Dairy sectors all over the world are being challenged by expanding populations and economic growth. A growing demand for dairy products has led to a significant increase in Dutch public and private involvement in dairy activities in Africa and Asia, creating new opportunities for many different stakeholders.

A fresh approach to joint dairy sector development is called for—one that helps stakeholders to create a shared language, shared objectives, and a shared strategy.

The framework presented here is part of a dialogue organised by the Dutch Ministry of Economic Affairs as part of its policy to better connect development aid, trade and investments.

The dairy sector challenge

1. Dairy-processing technology
2. Expertise and supplies for breeding and feeding
3. Sustainable intensification of dairy farming systems
4. The use of technology in dairy-farm management
5. The collaboration of farmers in cooperatives
6. Strong collaboration between government, the private sector, knowledge institutions, and NGOs
7. Integrated dairy-chain approach
8. Animal health control
9. Capacity development along the entire education chain.

• How do I identify opportunities in a new market?
• What constraints and dilemmas can I expect?
• What public and private partners should I involve?
• How do I get from analysis to action in a complex chain?
• What lessons have been learned?

Dutch dairy sector expertise

The Dutch dairy sector has a long tradition of exporting dairy products, dairy cattle, and equipment to produce and process milk all over the world. Its key areas of investments and exports are:

Photo credits: Bram Wouters, Jan van der Lee.

Production and design: Roger Reuver, Pauline Hassink.
The dairy sector challenge

- How do I identify opportunities in a new market?
- What constraints and dilemmas can I expect?
- What public and private partners should I involve?
- How do I get from analysis to action in a complex chain?
- What lessons have been learned?

Dairy sectors all over the world are being challenged by expanding populations and economic growth. A growing demand for dairy products has led to a significant increase in Dutch public and private involvement in dairy activities in Africa and Asia, creating new opportunities for many different stakeholders.

A fresh approach to joint dairy sector development is called for—one that helps stakeholders to create a shared language, shared objectives, and a shared strategy.

The framework presented here is part of a dialogue organised by the Dutch Ministry of Economic Affairs as part of its policy to better connect development aid, trade and investments.

Dairy sector expertise

The Dutch dairy sector has a long tradition of exporting dairy products, dairy cattle, and equipment to produce and process milk all over the world.

Its key areas of investments and exports are:

1. Dairy-processing technology
2. Expertise and supplies for breeding and feeding
3. Sustainable intensification of dairy farming systems
4. The use of technology in dairy-farm management
5. The collaboration of farmers in cooperatives
6. Strong collaboration between government, the private sector, knowledge institutions, and NGOs
7. Integrated dairy-chain approach
8. Animal health control
9. Capacity development along the entire education chain.
Dairy Actors

Organize stakeholders to build a dairy sector development strategy

Stakeholders who are motivated to further develop the dairy sector are the key factor in drafting a strategy. Their experience, their attitude, and their energy are needed to transform the present constraints and opportunities into future plans and actions.

The actors to consider here are governments, donors, private businesses, farmer organizations, NGOs, and knowledge institutes. Under the guidance of an independent facilitator, they will be able to design a sector development strategy that will show the way to a prosperous dairy sector.

Dairy Analysis

Analyse the sector and its surroundings by using the five 'lenses':

The economic context:
- urbanization
- income growth
- population growth
- business climate
- retail chain development
- infrastructure
- production costs

The biophysical context:
- land availability
- feed and water
- land tenure
- milk potential
- environmental stresses
- animal health

The socio-political context:
- dairy traditions
- political systems
- policies and taxes

Farming systems:
- management and entrepreneurial skills
- farm size and farm distribution
- farm profitability
- collective action and cooperative skills

The dairy chain:
- the market share of the formal dairy chain
- milk collection infrastructure
- transaction costs
- farmers’ access to inputs
**Dairy Diagnostics**

**Identify constraints and opportunities**

The next step is to identify constraints and opportunities tailored to the country concerned. (see Table 1.) This diagnostic phase is carried out together with stakeholders within the dairy chain.

Important issues here include:
- milk volume and quality
- farmers’ cooperation and communication
- access to finance and facilities
- level of knowledge
- infrastructure
- education and research
- chain governance
- farm size policies

**DILEMMAS**

When moving from analysis to action, stakeholders will have to deal with many dilemmas encountered in emerging economies and developing countries. Typical dairy sector development dilemmas are:

- To focus on dairy imports or on local milk production?
- To invest in the formal or the informal dairy chain?
- To rapidly or steadily increase milk production, in order to meet growing demand?
- To link smallholders to formal dairy chains or to establish large-scale farms?
- To develop the local herd or to import grade cattle?

**Dairy Goals**

**Choose goals and objectives**

The list of constraints and opportunities combined with stakeholders policies and priorities leads to the definition of development goals.

The many possible goals are prioritized by judging them based on criteria defined by the stakeholders. Their opinions about “what works and what doesn’t” should play a major role here.

