

# 6 Human resource development

Human resources in the agriculture and agri-food sector need training, advice and expertise if they are to develop their skills

and make the right choices in an increasingly competitive environment.

Research, development, new techniques and knowledge transfer will all help determine the sector's future. The task of recruiting a sufficient number of qualified

employees is also a concern, and workforce development is yet another challenge for agri-food enterprises wishing to improve their productivity and innovate.

## **BASIC TRAINING AND CONTINUING EDUCATION**

A broad range of easily-accessible training programs at the high school, college and university level are available in Quebec. The province's high schools dispense more than 20 basic training programs, and 15 of its colleges offer nine additional programs.<sup>1</sup>

The Institut de technologie agroalimentaire (ITA) has three campuses (La Pocatière, Saint-Hyacinthe and Sainte-Anne-de-Bellevue), and is the sector's largest college-level institution. It has a team of 300 people working on skills development and a well-established reputation that has resulted in a placement rate for its graduates close to 100%. The Institution also plays a significant role in continuing education. In 2004-2005, more than 300 continuing education sessions were dispensed to nearly 4,000 people.<sup>2</sup>

Université Laval and McGill University offer university-level training in agricultural sciences. Other universities and institutes also offer a range of related programs in the fields of biology, the environment and veterinary medicine.

In the hotel, restaurant and institutional sector, a number of high schools and colleges, in addition to the Institut de tourisme et d'hôtellerie du Québec (ITHQ), offer educational and training programs. At the ITHQ alone, the applications for hotel and restaurant management courses remain very high, representing 140% of the available places. At the university level, registration in recent years has grown by almost 20% each year.<sup>3</sup>

As far as agricultural production is concerned, MAPAQ data reveals a 30% drop in high school training program enrolments between 1999 and 2003, and a startling 47% drop for college program enrolments in the same period.<sup>4</sup> Between 1998 and 2006, despite financial incentives, enrolments for the *Farm Management and Technology* program offered by the ITA and a certain number of CEGEPS fell by 52%.<sup>5</sup>

Farmers in Quebec have the lowest level of education amongst all provinces.<sup>6</sup> In 2000, according to Statistics Canada, the percentage of farmers in Quebec with university qualifications was the lowest of all the Canadian provinces, and the percentage of farmers educated to Grade Nine level or less was the highest. Over the years, however, the gap has been closing. As the following table shows, the next generation of farmers is much more likely to have been educated at the post-secondary level, and the percentage of new farmers with no qualifications is declining.

**Table 4 – CHANGES IN THE LEVEL OF TRAINING OF QUEBEC’S NEXT GENERATION OF FARMERS, 1995, 1997 AND 2000 (%)<sup>6</sup>**

Level of training	1995	1997	2000
No qualifications	24	15	14
High school	49	53	43
College	22	25	34
University	5	7	9

The most popular university-level program in the agriculture and agri-food sector is agricultural science, accounting for 43% of the sector’s graduates in 2001.<sup>7</sup> Other popular university disciplines include dietetics and nutrition, engineering (rural and food), food science and technology, and veterinary medicine.

**The Commission would like to receive comments and opinions on agriculture and agri-food training:**

- **Do the available programs meet present and future needs?**
- **What steps could be taken to increase the number of agricultural graduates and ensure that all farmers receive sufficient basic training?**
- **What can be done to increase participation in continuing education programs?**

**LABOUR NEEDS**

The agri-food sector as a whole employs approximately 12% of Quebec’s total workforce. However, Emploi-Québec expects the percentage to decline slightly in the medium term.<sup>8</sup>

**Table 5 – DISTRIBUTION OF THE 452,000 JOBS IN QUEBEC’S AGRI-FOOD SECTOR<sup>9</sup>**

Field	Percentage
Agricultural production	13
Processing	16
Distribution and HRI	71

The farming sector is losing livestock-related jobs but gaining crop-related jobs due to the strong demand for seasonal workers. This trend is expected to continue. The overall number of jobs will not increase, but the skills required to perform them might.<sup>10</sup>

Family labour is no longer sufficient. Farms are increasing in size and families are having fewer children. Farmers must therefore face the challenge of recruitment, and the further challenge of training and sustaining the interest of the people they hire. The sometimes difficult working conditions in the farming sector, combined with a work week spread over seven days and low pay, add to the challenge and generate problems in terms of both recruitment and stability.

## INNOVATION

In the present, highly competitive context, everyone agrees on the importance of innovation. Research, technology watch activities and knowledge transfers are a source of profit and productivity, product diversification, adapted solutions and new processes.

In 2002, a total of around \$178 million was invested in agriculture and agri-food research in Quebec, half by the industry itself, 36% by the federal government and 14% by the provincial government. R&D spending in the sector increased significantly between 1995 and 2002, from \$43 million to \$89 million.<sup>6</sup> This situation reflects, in part, the decision by MAPAQ to support the development of public/private corporations. R&D activities have also been implemented with input from the industry, and this transfer of resources has created new leverage.

In 2002, R&D spending by food processing companies accounted for 0.24% of shipments, compared with 0.15% for Canada as a whole and 0.16% for Ontario<sup>6</sup>

In the food processing industries and food-related services sectors, the problem of recruiting and sustaining the interest of workers is common. Difficulties arise from the fact that many of the jobs are demanding and the food industry must compete with other types of firms seeking to attract people from the same labour pool.

Agriculture and agri-food enterprises need a larger workforce that is both stable and competent if they are to continue to develop.

**The Commission would like to receive comments and opinions on the strategies required to attract and retain human resources in the agriculture and agri-food sector.**

- What strategies should be used to provide agriculture and agri-food enterprises with the qualified workers they need?
- What role should governments play?
- How can a new pool of workers, such as immigrants, be attracted to the agriculture and agri-food sector?

In fiscal year 2004-2005, MAPAQ directly invested a sum of \$22.5 million in technological innovation in the form of support for centres of expertise, research corporations and joint initiatives.<sup>10</sup>

Knowledge is transferred via extension activities. As an example, every year the Centre de référence en agriculture et agroalimentaire du Québec (CRAAQ) reaches approximately 20,000 clients through its conferences, publications and web-based databank.<sup>11</sup> The federations of the Union des producteurs agricoles (UPA), cooperatives, MAPAQ offices and many other associations also organize a host of extension activities. A number of specialist publications and web sites also disseminate information.

