



Financière agricole du Québec  
Développement international

**PROJECT NAME:**

**CROP INSURANCE BASED ON WEATHER DERIVATIVES**

**PROJECT MANAGER:**

Alain Pouliot, agr., M. Sc.

**PROJECT NUMBER:**

**QUBC-08014**

**COUNTRY:**

**Canada**

**STUDY ZONE:**

**Québec**

**PROGRAM DESCRIPTION:**

In 2007, close to 8000 farm producers benefited from a new approach using weather-related derivatives to appraise loss in hay coverage. The innovative method, developed to meet the needs of the agricultural sector, made it possible for La Financière agricole du Québec to appraise the quantity and quality of hay crops based on the amplitude and frequency of weather conditions measured on each weather station's territory. There is currently 300 meteorological stations to represent the insured clients' environment. Around each station a territory was delineated based on distance between stations, altitude, ecological districts and parcels that belong together. One station covers 95,000 ha and its weather data is gathered to appraise loss. The weather-related data collected daily are minimum and maximum temperatures, rain precipitation, snow cover on ground, snow precipitation and special weather phenomena. To appraise loss, La Financière agricole has developed two models, one to evaluate the quantity and the other to evaluate the quality of hay. These models use agronomic variables reported by the producers as well as bioclimatic variables calculated by using station data. The results for the 2007 year show that the objective of better representing the agroclimatic environment of farm businesses was reached. A leader in its coverage of weather-related risks, La Financière agricole regularly tailors its practices to adequately meet the changing needs of its insurance clientele. This new approach is in keeping with the mission of La Financière agricole, which is to support and promote sustainable development in the agricultural and agri-food sector.

**ACHIEVEMENTS:**

- ⊕ Development of appraisal models
- ⊕ Data collection and analysis
- ⊕ Delineation of weather stations territories
- ⊕ Development of a information system by the computer team
- ⊕ Prototype validation
- ⊕ Support for service centres and for clients
- ⊕ Program administration

**FADQDI**

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