Possible criteria for prioritizing goals include:
- appropriateness
- sense of urgency
- feasibility
- expected effectiveness
- costs and revenues
Dairy Action

Identify intervention strategies

In the final step definitive goals and objectives are translated into strategies and interventions. (see Table 2.) The final list of interventions should be both challenging and inspiring, and should match the roles and responsibilities that the different stakeholders are willing to take.

Obtaining commitment from the organizations and people who take responsibility for implementing the interventions is a major challenge at this stage. Planning should be followed by joint monitoring, review, and follow-up planning in order to maintain momentum and to make the sector’s development a continuous process.

Table 1. Common constraints and opportunities in dairy sector development in emerging countries

<table>
<thead>
<tr>
<th>Constraints</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small farms and small volumes of raw milk supply</td>
<td>Strong market demand for milk: upscaling of farms</td>
</tr>
<tr>
<td>Underutilization of capacity of dairy plants</td>
<td>Start-up of professional processors</td>
</tr>
<tr>
<td>Inadequate transport facilities</td>
<td>Improve infrastructure: roads, transport and trade</td>
</tr>
<tr>
<td>Lack of testing facilities</td>
<td>Set up milk-testing laboratories</td>
</tr>
<tr>
<td>Insufficient cold-chain facilities</td>
<td>Investments in cold-chain equipment, storage and transport</td>
</tr>
<tr>
<td>Food safety and milk quality regulations absent or not enforced</td>
<td>Set up legislation and enforcement on food safety</td>
</tr>
<tr>
<td>Weak cooperation within dairy chain</td>
<td>Quality assurance and quality-based payment systems</td>
</tr>
<tr>
<td>Moderate technical and entrepreneurial skills</td>
<td>Training and education, improve farmer entrepreneurship</td>
</tr>
<tr>
<td>Insufficient poor-quality fodder</td>
<td>Commercial feed and fodder supply with better inputs and services</td>
</tr>
<tr>
<td>Low reproduction rates</td>
<td>Improve young stock rearing</td>
</tr>
<tr>
<td></td>
<td>Improve animal feed and supplements</td>
</tr>
<tr>
<td></td>
<td>Improve animal health and veterinary services</td>
</tr>
<tr>
<td>Poor access to finance (other services)</td>
<td>Improve finance facilities</td>
</tr>
<tr>
<td></td>
<td>Improve regulations around collateral</td>
</tr>
<tr>
<td>Research and extension not tailored to needs of chain actors</td>
<td>Tailor-made practical training and extension</td>
</tr>
<tr>
<td></td>
<td>Research and development, Training of trainers</td>
</tr>
</tbody>
</table>

Table 2. An example set of a goal, objectives and interventions for a dairy sector strategy

Competitive and developed dairy sector

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Competitive dairy production</th>
<th>Developed dairy chains</th>
<th>Developed Knowledge base</th>
<th>Developed organization and representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example interventions</td>
<td>Introduction of fodder</td>
<td>Collection grid and business clusters</td>
<td>Farmer advisory service</td>
<td>Independent milk-testing laboratory</td>
</tr>
<tr>
<td>Dairy zone development</td>
<td>B2B linkages</td>
<td>Business development services for SME’s</td>
<td>Crossbreeding program</td>
<td></td>
</tr>
<tr>
<td>Training young stock rearing</td>
<td>Quality-based milk payment</td>
<td>Innovation coaching and funding</td>
<td>Disease surveillance</td>
<td></td>
</tr>
<tr>
<td>Soil fertility management</td>
<td>Producers organisation capacity building</td>
<td>Business-linked vocational training</td>
<td>Land titling</td>
<td></td>
</tr>
</tbody>
</table>
Developed by Wageningen UR on request of the Directorate General Agro of the Ministry of Economic Affairs of the Netherlands.

This brochure summarizes the discussion paper “Milking to potential - Strategic framework for dairy sector development in emerging economies” by Jan van der Lee, Jelle Zijlstra, Bram Wouters, and Simone van Vugt. The authors are working for Wageningen UR Livestock Research and Centre for Development Innovation, Wageningen UR.

Contact:

Jan van der Lee
jan.vanderlee@wur.nl
www.wageningenUR.nl

Geert Westenbrink
g.westenbrink@minez.nl
www.rijksoverheid.nl/ministeries/ez

Colophon

Milking to Potential: Joint Dairy Sector Development in Emerging Economies

1. Dairy-processing technology
2. Expertise and supplies for breeding and feeding
3. Sustainable intensification of dairy farming systems
4. The use of technology in dairy-farm management
5. The collaboration of farmers in cooperatives
6. Strong collaboration between government, the private sector, knowledge institutions, and NGOs
7. Integrated dairy-chain approach
8. Animal health control
9. Capacity development along the entire education chain.

• How do I identify opportunities in a new market?
• What constraints and dilemmas can I expect?
• What public and private partners should I involve?
• How do I get from analysis to action in a complex chain?
• What lessons have been learned?

Dutch dairy sector expertise

The Dutch dairy sector has a long tradition of exporting dairy products, dairy cattle, and equipment to produce and process milk all over the world. Its key areas of investments and exports are:

Photo credits: Bram Wouters, Jan van der Lee.
Production and design: Roger Reuver, Pauline Hassink.