**Based on your own vision of the agriculture and agri-food sector, what strategies are needed to support research, technology watch and new knowledge transfer activities:**

- Is sufficient money being invested in research, technology watch and new knowledge transfer activities, and is the money being properly targeted?
- Do the investments target the market niches with the best future potential?
- How can exchanges between the various knowledge producers be improved?
- What can be done to maximize the impact of investments in research and development?
- What can local and regional authorities do to support innovative activities within their territories?
- What role should the State play?

## **SPECIALIZED ADVISORY SERVICES**

Advisory services are vital to the transmission of new knowledge. To play their role properly, consultants must be aware of recent findings, especially from applied research. They must forge and maintain trust-based contacts with their customers.

Farm advisory services used to be almost exclusively the responsibility of MAPAQ. Twenty years ago, MAPAQ changed its strategy, cutting back on direct interventions and reducing its workforce, and providing financial support for group advisory structures instead.

The collective formula, developed first by the farm management clubs, allows groups of farmers working on a voluntary basis to develop a service that they themselves manage and partly fund. Using this model, advisory services were subsequently developed in the areas of production, agro-environmental techniques and farm transfers.

Regional advisory networks were also created. The aim was to make advisory services more accessible and to tailor them more to the needs of individual regions.<sup>15</sup> Subsidized advisory services are used by only one-third of Quebec's agricultural operations.<sup>12</sup>

A number of farm suppliers, financial institutions, feed companies and cooperatives have recruited agronomists and technicians and developed their own advisory services. These services are used extensively and are also valued by producers, although they are perceived in some quarters as being less neutral.

The need to coordinate these services while maintaining their accessibility and increasing the number of users has received a great deal of attention in recent years. The federal government's strategic framework, by leaving more room for individual choice by farm managers, has also helped to change the dynamics of the situation, especially with regard to the group formula.

Processing and distribution companies have access to the services of firms of all types offered through Emploi-Québec, the Ministère du Développement économique, de l'Innovation et de l'Exportation and other federal and provincial government departments and agencies.

Lastly, a number of private companies join with professional, sector-based associations in order to obtain the expertise they need through workshops, conferences, events, and so on.

**The Commission proposes the following subjects for reflection, among others:**

- **How can access to advisory services be developed?**
- **What can be done to guarantee the quality of all these services?**
- **What can be done to ensure that existing resources work together?**
- **Does training for advisors and consultants meet current needs?**

# 7 Agriculture, agri-food and the environment

All human activities have an impact on, and modify, the environment. Agriculture, by its very nature, is a major user of resources such as

land and water. In fact, with 1.9 million hectares of land under cultivation,<sup>1</sup> agricultural production occupies much of the inhabited portion of Quebec. Taken together, these two observations underline an inescapable fact: the quality of our environment, and of its ecosystems, is closely tied to the quality of our agriculture and agri-food practices.

Our living environment is fragile and we must take care of it—this is the message we have received from citizens of all backgrounds. Agriculture must preserve the resources on which it depends if it is to remain viable. Water and soil quality are essential to its ongoing survival.

The practices best suited to preserving the environment require work and investment by government, farmers, processors and other stakeholders. Although efforts in Quebec compare favourably to those elsewhere in Canada and around the world, research tends to show that the results obtained are not completely satisfactory, and that we have not yet attained the balance needed to ensure sustainable development.<sup>2</sup>

## MAIN OBSERVATIONS

### WATER

In Quebec, water management has been based on watersheds since 2002. A watershed is a drainage basin comprised of an area of land in which all surface water drains towards the same outlet. The watershed approach is designed to take into account all aspects of water management, ecosystems and water usage by all players within the watershed.<sup>3</sup>

Animal, industrial and domestic waste, including runoff from septic systems along lakes and rivers, overflow from municipal sewage systems<sup>4</sup>, and mineral fertilizers and pesticides, are the main sources of water pollution in Quebec.<sup>5</sup> If the ability of a watershed to support pollution is exceeded, various types of algae (including cyanobacteria) and aquatic plants may proliferate making the water unsafe for swimming and drinking.

A sign of the direction in which the agri-environment is moving is that over the last three years, the number of bodies of water in Quebec affected by cyanobacteria has increased from 53 to 73.6. Phosphorous has been identified as the main factor in this proliferation.<sup>7</sup>

Numerous water supply systems in rural areas that rely on groundwater, as well as private domestic wells, are or have been affected by nitrates. A study entitled *La qualité de l'eau potable dans sept bassins versants en surplus de fumier et impacts potentiels sur la santé*, carried out in 2004, compared intensive agriculture zones and control zones in seven different watersheds. The results show that wells in agricultural zones contain more nitrites and nitrates, but similar numbers of micro-organisms.<sup>8</sup>

The authors of the *Suivi 2003 du Portrait agroenvironnemental des fermes du Québec*<sup>9</sup> state that controlling diffuse pollution generated by pesticides is a key issue for regions where over 50% of the land is treated with pesticides, in other words six out of the 14 regions in which agriculture is prevalent.

Within a given watershed, research has shown a causal relationship between areas where the land is worked for cultivation purposes, for example for crops such as corn and potatoes, and a deterioration in water quality. There is also a link between total forested area and water quality within a watershed.<sup>10</sup>

Urban sprawl and agricultural expansion have led to the disappearance of forests and wetlands which act as sponges and help stabilize water flow after storms and snowmelt. This situation has increased runoff and the risk of soil erosion.

## SOIL

An agricultural soil is a living environment that requires a correct balance of water, air, living organisms and nutrients. This balance ensures the health of the soil. When the balance is upset, plants can no longer grow at their optimum rate and crop yields may be affected. Nature takes several thousand years to “create” a balanced soil.

