrepreneurial spirit.*
- *ACTION: The majority of people, in general, do not have entrepreneurial spirit for one of many reasons. If they can be introduced to successful smallholders some of them may change. This change often takes a number of generations rather than years.*
- *Weak support systems.*
- *ACTION: Support systems must play a part in any change from subsistence to commercial production. Those with the desired entrepreneurial spirit are more likely to utilize support and move forward so they need to be identified and supported. Sometimes, those with entrepreneurial spirit need to be moved out of the communal system for them to become effective. Support must include the following in order of importance: Animal health, nutrition, hygiene, finances and general management.*
- *Unhygienic conditions for milk production.*
- *ACTION: Training in hygienic milk production for all stockowners.*
- *Political instability.*

ACTION: It is deeply disturbing that most efforts at assisting smallholder dairy farmers will be in vain unless political stability is achieved in these countries. Chambers (1981), De Revero (2001) and more recently Calderisi (2006) have warned of the requirements of these governments to apply certain standards in governance if improved food production is to succeed. Calderisi lists 12 requirements of governments. Very few of these countries can comply with these principles but the ACTION is: Support those countries that do comply.

4. CONCLUSION

For those intending to intervene in Africa, remember that the 'VISION' for the stockowners of Africa should be "Ensure that the people can continue with their passion for running cattle, meeting their traditional needs, while developing their entrepreneurial skills to enter into the commercial markets and at the same time preserving their natural environment".