

Intervention Report

Local Value Chain Development of the dairy industry in Kurunegala District

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1. Background

Upon request from the MSE Forum¹ in Kurunegala, Enter-Growth decided to intervene in the dairy sector, conducting a Local-VCD (Value Chain Development) exercise that focused on the dairy industry in Kurunegala District.

Kurunegala District	Characteristics of the dairy industry
Province: North-Western	➤ Size and infrastructure: The dairy industry in Kurunegala District constitutes 38% of the total national production, i.e. 95,000 litres of milk per year (national production is 250,000 litres per year). The industry is based on micro, small and large scale enterprises.
District: Kurunegala	➤ Large companies: Most of the large companies in Sri Lanka, i.e. Milco, Anchor, CTMU and Nestle are present in the District. ➤ Pro-poor: The dairy industry includes many MSEs and is a very common source of income for poor families.
Population: 1,452,369*	➤ The market: The demand for fresh milk, mainly from the large companies, is large and stable and there is no need for advanced technology or skills, making the threshold to enter the industry very low. ➤ Dairy Divisions: The dairy industry is strongest in the Divisions of Ridigama, Ibbagamuwa, Mawathagama, Ganewattha and Narammala.

Source: *Census of Population and Housing 2001, Department of Census and Statistics, 2003

The purpose of the Local-VCD exercise is to assess the local economy and its competitive advantages and to develop proposals for strengthening such advantages. Instead of conducting LOCAs² that cover all sub-sectors, the MSE Forum in Kurunegala decided early on that they wanted to conduct Local-VCD exercises. The exercise on dairy was managed by the Enter-Growth district manager in Kurunegala together with trained “VCD facilitators” who are all staff of different BDS organisations and authorities. In addition, representatives from the Provincial Ministry of Land, Agriculture, Irrigation and Animal Production as well as one of its departments,

¹ An MSE Forum brings together public (including the District and Provincial Government), private and non-governmental organisations relevant to enterprise development.

the Provincial Department of Animal Production and Health, were included in the dairy VCD team. It was further decided to carry out the exercise as a pilot in Ridigama and Ibbagamuwa, which are two divisions with a very significant dairy industry.

- Main reasons for selecting the dairy industry for the Local-VCD exercise:**
- Clear value chain
 - High presence of MSEs
 - High potential to generate higher income to the poor
 - Strong interest and support from relevant institutions in the District
 - Priority sector in the district

2. Enter-Growth plan

The Local-VCD on dairy included a series of workshops and fieldwork with the purpose of assessing the dairy industry, including interviews with relevant individuals and organisations. The findings together with a number of proposals based on the findings were presented to key stakeholders in a way-forward workshop where they were expected to take responsibility for the proposals and the next steps.

The Local-VCD resulted in a decision to expand the industry by developing the first three sub chains of the local dairy value chain and also to generate business development services. The three identified and prioritised sub value chains on which the proposals are based are fresh milk distribution, milk based products and market linkage between large companies, dairy farmers and MSEs (see annex for the value chain map).

Proposal	Background
<ol style="list-style-type: none"> 1. To promote and create a market for fresh milk. <ul style="list-style-type: none"> • To assist improving the present small scale distribution of fresh milk carried out by the Sri Abhinawarama Development Foundation. • To develop a brand name under which selected farmers can sell their fresh milk. 2. Small scale milk based producers (producing yoghurt, curd, toffee, etc.) should be encouraged to form associations, which could: 	<p>The Local-VCD exercise identified that there is a high demand for fresh milk instead of powder milk, which is widely used in Sri Lanka. A high potential to promote and create a market for fresh milk was identified, if the supply-side could assure quantity and quality as well as regular and reliable distribution.</p> <p>Small scale producers need more information on credit schemes, technology, machinery, packaging, labelling, etc.</p>

² LOCA is known as PACA (Participatory Appraisal of Competitive Advantage) elsewhere in the world. It is a product of Mesopartner. See www.mesopartner.com.