In recent decades, pork and poultry farms often have not owned any land under cultivation. In some cases this can lead to an imbalance between the area of land under cultivation and the volume of animal waste to be spread in a given zone.<sup>11</sup>

The last exhaustive scientific study of soils in Quebec, *Inventaire des problèmes de dégradation des sols agricoles du Québec* was published in 1990. More recent data from a survey conducted by IRDA and MAPAQ on the minerals present in soil, particularly phosphorous, show that over-fertilization<sup>12</sup> exists in watersheds with higher concentrations of livestock and more intensive agriculture.

## AIR

According to the Ministère du Développement durable, de l'Environnement et des Parcs (MDDEP) agriculture contributes around 9% of Quebec's greenhouse gas emissions, mainly in the form of nitrogen losses from soil under certain specific conditions, methane production from bovine digestion, and manure slurry storage. For comparison purposes, the transportation sector emits the most greenhouse gases (37%), followed by the industrial sector (31%).<sup>13</sup>

Agricultural activities, and especially the pork sector, also produce odours mainly from the spreading of manure. This has led to social problems in some regions where farms are located close to residential areas. In addition, according to MAPAQ, more than 50% of dairy farms now manage their animal waste in liquid or semi-liquid form, adding to the odour problem.<sup>14</sup>

## BIODIVERSITY

More than 70% of the forest habitats in the St. Lawrence Valley have disappeared. Agriculture, by changing the habitats of wild species and using a small number of cultivated plants, results in a reduction of biodiversity. It is estimated that the risk of biodiversity loss is high when forest cover falls below 30% in a given area.<sup>15</sup> Wooded areas on farms have a number of important functions for ecosystems, especially by preserving native animal and plant species in the agricultural environment and by acting as windbreaks.

Transgenic plants are seen by some people as a cause for concern because they disperse alien genes into the environment.<sup>16</sup> Genetically-modified plants contain genes from other species, including bacteria, viruses, plants or even animals. Scientific examination has shown that dispersion may create a risk of toxicity for insects, an increase in resistant insect populations, and the emergence of herbicide-resistant weeds. Other studies have demonstrated possible benefits: lower pesticide use, less toxic pesticides, less tillage and increased agricultural production.

**The Commission would like to hear the views of participants concerning strategies and ways of achieving and maintaining a balance between the environment and agriculture.**

- **How can the responsibilities of the agricultural, industrial and municipal sectors with regard to environmental protection be exercised more effectively?**
- **Are the strategies used to manage animal waste appropriate, especially with regard to water quality?**
- **What steps should be taken to reduce the negative effects of liquid manure management?**
- **Which are the best agronomic practices, especially in connection with fertilization, soil conservation and pesticide use?**
- **How can agriculture help reduce greenhouse gas emissions and contribute to the broader effort to reduce global warming?**
- **What should be done to maintain and increase biodiversity on agricultural land?**
- **What do you think about the use of genetically-modified plants in terms of the risks and benefits they represent?**

## GOVERNMENT POLICIES

Government policies, laws, regulations and assistance programs based on sustainable development have gradually been introduced to address the complex environmental and co-habitation problems faced by the agricultural sector.

- In 2002, the *Quebec Water Policy* introduced a watershed approach following extensive public consultation by the Bureau des audiences publiques sur l'environnement (BAPE).
- The *Groundwater Catchment Regulation* is intended to protect groundwater used for human consumption, and to manage groundwater extraction.
- The *Protection Policy for Lakeshores, Riverbanks, Coastal zones and Floodplains* governs conservation practices for the areas in question.
- The *Regulation on Agricultural Operations* is intended to restore a balance between the volume of effluent generated by livestock operations and the soil's carrying capacity for animal waste. Phosphorous levels serve to establish the limit for applying farm fertilizers. Since 2004, amendments to the Regulation have prohibited the creation of any new lots of cultivated land in a large number of municipalities.<sup>17</sup>
- The *Agricultural Operations Regulation* specifies that by 2010, all farms must have access to 100% of the area required to spread the animal waste they generate from their livestock activities.<sup>17</sup> If a sufficient area of cultivated land is not available, they will have to process and dispose of the waste in another way. Many people wonder if this objective is achievable.

- The use of pesticides is governed by the *Pesticides Act*, the *Regulation respecting permits and certificates for the sale and use of pesticides* and the *Pesticides Management Code*. Under these rules, farmers must pass an examination in order to obtain a certificate allowing them to use pesticides for agricultural purposes.

Financial support measures have been implemented by the government, in particular to help farmers make the investments required to comply with environmental standards, support research, create incentives for sound agricultural practices and offer advisory services in the agri-environmental field.<sup>18</sup>

In 2001, Quebec's programs and regulations generated the highest level of agri-environmental investment in Canada, at \$4,126 per farm. In the rest of Canada, in the same year, the average amount invested was \$1,091 per farm.<sup>19</sup>

In 2002, the Quebec government set itself the objective of making its assistance programs eco-conditional; in other words, compliance with environmental standards became one of the eligibility criteria for government assistance. La Financière agricole du Québec and MAPAQ are responsible for applying eco-conditional measures in the agriculture sector, and the *Act respecting La Financière agricole du Québec* was amended accordingly in 2004. In 2005, MAPAQ introduced environmental compliance conditions for one of its principal financial support program, the partial reimbursement of the property taxes paid by farms. To be eligible for the program, farmers must submit a phosphorous report on their farm to the MDDEP.

**The Commission would like to receive comments from participants concerning the nature and stringency of environmental requirements in the field of agriculture.**

- **Do the requirements target the right problems?**
- **Are the standards sufficient?**
- **Do the standards produce the expected results?**
- **Should farmers alone bear the cost of the environmental norms they are required to uphold in the collective interest?**
- **Are current governmental agri-environment policies adequate?**
- **How could the policies be improved?**
- **Does the government have the tools it needs to enforce and follow up on its regulations and policies? Is the current level of government supervision adequate?**





# Health and consumer concerns

The agriculture and agri-food sector, because of its role as a food producer, has a determining influence on public health.

Life expectancy in Quebec has progressed rapidly, from 60 years in 1920 to 79.7 years in 2000.<sup>1</sup>

The general health of the population has also improved markedly in recent decades.

Nevertheless, there are growing concerns about food quality and the way it is controlled. Several people have suggested a loss of public confidence in the food production and processing chain.

