La Financière agricole Québec

Crop insurance – Hay and pasture protection "Quantity" Grid

From the 2024 season onwards, the "Quantity" grid for hay and pasture coverage will be applied using an approach based on the concept of useful rainfall. Hay and pasture loss rates are calculated using the cumulative rainfall useful to plants during the covered growing seasons.

This approach is simple, efficient, and precise.

Definition of "Useful Rainfall"

The rate of quantity loss is calculated using the cumulative "useful rainfall" absorbed by the plant as opposed to the cumulative daily rainfall.

This method limits the calculation of water supply (rainfall) to the quantity of water that the soil can absorb and make available to the plant.

Every day, the useful water reserve will fluctuate according to rainfall and evapotranspiration (plant transpiration and soil evaporation), without exceeding the soil's maximum water absorption capacity of 40 mm.

For the entire province, the maximum water **retention capacity of the soil has been set at 1 mm of water per centimetre of soil thickness**, up to a maximum of 40 mm, for all soil types.

Calculating Useful Rainfall During a Growing Season

Once the useful rainfall has been calculated on a daily basis (e.g., from May 1st to June 15th), the results for the entire growing season must be added up.

The formula used is as follows:

Total useful rain
= Useful soil water reserve **at the start of** the growing season
+ Total useful rainfall **during** the growing season
- Useful soil water reserve at the **end of** the growing season

If applicable, the total useful rainfall in millimetres will be translated into a loss rate using the "Quantity (lack of rain)" grid.

Specifics at the Start of the First Growing Season

The soil's useful water reserve available at the start of the first growing season is limited to 15 mm for the cumulative rainfall over the 5 days preceding the start of the growth period.

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