<ul style="list-style-type: none"> • Implement awareness programme on credit schemes, technology, machinery, packaging, labelling, etc. • Facilitate the procedure and lower the costs of obtaining Sri Lanka Standard certificate, SLS, certificates to small scale producers. The idea is that several small scale producers could join forces to overcome the main obstacles to obtain the SLS. <p>3. Increase the quality and quantity of fresh milk/supply capacity development, through encouraging farmers to work full time and take up better dairy farming practices:</p> <ul style="list-style-type: none"> • Select full-time farmers and assist them to develop model farms in Ridigama and Ibbagamuwa. This would include facilitating cattle shed building, biogas production and grass plantation as well as practices. • Association building, which could be an information and capacity building channel for farmers to improve their practices. <p>4. Public-private partnerships to develop cattle breeding centres.</p> <ul style="list-style-type: none"> • Reorganise/restart the government farms together with private actors. • Reinstate the breeding centres at these new farms owned by public and private together. <p>5. Reorganise artificial insemination (AI).</p> <ul style="list-style-type: none"> • Fill the existing vacant LDI (Livestock Development Instructor) posts to increase the number of public 	<p>Associations can be a good channel for this, but small scale producers are not organised.</p> <p>Another problem is that it is almost impossible for an individual small scale producer to obtain the Sri Lanka Standard certificate, SLS (it is costly, high requirements, etc.). The SLS is not compulsory for producers but is a quality label and extends the market for producers.</p> <p>There is an inadequate supply of high quality milk. Many farmers have only 1-2 cows and are working on dairy part-time and do not provide their cows with good feed and treatment, resulting in low quality and productivity.</p> <p>There is shortage of high breed cows in Sri Lanka , which leads to low productivity of milk. Previously, there were breeding centres at the government owned farms from which the small farmers could buy high breed cows. However, the government farms are not well managed, lacking technical skills, and the breeding centres no longer exists. For small farmers it is too expensive to import high breed cows.</p> <p>In addition to importing high breed cows, the government provides artificial insemination (AI) to farmers. This makes it difficult for private providers to compete on</p>
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<p>officers providing AI.</p> <ul style="list-style-type: none"> • Continue to train farmers on AI and prevent the drop-outs. <p>6. Market linkage between large companies and dairy farmers. Strengthening the supply network through building confidence between the farmers and the companies, encourage dialogue between them, appointing an intermediary.</p>	<p>difficult for private providers to compete on AI. Also, the incentives for the public officers, LDIs (Livestock Development Instructor), to provide this service are low, resulting in too few LDIs who actually conduct AI. A programme, initiated already before the Local-VCD exercise, trained farmers or their families in rural areas to provide AI in order to offer a private alternative. The programme has however experienced a large number of drop-outs.</p> <p>Dairy farmer societies are usually formed by the large companies buying fresh milk from these farmers. The large companies provide some services but the farmers must be more coordinated among themselves in order to be able to demand services that improve their productivity and bargaining power.</p>
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3. What actually happened

The table gives a short summary of the activities that have been conducted to implement the above mentioned proposals. The Provincial Ministry of Land, Agriculture, Irrigation and Animal Production was the key decision making authority and the Provincial Department of Animal Production and Health was the key implementer of the majority of these proposals. Enter-Growth acted as a facilitator.

<p>Proposal 1</p>	<p>The Provincial Ministry of Land, Agriculture, Irrigation and Animal Production supported a number of activities that came out of the proposal:</p> <ul style="list-style-type: none"> ⇒ Facilitate loans to the dairy enterprise of Sri Abhinawarama Development Foundation, SADF, to set up a fresh milk centre and to buy a van in order to expand the distribution of fresh milk. This was done in cooperation with the Wayamba Development Bank. ⇒ Potential entrepreneurs were interviewed in order to support them in setting up fresh milk based businesses. So far 3 units have been established. ⇒ An Indian company, which was supposed to set up a milk powder factory, decided to set up fresh milk production instead. For this new production, 520 farmers in 11
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divisions were selected to provide fresh milk.
⇒ Of the farmers selected as suppliers to the Indian company, 150 have so far received technical advice on how to increase their productivity by Wayamba Training Institute and Wannigama farm.

Proposal 2

Associations: Department of Animal Production and Health has suggested doing a needs assessment and assisting the small scale producers to set up an association. The decision to conduct the assessment is with the National office in Kandy and has not been implemented yet. Also, a partner to assist in the assessment has to be identified.