The agriculture and agri-food sector has also been affected by the need to switch to a healthier lifestyle. One of the key challenges of public health is to encourage individuals to eat a more balanced diet and take more exercise. Many people believe the mission and objectives proposed by the government for the agriculture and agri-food sector should include objectives centred on the promotion of consumer health.

## **FOOD SAFETY**

The Canadian Food Inspection Agency, MAPAQ and the Centre québécois d'inspection des aliments et de santé animale are jointly responsible for compliance with food safety standards. Several government measures and programs are designed to ensure that food is safe, clean and traceable. The overall objective is to make sure the food supply is safe and minimize the risk of contamination at all stages in the production chain.

In the area of food safety, MAPAQ's priorities are established on the basis of potential risks for human health. Food products that represent a health risk are withdrawn from the market.

A survey carried out in 2005-2006 found that nine out of ten people believe the food products on sale in Quebec to be safe.<sup>2</sup>

Pesticides are also a cause of concern for many people. Amongst a group of 32 countries, including the members of the European Union and the United States, Canada permits the highest levels of pesticide residue. In addition, a comparative analysis with the European Union and the United States shows that Canada permits the use of 60 pesticides that have been eliminated, prohibited or withdrawn by other jurisdictions.<sup>3</sup>

It is important to note that Quebec's *Pesticides Management Code*,<sup>4</sup> which came into force in 2003, prohibits the use of more than 100 pesticide products within the municipal milieu that are still used<sup>3</sup> in the rest of Canada. Since 2001, the *Regulation respecting the quality of drinking water* requires the person in charge of a water distribution system serving more than 5,000 people to conduct quarterly checks for 25 pesticides. Out of 213 municipal water systems sampled from June 2001 to December 2004, 116 showed traces<sup>5</sup> of one or more pesticides.

It has been suggested that illnesses may be caused by the presence of undesirable substances in the environment and the food supply. However, research is, as of yet, unable to prove that the characteristics of the agri-food environment have an impact on the incidence of chronic illness.

### **SANITARY CHALLENGES IN LIVESTOCK PRODUCTION**

In the winter of 2003, a single case of bovine spongiform encephalopathy (mad cow disease) in Alberta was enough to close the border with Canada's main customer, the United States. The following year, fears of a global epidemic of bird flu led to the widespread preventive slaughter of poultry in infected zones. The recent contamination of food products by *Clostridium botulinum*, *Salmonella* and *E. coli* bacteria has also raised concerns.

Against this background, stakeholders in the agriculture and agri-food sector, working with the Quebec government, have established a traceability system that currently tracks two products: beef and lamb. The Canadian government eventually proposes to make most retail food products traceable at all stages of the agri-food chain.

Many people believe that growth hormones are widely present in food products. They are, in fact, used by beef cattle producers to promote muscle development. However, they are not used at all in the poultry or pork sectors.<sup>6</sup>

The use of antibiotics is a further concern. Consumers are afraid of ingesting them with their food, or that they will spread in the environment. Some poultry and pork producers use antibiotics preventively, or to stimulate growth.

This use of antibiotics is controversial since, according to the Institut national de santé publique, they can promote the development of antibiotic-resistant bacteria.<sup>7</sup> The BAPE is also concerned about the potential risk created by antibiotic residues contained in manure slurry.<sup>8</sup>

### **NEW TECHNOLOGIES AND TRENDS**

Over the last few years, food products have tended to reflect new trends based on the most recent scientific discoveries: functional, nutraceutical and antioxidant foods are now among the products offered. Grocery stores have now begun to stock specialized foods, such as Omega 3 milk, calcium-enriched juices and yoghurt enriched with active bacteria.

The application of certain cutting-edge technologies is also a concern. The use of genetically-modified organisms (GMOs) is highly controversial in Europe, and to a lesser degree in North America.

Currently, around a dozen genetically-modified plants have been approved in Canada. Three are cultivated in Quebec—grain corn, soya and canola.<sup>9</sup>

There are currently no genetically-modified fruits or vegetables on sale in grocery stores,<sup>9</sup> although some products contain GMO derivatives, such as soya lecithin, canola oil and corn starch. In Canada, the use of GMOs must be approved by the Canadian Food Inspection Agency, and the provinces are not involved in the approval process.

**The Commission would like to receive comments from participants on the following points:**

- **Are the standards used in the food inspection system, especially those that set pesticide residue levels, satisfactory?**
- **How could the food inspection system be improved?**

## HEALTHY FOOD AND LIFESTYLES

The food we eat depends on our individual choices, but also on the prevailing social environment. It is important to understand how agriculture and agri-food policies help create this environment.

Consumers are increasingly aware of the content of food products, and try to avoid various types of fat, salt, and refined and allergenic sugars, while increasing their consumption of products rich in fibre, minerals and vitamins. Organic and fresh local products are also gaining in popularity.<sup>10</sup> Over half of all Canadians (57%) choose food products on the basis of their fibre, antioxidant and fatty acid content, among other things.<sup>11</sup> A campaign has been launched calling for legislation to ban the use of trans fats, as is currently the case for restaurants in New York City.

Data from the Institut national de santé publique (INSP) for the year 2005 shows that only 35% of adult men and 53% of adult women eat five daily portions of fruit and vegetables.<sup>12</sup> The figures for children aged 16 and under are also worrying.

In 2004, 57% of Quebec's population had a weight problem (35% were overweight, 22% obese)<sup>13</sup> due to poor diet, combined with an inactive lifestyle. Weight-related illnesses (diabetes, high blood pressure, heart disease) are increasingly prevalent. The direct health care costs associated with obesity were estimated at \$1.6 billion in 2001, and the indirect costs at \$2.7 billion.<sup>7</sup>

The UN Food and Agriculture Organization recommends a reduction of the individual daily energy intake of fats, sugar and salt.<sup>7</sup> The availability and affordability of high-quality products, especially fruit and vegetables, is paramount in achieving this goal.

Because many people eat outside the home, the hotel, restaurant and institutional (HRI) sector is increasingly involved in this issue. Many people question the nutritional quality of certain meals, stressing the importance of offering healthy choices and reducing portion sizes. Daycare centres and schools, too, are now being encouraged to improve their menus. Culinary schools have also been asked to make a contribution by adjusting their programs.