Awareness programmes: At the District MSE Service Fair³, organised under the auspices of the MSE Forum, a one-day seminar was facilitated by the Dambadeniya Development Foundation, DDF, on dairy input supply and technical skills (e.g. awareness workshops on credit, technology, machinery, and packaging). For this seminar, 150 people participated. The Small Enterprises Development Division at the District Secretariat, SEDD, has also conducted training on technology and management, to which 185 farmers have attended.

Certificates: The Director at Veterinary Research Institute, VRI, has verbally agreed to take action to improve the situation on certificates but has suggested that a survey should be conducted first in order to find out how big the problem is.

Proposal 3

DDF introduced the first model farm with ten cows and modern equipment (self-funded). Now, 30 model farms have been set up in Ridigama (20) and Ibbagamuwa (10) by selected farmers with support from the Provincial Ministry of Land, Agriculture, Irrigation and Animal Production, which provided loans for cows, technical advice, provision of feed, etc. In addition, SEDD conducted training on value added products, attended by 90 farmers.

Proposal 4

The District Secretary provided land to the Sri Abhinawarama Development Foundation to set up a breeding farm, which is not yet established since funds for infrastructure and breeds are not yet organised. Further, a proposal has been submitted to establish a Livestock Breeding and Training Farm by private sector and Provincial Ministry in collaboration. This is still discussed and the private sector actor is not selected.

Proposal 5

The Local-VCD exercise did result in efforts aiming to improve the situation with regard to artificial insemination but it has proven to be difficult. A small scale study was conducted by Enter-Growth where the problems and issues were identified.

The tangible results so far are that 22 new officers doing artificial insemination have been recruited, which is 50% of the vacancies and another 20 are planned to be recruited.

Through the Local-VCD, the Ministry has also been influenced to improve the selection of farmers for the programme on private artificial insemination.

Proposal 6

In some cases, the relationship between the dairy farmers and the large companies has been strengthened to the benefit of the dairy farmers. This is mainly due to the fact that there is an intermediary player that has assisted in improving this relationship, such as

³ The MSE Forum and Enter-Growth have organised two MSE Service Fairs in Kurunegala District to promote local business services providers to the general public.

DDF, SADF and the Provincial Ministry. In general, however, the market linkages between dairy farmers and larger companies are still weak.

4. First signs of impact

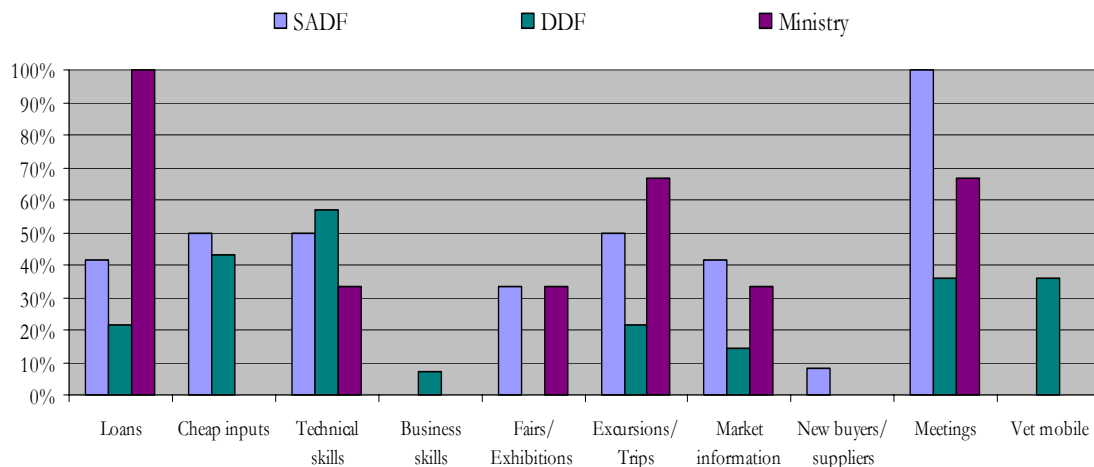
Though some of the proposals have not yet been implemented, some initial signs of impact resulting from the intervention can be observed after 16 months. First of all, the Local-VCD exercise on dairy brought all the stakeholders to one platform, which contributed immensely to implementing the proposals and to building capacity in the District regarding the dairy industry.