It is generally agreed that current information and education measures are not sufficient. Action must also be taken with the food environment: the agri-food industry, producers, processors and distributors all play a determining role in supplying high-quality products and, therefore, in ensuring public health.

The World Health Organization (WHO) believes agricultural and economic policies can also be used to promote the supply of safer, more nutritious and more affordable food. In the view of the WHO, a key element in the fight against obesity and chronic illness is the ability of a government to establish a strong partnership with its agri-food industry.<sup>7</sup>

**The Commission wishes to receive opinions and comments on the following questions:**

- **What role do consumers, processors, distributors and the State play in improving healthy eating patterns?**
- **Is the available information on the nutritional value of food products sufficient and adequate?**
- **What can agriculture and agri-food policies do to promote better eating habits?**
- **What can be done to ensure that consumers are informed in a straight-forward, credible and coherent manner?**
- **How can agri-food policies support the HRI sector to do more to encourage healthy eating habits?**

## **HEALTH OF HUMAN RESOURCES IN THE AGRICULTURE AND AGRI-FOOD SECTOR**

The health of workers in the agriculture and agri-food sector is another issue that requires examination.

A recent survey of the psychological health of farmers found that one respondent out of two (50.9%) had a high level of psychological distress, compared to 20.1% for Quebecers as a whole. More than one out of 20 farmers had suicidal tendencies, compared to one person out of 25 in the general population.<sup>14</sup>

In addition to financial worries, a number of other factors affect the psychological health of Quebec farmers. They include regulatory requirements, market instability, animal sickness, workloads, worldwide competition and climate change.

The agriculture sector also presents a high risk of work-related accidents. Agriculture ranks as the third most dangerous industry in Canada. The Canadian Agricultural Injury Surveillance Program reports that in Canada, between 1990 and 2003, 1,547 people died as a result of a work-related injury.<sup>15</sup>

In addition, the Commission de la santé et de la sécurité du travail (CSST, the Quebec workplace health and safety board) reports that, in 2002, the food and beverage sector had an injury rate 92% higher than the average for other sectors of activity.<sup>16</sup>

**The Commission would like to receive opinions concerning the health of farmers, farm workers and food processing workers:**

- **What measures would ensure better protection for the physical and mental health of human resources in the agriculture and agri-food sector?**

# Rural life and regional development

Agriculture and rural life  
in Quebec have always been  
closely linked.

## **AGRICULTURE AND RURAL LIFE**

Presently, 1,023 out of 1,262 municipalities in Quebec are considered to be rural municipalities, with fewer than 5,000 inhabitants. They are home to slightly over 1.3 million people, and cover 80% of the inhabited land mass.<sup>1</sup> It is important to note that 252 municipalities in Quebec have fewer than 500 inhabitants, and the rural landscape is characterized by its low population density.<sup>2</sup>

Data compiled by the Institut de la statistique du Québec show that Québec's rural population is decreasing.<sup>3</sup> Between 1996 and 2005, 53% of all rural municipalities lost a total of 61,000 inhabitants.<sup>4</sup>

An ageing population and the exodus of young people to major urban centres are both recognized phenomena. For the time being, the growing attraction of urbanites to rural communities has not been sufficient to reverse the falling demographic curve.

The current situation has led to a growing debate about ways to ensure the dynamic occupation of Québec's territory. Maintaining the critical population mass required to ensure the viability of public and private services is another issue. The indicators published in 2005 by the Ministère du Développement économique, de l'Innovation et de l'Exportation show that the problem of economic disparity is increasingly affecting outlying and resource-based regions.<sup>5</sup>

The State has introduced regional development policies in the economic and social fields. The Québec government's National Policy on Rurality, recently updated and extended until 2014, targets rural communities. Its key element is the signing of rural partnership agreements with regional county municipalities (known as MRCs). Under the agreements, the government and elected municipal officials in rural areas make a joint commitment to support projects that will ensure the ongoing viability of rural communities.

Agriculture, too, has undergone a series of far-reaching changes in

recent decades. Farm specialization and increased size has led to a reduction in the number of farms and the size of the agricultural workforce.

Data from Statistics Canada show that the agricultural population fell by 26% between 1991 and 2001, and now accounts for only 6.4% of the rural population and 1.3% of the total Québec population.<sup>6</sup>

Problems connected with the transfer of farms to the younger generation and access to the farming profession have been cited, along with the growing difficulty of recruiting workers.

For many observers, the long-term vitality of rural communities depends on the diversification of the regional economy: agriculture, forestry and natural resource extraction must be part of a more varied economic base that includes service and processing activities, as well as a dynamic recreation and tourism industry.

It is clear that the modern agriculture and agri-food sector still plays a vital role in regional economies. MAPAQ's 2005 agri-food profile states that agriculture still accounts for 10% of employment in 13 of Quebec's 17 administrative regions.<sup>7</sup>

In addition, other jobs are provided by food processing and distribution companies. Many jobs linked to agriculture are also found in a range of sectors including agricultural inputs, transportation, machinery sales and maintenance, veterinary services, advisory and consultancy services, construction, financing, and public service.

The agriculture and agri-food sector is an important asset for Quebec's regions and rural communities. It provides employment for many rural families. It is vitally important to identify the conditions and strategies required to ensure that the agriculture and agri-food sector contributes as effectively as possible to the vitality and ongoing viability of rural communities.

**The Commission wishes to receive opinions and comments concerning the following questions:**

- **How can agricultural policies support a form of agriculture that will contribute more to rural development?**
- **How should regional agriculture and agri-food potential be taken into consideration in the design of public policies?**
- **What opportunities are offered by modern agriculture?**
- **What should be done to ensure a better response to the problem of transferring farm ownership from one generation to the next, and to help young people see a future in the agriculture and agri-food sector?**

## RECONCILING LAND USES

Members of the general public, whether living in an urban or rural setting, are increasingly concerned about environmental protection and quality of life. They want their concerns to be a focus of development, and they want to be consulted on this issue.

There have been several recent conflicts concerning land use and social acceptability, mainly connected with pork production. Although there are many underlying factors in these conflicts, most people would agree that it is not usually livestock production itself that is questioned, but rather certain specific practices and the way in which new facilities are positioned in the community.