To assess the impact of the Local-VCD exercise, a study was conducted, interviewing randomly chosen farmers participating in the three main dairy projects, which were also stakeholders in the Local-VCD exercise. These are:

- 1) Sri Abhinawarama Development Foundation ('SADF') (12 farmers interviewed of 65 in total)
- 2) Dambadeniya Development Foundation ('DDF') (14 farmers interviewed of 40 farmers in total)
- 3) The Provincial Ministry of Land, Agriculture, Irrigation and Animal Production ('Ministry') (3 farmers interviewed of 520 farmers in total)
- 4) In addition, dairy farmers outside these projects ('Other') (8 farmers interviewed) have been assessed.

The dairy farmers received various services from the projects, which are illustrated in Figure 4.1. It should be noted, though, that none of the farmers says they received grants or access to new technology via the projects.

Figure 4.1: Overview services received from the projects



Proposal 1

The Sri Abhinawarama Development Foundation (SADF) had initiated a number of activities to improve the situation for the surrounding dairy farmers also before the Local-VCD but received additional support from the Ministry as a follow up to the Local-VCD proposals. The SADF fresh milk centre mentioned under proposal 1 has been established. The van, also funded by the Ministry, is currently not used for the distribution of fresh milk, as the recent increase of petrol prices made this too expensive but instead it is used to bring boiled milk to the sales centre and to bring the excess milk to Nestle.

All the 14 interviewed SADF farmers bring their milk to the SADF collecting centres, and SADF distributes the fresh milk to people's houses by motorbike, produces milk-based products and sells the excess milk to Nestle. SADF claims that the demand for fresh milk distribution to households is continuously increasing. The demand for the new milk based products is also increasing, hence contributing to an increase in the demand for fresh milk, and they are sold through the sales centre, to school and hospital canteens. All the activities conducted by the SADF contribute to a higher price for the fresh milk for the dairy farmers selling their milk to SADF. In 2004, the milk farmers sold to Nestle for Rs. 20 per litre fresh milk. Now they can sell to other distribution channels through SADF at the price of Rs. 26 per litre fresh milk. The goal for SADF is to make it possible to sell for Rs. 35.

In addition, SADF provides technical training to the dairy farmers, in collaboration with the Provincial Departments of Agriculture and for Animal Production and Health.

The Indian company has not been set up yet, but the 520 farmers to provide the milk have recently been selected. The Indian company will initially need 30,000 litres a day, which will be increased to 60,000 litres a day. This means that the demand for fresh milk will be increased by 30-50% when the company is established.

Proposal 2

Associations:

Of the dairy farmers interviewed, 11% became new members of an association after the implementation of the Local-VCD exercise. The change in membership cannot, however, be attributed to formation of a new association but mainly because the farmers change their membership to the association belonging to the company that they currently supply to.

Awareness programmes:

Of the farmers in the Dambadeniya Development Foundation (DDF) project, 57% indicate that they received technical skills training from the project. This may refer to the training provided on credit, technology, machinery, packaging at the District MSE Service Fair. Fifty percent of the SADF farmers also received training on technical skills and 33% of the Ministry's farmers received technical skills training from the Ministry. DDF farmers were the only farmers who also received significant benefits from other service providers, mainly from the veterinary services. These service providers may have been stimulated by the Local-VCD exercise, though this cannot be said with certainty. Only one farmer has received benefits from the SEDD.

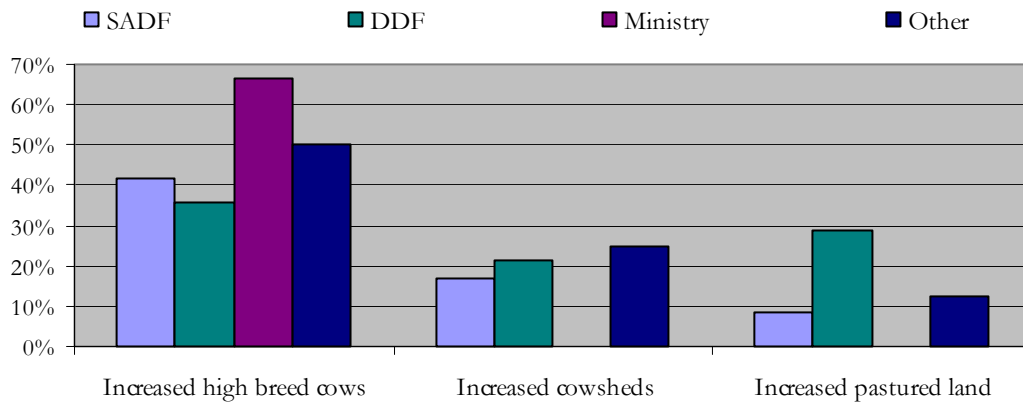
Generally speaking, the farmers indicate that they have increased their personal level of knowledge and experience and that the knowledge they have obtained is useful for their personal life (95%). More than half of the farmers indicate that the usefulness of the knowledge they received increased during the last 1.5 year. This was the case for 75% of the SADF and other farmers and for 67% and 29% of the Ministry and DDF farmers respectively. This may also be a positive spin-off effect of the VCD exercise, which helps service providers identify needs.

One of the DDF farmers has started producing milk-toffees, probably as a result of the training conducted by DDF. However, although several training sessions focussing on value-addition have been conducted, it still turned out to be difficult for farmers to start their own production-units.

Proposal 3

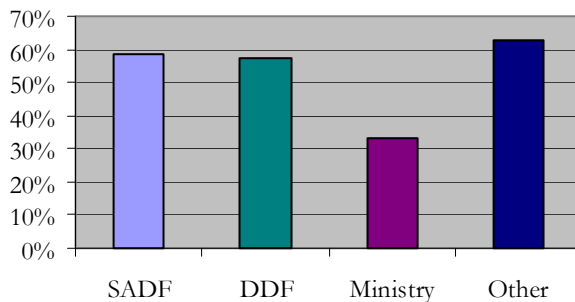
The majority of the farmers have invested in their business, purchasing high breed cows, building a cowshed and/or increasing the number of acres of pastured land with CO3 (best quality) grass.

Figure 4.2: Signs of expansion of the business



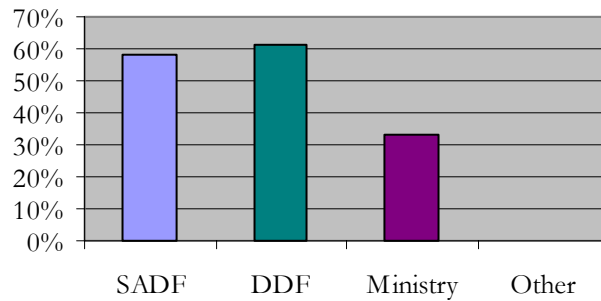
The total daily volume of production has increased for the majority of the dairy farmers.

Figure 4.3: Increased volume of total daily milk production – per project



A large percentage of the farmers have also improved their productivity, having increased the production per cow.

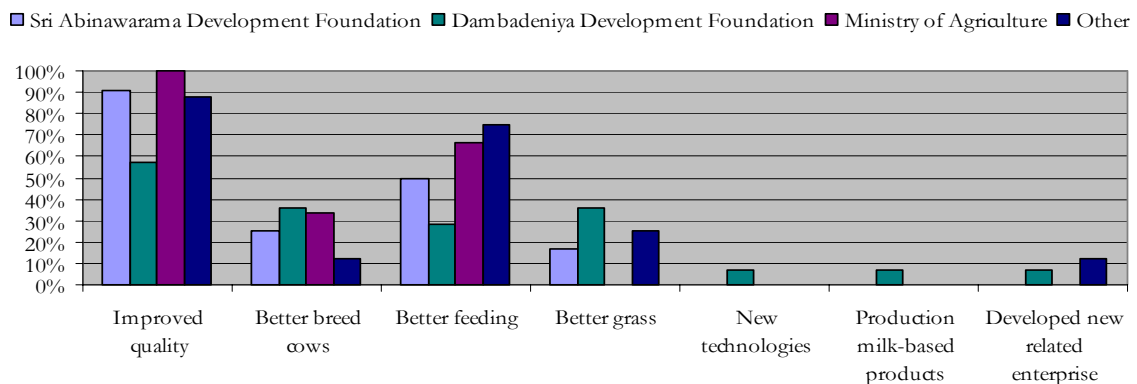
Figure 4.4: Increased volume of milk production per cow (productivity) – per project



One of the proposals was to focus on improving the quality of the milk produced. Farmers can improve the quality of the milk by upgrading their business in different ways. One way is product upgrading, i.e. directly improving the quality of the milk, whereas another way is through process upgrading, such as buying better breed cows, providing better feed to the cows and/or using more advanced technologies such as artificial insemination and machine milking. Furthermore, farmers can upgrade their business through functional upgrading, in which they add value to their products, such as starting to produce milk-based products (milk-toffees, yoghurt, curd, etc.), as well as through inter-sectoral upgrading, whereby the farmer starts a business in a related sector, for example biogas production.