Since 1997, municipalities have been responsible for reconciling agricultural and non-agricultural activities via the land use and planning tools available to them.<sup>8</sup> Although local authorities have been asked to seek a consensus between farmers, elected officials and the non-agricultural population, several have realized that a balanced approach will require a more open and responsible attitude on the part of agricultural operations, along with adapted practices and methods, and a constant search for new solutions that allow enterprises to remain competitive.

At the opposite end of the spectrum, the development of other types of activity in agricultural areas has also generated friction. Examples include extension of residential, commercial or industrial usage in agricultural zones, the construction of isolated dwellings in agricultural zones, and other land uses that have an impact on agricultural land such as hiking, ATV and snowmobile trails, power transmission lines, oil pipelines, wind farms, new roads, etc.

In 1978, to ensure adequate protection for productive farm land in Quebec, the Government passed the *Act to preserve agricultural land*. The amendments made to the Act over the last ten years have extended its scope, and it is now known as the *Act to preserve agricultural land and agricultural activities* (APALAP).<sup>9</sup>

The Commission de protection du territoire agricole du Québec (CPTAQ, the Quebec farm land protection commission) manages applications for the authorization of non-agricultural activities in agricultural zones. It faces two main challenges, namely the pressure of urban development on agricultural land adjacent to urban centres, and the introduction of non-agricultural (mainly residential) uses in rural areas.

Although the type of pressure on agricultural land is not the same in all communities, few people question the relevance and usefulness of the APALAP. However, some believe it does not always take regional particularities into account, while others suggest that by protecting the agricultural vocation of land with low production potential it can actually hinder the revitalization of rural areas in some regions.

Representatives of the farming community, in turn, point out that less than 2% of Quebec's land mass is suitable for agriculture, and that this land must be protected.<sup>10</sup>

**An increasing number of rural communities must manage the problem of reconciling agricultural and non-agricultural activities.**

- **What steps should be taken to reconcile different land uses in rural areas?**
- **What should be the role of each player: the CPTAQ, municipalities, the Quebec government and its departments and bodies, and other stakeholders?**
- **Is the CPTAQ using the right management framework and methods?**

## **NEW DEVELOPMENT PROSPECTS**

New prospects for agri-food development offer potential for local and regional development.

Some countries have introduced the concept of multifunctionality to measure the role played by agriculture and its contribution to collective wealth. This requires an examination of the institutional mechanisms, market mechanisms and agricultural policies used to promote a balance between the different functions of agriculture: food production, land use, stimulation of rural communities and maintenance of the collective heritage.<sup>11</sup>

Some interesting prospects for non-traditional crops, or crops intended for use in biotechnology, have been proposed. Other suggestions include the development of smaller-scale agriculture, part-time agriculture, or the creation of small agricultural companies supported by the community.

Organic agriculture and other "alternative" approaches are often proposed as a way of meeting social and environmental concerns and responding to the new needs of growing numbers of consumers. However, it has also been suggested that the potential market is not large enough to encourage farmers to make the switch.

The promotion of local and artisan products, as well as agri-tourism have also been suggested as ways of diversifying the income of farms and rural communities. Some people have suggested that the marketing of rural products should be supported by the creation of a network of dedicated farms, and by locally-based processing. Larger-scale production of rural products could be conducive to local processing and marketing, or direct farm sales. The creation of alternative distribution networks for rural products is another solution that is being considered.

**The Commission would like to receive opinions and comments on the following questions:**

- **How can food processing companies be encouraged to settle, remain and develop in Quebec's regions?**
- **How can the growth and financial viability of new types of production be assured?**
- **How can sufficient outlets be found for new products, how can they be made profitable, and how can they make a dynamic contribution to rural communities?**

# 10 Governance

The agriculture and agri-food sector includes a large number of players from the government, private, union, cooperative and volunteer communities, whose powers and responsibilities are often exclusive to Quebec.

The federal and provincial governments, local and regional authorities, La Financière agricole du Québec (FADQ) and the Union des producteurs agricoles du Québec (UPA) and cooperatives all play a key role in the governance of the agriculture and agri-food sector.

## **AGRICULTURE AND AGRI-FOOD CANADA**

Under the *Constitution Act*, both the federal and provincial governments have the power to pass legislation concerning agriculture. However, the Act also states the primacy of federal legislation.<sup>1</sup>

The actions of Agriculture and Agri-food Canada are based on a pan-Canadian vision of sector development. One recent example is the Agricultural Policy Framework (APF) that has been in force since 2003. It focuses on five complementary elements: business risk management, the environment, food safety and quality, renewal, and science and technology.<sup>2</sup>

The actions of the federal government concern agri-food trade policy, trade agreements and negotiations, the promotion of exports from Canada and Quebec, food safety, food product traceability, quality assurance and food inspection, through the Canadian Food Inspection Agency (CFIA). Finally, the federal government contributes to the stabilization of farm revenues (CAIS) and the management of farm cash flow through the advance payment program.

In Quebec, one of the key issues connected with the negotiation and implementation of the APF is Quebec's scope for autonomous action and the recognition of its programs. Some people have questioned the overly rigid nature of Canadian policies and would like to see them take more account of Quebec's unique situation, problems, orientations and institutional structures.



## **THE MINISTÈRE DE L'AGRICULTURE, DES PÊCHERIES ET DE L'ALIMENTATION DU QUÉBEC**

The mission of the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (MAPAQ) is to ensure the growth of Quebec's agri-food industry with a view to sustainable development.<sup>3</sup> In pursuit of its mission, it takes action through its programs and policies in all sectors: production, processing, distribution, marketing and the consumption of agriculture and agri-food products and services. It is also active in the field of the agri-environment.

Three government bodies come under MAPAQ's authority, namely La Financière agricole du Québec, the Régie des marchés agricoles et alimentaires du Québec (RMAAQ) and the Commission de protection du territoire agricole du Québec (CPTAQ).<sup>4</sup>

The overly narrow economic focus of MAPAQ and the lack of attention paid to rural matters in its mission statement are a disappointment to some people. In some European countries, and in other Canadian provinces, the department of agriculture is responsible for a broader rural vision, often via a rural policy. In Quebec, responsibility for rural matters is currently entrusted to the Ministère des Affaires municipales et des Régions (MAMR). Another aspiration is that MAPAQ take more action in the field of nutrition.