Most of the dairy farmers interviewed have upgraded their business through upgrading the *product* they sell (improve the quality of the milk) and secondly they have focussed on *process* upgrading, such as buying better breed cows, buying better feeding, see Figure 4.5.

Figure 4.5: Upgrading techniques applied by the dairy farmers in the last 1.5 year – per project



As a result of the above, the operating costs increased for 86% of the farmers but 76% also increased their total sales income. The latter is an effect of the increased sales volume (for 57% of the farmers) and the increased price (for 95% of the farmers). The differences between the different projects are minimal (67% - 83%). A correlation analysis was conducted, suggesting that the increased productivity increased the production volume, which increased the sales income significantly. In addition, the increased price for many farmers, influenced the sales income and the profits of the farmers positively. At the time of the interviews, the average price that the

farmers received for a litre of milk was Rs. 23.78. The average production per cow (productivity) was 7.44 litres. Farmers were able to sell on average 15.55 litre per day. As a result the farmers received on average Rs.11,201 for their milk per month. After deducting their expenses their profits were on average Rs. 6,618.

Thanks to this, for 70% of the dairy farmers the income from the dairy business has become more important over the last 1.5 year. This was especially the case for the Ministry (100%) and other farmers (88%) but also for more than half of the SADF (67%) and DDF (57%) farmers. In addition, 24% of the farmers argue that the level of security that their dairy business provides to them and their family's life has increased. This is positively related to the level of job satisfaction (as an indicator for decency of work), which has also increased for 38% of the farmers.

Though several farmers have improved their business in terms of sales volume, price and profits, and several farmers have upgraded their business, none of the farmers has increased the number of workers in their enterprise, even though 16% of the farmers say that the number of hours spent on their business has increased. This may be a result of the Local-VCD exercise's aim to encourage them to start working full time in their business. Currently 50% of the DDF farmers are working full-time on their farm. This is the case for 33%, 25%, and 13% of the Ministry, SADF, and other dairy farmers respectively. It also illustrates that although the business is growing, for now the farmers are reluctant to hire new workers.

Proposal 4

As the breeding farm, suggested under this proposal, has not yet been established by SADF, no direct impact on the dairy farmers could be found in this assessment. Still 43% of all the dairy farmers were already able to invest in new high breed cows during the past 1.5 year. The breeding farm would possibly reduce the costs and facilitate the process of obtaining good quality high breed cows in the future.

Proposal 5

Since the recruitment of the new officers to conduct Artificial Insemination (AI) services has started only recently, there has not been any impact for the farmers assessed. However, the study shows that the majority of the farmers used AI before the Local-VCD exercise, which has resulted in an increased number of high breed cows. It seems that, to some extent, the farmers are managing despite the problematic situation of AI services.

Proposal 6

Generally, dairy farmers tend to sell their milk to the collecting centre of large companies or supermarkets, or to the collecting centre of the project to which they are related (e.g. in the case of SADF). When studying whether any changes took place in the relation between the farmers and their buyers since the Local-VCD exercise was conducted, the result is mixed. None of the SADF farmers changed their buyers, which can be explained by the fact that they simply supply their milk to the SADF collecting centre. In contrast, 36% of the DDF farmers switched buyers. Of the farmers that switched to Milco or Cargills 67% indicate that this change had a positive effect on their business, whereas only 1/3 of those that switched to Nestle experienced a positive

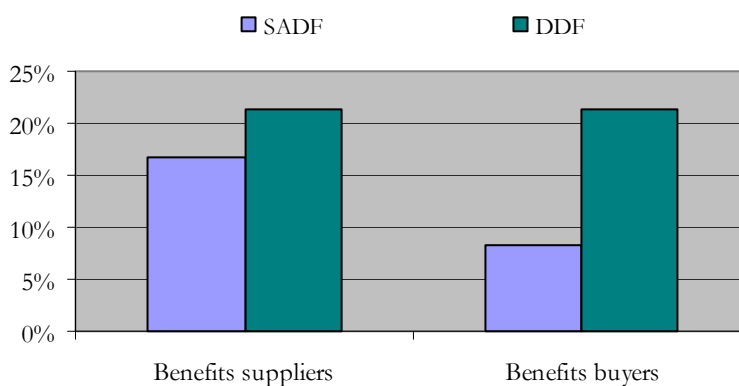
change. Of the farmers that are not directly linked to an organisation or foundation 50% switched buyers. They all switched to Milco and with a positive impact.