## **REGIONAL AND LOCAL AUTHORITIES**

Quebec's regional county municipalities (MRCs) and municipalities, through their powers and responsibilities in the area of land use planning, play a role in the expansion and supervision of agriculture and agri-food activities. The actions taken by MRCs and municipalities are defined by provincial legislation and guidelines.

Municipalities are legally required to give priority to agriculture as the primary land use in agricultural zones, and to ensure the harmonious co-habitation of agricultural and non-agricultural land uses.<sup>5</sup> The actions of elected municipal officials are structured by government land use guidelines, and their conformity must be approved by the Minister of Municipal Affairs and Regions after consulting with the other government departments concerned.<sup>6</sup> MRCs and municipalities are empowered to file applications to exclude land from an agricultural zone with the CPTAQ.<sup>7</sup>

Quebec's municipalities also exercise environmental responsibilities that have repercussions on agriculture, including the protection of lakeshores, riverbanks, coastal zones and floodplains, the determination and enforcement of protection perimeters around groundwater intakes for human consumption, and the treatment of sewage from individual dwellings.

## **LA FINANCIÈRE AGRICOLE DU QUÉBEC**

In Quebec, financial assistance for farmers is mainly provided by La Financière agricole du Québec (FADQ), a state-owned enterprise that resulted from the 2001 merger of the Régie des assurances agricoles du Québec and the Société de financement agricole (SFA).<sup>8</sup>

It has been pointed out that the composition of the FADQ board of directors does not comply with the rules of governance set out in the policy on the governance of state-owned enterprises introduced by the Quebec government in 2006.<sup>9</sup> The rules, designed to ensure the independence of boards of directors, stipulate that two-thirds of the members, including the chair, must meet certain criteria designed to ensure their independence. The purpose of this is to ensure that they have no relationships or interests likely to interfere with the quality of their decisions. Since the amounts paid to agricultural operations come mainly from public funding, the large number of board members representing the Union des producteurs agricoles du Québec – five out of 11 – has been called into question.

La Financière agricole du Québec provides income protection, crop insurance and agricultural financing services for farms, adjusted to the types of risks they encounter. It administers insured values of almost \$4 billion, and its portfolio of secured loans totals over \$4 billion. The assets of the Fonds d'assurance-prêts agricoles et forestiers (farm and forest loan insurance fund) amount to more than \$120 million.<sup>10</sup>

## THE UNION DES PRODUCTEURS AGRICOLES

The Union des producteurs agricoles (UPA) is the only association certified under Quebec's *Farm Producers Act*,<sup>11</sup> a fact that confers a number of special responsibilities such as speaking on behalf of Quebec's farmers and representing them in dealings with public authorities. The UPA is made up of 155 local syndicates, 16 regional federations, 222 specialized syndicates and 25 specialized federations. Its members are classified according to their region and type of production.<sup>12</sup>

Under the *Farm Producers Act*, no farm producer is obliged to join the UPA, but all must pay a membership fee. As the sole certified association it can establish, levy, receive and redistribute the fees of all farm producers even if they are not members of the association.<sup>11</sup>

Compulsory assessment fees also exist in Ontario. However, farm producers can choose to pay them to the agricultural association of their choice from a designated list. In the United States, France and other countries, there are no compulsory assessments paid to agricultural associations.

The Government has made the UPA into a genuine partner by giving it responsibilities in the management of La Financière agricole and the marketing system supervised by the Régie des marchés agricoles et alimentaires.

## COOPERATIVES

Agricultural cooperatives are important players in the agriculture and agri-food sectors. They play a primordial role in regional development.

For example, the Coop fédérée du Québec brings together 62,000 members from over 100 agricultural cooperatives. Its mission consists of providing supplies and inputs for farming operations as well as processing and marketing their produce on local and international markets.

The Coop fédérée is the 4th largest enterprise in Quebec by revenue and the 7th largest by number of employees.<sup>13</sup>

**The Commission would like to receive opinions and comments on the following questions:**

- **The Commission would like to receive opinions and comments on the following questions: What do you think about the current balance between the roles and powers of the various players?**
- **Do Canadian policies pay enough attention to Quebec's particularities, problems, orientations and structures?**
- **Should the mission and policies of MAPAQ be extended to include concerns and objectives relating to rural matters, the environment and nutrition?**
- **How do you see the future for cooperatives?**

# How to participate

## **COMMITMENT OF THE COMMISSION**

The Commission is systematically seeking the comments and opinions of individuals and groups concerned by the matters that it is looking in to. It has set up a simple, transparent and rigorous consultation process that is accessible to citizens in every region and community in Quebec. The Commission will take the results of the consultation process into account when formulating its recommendations to the government. It guarantees a transparent, public approach, and has adopted a code of ethics and a public consultation policy that are publicly available.

## **REGIONAL PUBLIC HEARINGS**

The regional public hearings will be held from February to May, 2007. The Commission will travel to 15 regions and 26 municipalities. In each region, the schedule will be adjusted to fit the number of individuals and groups who apply to be heard. In general, the Commission expects to sit in each region for two to three days.

The exact date, time and venue of the public hearing in each city will be announced in the regional media and on the Commission's website.

REGIONS	CITY	WEEK OF
<b>Mauricie</b>	<b>Trois-Rivières</b>	<b>February 12</b>
<b>Centre-du-Québec</b>	<b>Nicolet</b>	<b>February 19</b>
	<b>Victoriaville</b>	
<b>Chaudière-Appalaches</b>	<b>Saint-Agapit</b>	<b>February 26</b>
	<b>Saint-Joseph-de-Beauce</b>	
	<b>Montmagny</b>	
<b>Montérégie</b>	<b>Sallaberry-de-Valleyfield</b>	<b>March 5</b>
	<b>Saint-Jean</b>	
	<b>Saint-Hyacinthe</b>	
<b>Bas-Saint-Laurent</b>	<b>La Pocatière</b>	<b>March 12</b>
	<b>Notre-Dame-du-Lac</b>	
	<b>Rimouski</b>	
<b>Outaouais</b>	<b>Gatineau</b>	<b>March 19</b>
<b>Lanaudière</b>	<b>Joliette</b>	<b>April 2</b>
<b>Capitale-Nationale</b>	<b>Baie-Saint-Paul</b>	<b>April 9</b>
	<b>Pont-Rouge</b>	
<b>Laurentides</b>	<b>Lachute</b>	<b>April 16</b>
<b>Laval</b>	<b>Laval</b>	<b>April 23</b>
<b>Estrie</b>	<b>Sherbrooke</b>	<b>April 30</b>
<b>Abitibi-Témiscamingue</b>	<b>La Sarre</b>	<b>May 7</b>
	<b>Ville-Marie</b>	
<b>Saguenay-Lac-Saint-Jean</b>	<b>Alma</b>	<b>May 14</b>
	<b>Ville de Saguenay</b>	
<b>Côte-Nord</b>	<b>Les Escoumins</b>	<b>May 21</b>
<b>Gaspésie-Îles-de-la-Madeleine</b>	<b>Bonaventure</b>	<b>May 28</b>
	<b>Îles-de-la-Madeleine</b>	

**This schedule is subject to change. Consult the Commission's website to obtain the most up to date information.**

Any individual, group or organization with an interest in the future of agriculture and the agri-food sector in Quebec is invited to submit a brief.

Individuals and organizations submitting briefs will be asked to present them to the commissioners at a public hearing. A period of 20 minutes will be allotted for each presentation and the ensuing discussion. Participants will be asked to present a summary of their brief. Priority will be given to discussion. The commissioners may increase or decrease the time reserved for presentations and discussions to facilitate the hearing process.

The commissioners will read and analyze all briefs received before the hearing. In addition, all briefs, including those submitted by individuals and groups that decide not to present them at the hearings, will be made available on the Commission's website. The commissioners will consider all briefs with the same attention, whether or not they are presented at a public hearing.

To facilitate the logistics of each hearing, individuals or groups wishing to make a presentation, whether or not supported by a written brief, must register and file their brief, if any, at the Commission's office not later than Monday of the week preceding the week during which the regional public hearing is scheduled.

To register, please contact the Commission by e-mail, phone or fax.

E-mail: **info@caaaq.gouv.qc.ca**  
Phone: **418 646-1049**  
Fax: **418 646-1051**

- your name;
- the name of the organization you represent, if any;
- your contact information; and
- the city where you would like to attend a hearing.

For presentations not supported by a written brief, a short description of the presentation must be provided when registering with the Commission.

The Commission is especially interested in receiving comments on the topics dealt with in this documents but will not necessarily limit itself to these topics.

Each brief submitted to the Commission must be worded in a way that remains respectful of other participants. In other words, it must not infringe on the dignity, honour, reputation or privacy of any other person.

Since the briefs will be made public, in particular on the Commission's website, it is important to include only information that supports the arguments presented and identifies the person or organization signing the brief. Personal information, such as an address and phone number, should be placed on a separate page.

The Commission asks participants to be concise. If your brief has over 15 pages you should provide a summary of not more than three pages. Complementary information and a presentation of the organization involved, if applicable, should be included as an appendix.

As far as possible, briefs should be forwarded to the Commission by e-mail ([info@caaaq.gouv.qc.ca](mailto:info@caaaq.gouv.qc.ca)), in French or English, in PDF, Word or PowerPoint format.

Briefs may also be forwarded by mail, along with an electronic file if available, to the following address:

**Commission sur l'avenir  
de l'agriculture et de  
l'agroalimentaire québécois  
1150, Grande Allée Ouest, 1<sup>er</sup> étage  
Québec (Québec) G1S 1E5**

## ROUNDTABLE DISCUSSIONS

To examine the themes in more depth, the Commission will organize roundtable discussions on specific issues connected with its mandate. Participation in the roundtable discussions will be by invitation only. The discussions will take place in public and will be webcast on the Commission's website.

THEME	VENUE	WEEK OF
<b>Quality of life: the aspirations and realities of farm families</b>	<b>Victoriaville</b>	<b>February 19</b>
<b>Bio-energy, fibre, medications: new opportunities in agriculture</b>	<b>Saint-Hyacinthe</b>	<b>March 5</b>
<b>Establishment in farming: new ways of getting started</b>	<b>Rimouski</b>	<b>March 12</b>
<b>Environmental protection: priority approaches</b>	<b>Joliette</b>	<b>April 2</b>
<b>Building renewed rural communities – together</b>	<b>Sherbrooke</b>	<b>April 30</b>
<b>Agriculture and dynamic regions: making use of our particular strengths</b>	<b>Alma</b>	<b>May 14</b>
<b>Agri-food and the concerns of consumers: a dialogue to build upon</b>	<b>Montréal</b>	<b>June 18</b>

## PROVINCIAL PUBLIC HEARINGS

To accommodate participants with province-wide interests, the Commission will organize two public hearings in Quebec City and Montréal in June 2007. Participation by individuals and groups will be by invitation only. Briefs dealing mainly with agriculture will be heard in Quebec City, while those dealing mainly with processing and consumption will be heard in Montréal.

These hearings will be preceded or followed by sessions open to the public-at-large of the regions in question.

Participants must file their briefs at the Commission's office no later than Friday, June 1, using the procedure described above for regional public hearings.

A 40-minute period will be reserved for each presentation and the ensuing discussion; the presentation of the brief itself should last no longer than 20 minutes.

## WEBSITE

The address of the Commission's website is: [www.caaq.gouv.qc.ca](http://www.caaq.gouv.qc.ca).

- The website provides a detailed schedule of public activities.
- Public hearings and roundtable discussions will be webcast live.
- Audio files will be available for later listening.
- A section of the website will be reserved for the opinions and comments received from members of the general public by mail or e-mail. The Commission reserves the right not to post comments that infringe on the dignity, honour, reputation or privacy of any person.
- Data and documents will be made available on-line to facilitate debate.
- All documents and briefs filed with the Commission may be accessed on-line.
- A newsletter will be published, informing subscribers of the Commission's activities.

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