Most of the dairy farmers have no 'official' agreement with their buyers but a quarter of the other farmers that changed to Milco, now have a written agreement. They indicated that this had a positive effect on their business. None of the other farmers or those linked to the Ministry was able to negotiate the price with their buyer, and only one of the DDF farmers was able to negotiate the price. On the contrary, half of the SADF farmers indicate that they are able to negotiate the price with their buyer. This can be explained by the fact that the project itself aims to give the farmers the highest price possible. It should be noted that the demand for milk has been sufficient and stable over the last years.

Most of the farmers buy their inputs from their buyers to whom they supply their milk and this is especially the case for the farmers who are not involved in any of the projects (75%). However, the farmers connected to the Ministry tend to buy their inputs from the veterinary services and the farmers linked to the SADF say they buy about half of their inputs from the local market, such as retail shops and rice mills.

Mainly the farmers involved with the DDF receive embedded services in the form of training from their buyers (21%) (Milco and Cargills) and suppliers (21%) (Company collector, other wholesalers and the Veterinary Services). This was the case for respectively 8% (SADF) and 17% (SADF and Veterinary service) of the Sri Abhinawarama Development Foundation dairy farmers. None of the farmers connected to the Ministry, nor the other farmers received training from their buyers or suppliers.

Figure 4.6: Embedded services offered to the dairy farmers – per project



It can be concluded that there have been some improvements in the farmer - buyer relationship over the past 1.5 years. Some farmers have changed buyers, which had a positive effect on their business. Some have also increased their bargaining power, or receive more embedded services from their buyer/supplier.

5. Learning, conclusion & next steps

The Local-VCD exercise is an effective method to bring the stakeholders together; 1) the effort/effect ratio is reasonably low, whereas 2) the sustainability rate is reasonably high, as the process remains in the hands of the stakeholders; they merely combine their strengths.

The cooperation between the public and private sector stakeholders has contributed to achieving some of the results that came out of this exercise. The exercise has demonstrated that this resulted in a possible change that is likely to have an impact on pro-poor growth. Different organisations focus on the same subject, and similar projects operate in the same area. When coordination is improved and organisations are aware of the; 1) subjects covered, 2) working areas, 3) focus and specialised knowledge offered by other organisations, they are able to more strategically use their own resources, increasing the efficiency of the services provided in the dairy sector and thereby improving the final outcome of their measures.

It is interesting to focus on value-addition in order to increase profits and ultimately the farmers' income. However, although several training sessions have been conducted, it still turned out to be difficult for farmers to start their own production units. Therefore, when service providers and other projects/programmes aim to focus on value-addition, they should also give practical assistance regarding the production after the training.

This value chain exercise had a 'local' focus. Normally, in a value chain, it is important to focus on both the local and global processes in the chain. However, since the market for dairy is organised in such a way that the farmers only sell their milk on the local/national market, the global processes become relatively less important. The main reason for this is that the buyers (e.g. Milco and Nestle) depend on those small farmers to provide fresh milk. Therefore interventions in this 'local' sector should mainly focus on local processes, such as local market organisation (e.g. collecting systems and business association formation) and improvements in market coordination (e.g. access to AI, new technologies), and the quality, productivity and quantity of milk production.

At the same time, the cooperation with the large companies is important in the dairy sector, as most dairy farmers receive benefits from the buyers, especially when they change buyers. As the main buyers in this industry are large companies such as Milco and Nestle, a value chain analysis should also be done on a national level where national stakeholders are invited. As a next step, Entergrowth has decided to start a regional value chain initiative in which all four districts covered by the project are participating.

Annex

Local Dairy Value Chain - Sinhala

Local Dairy Value Chain - English

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