

When to Apply Winter Protection to Strawberry Fields



Strawberry plants are considered a tender perennial on the prairies and require additional winter protection to survive our extreme winter temperatures. Mulching with straw is necessary to protect the crop from low temperature injury to crowns and shallow root systems. When properly applied, straw mulch keeps soil temperatures more uniform, prevents plants from drying out from cold and dry winter winds, and helps trap snow.

As winter approaches, strawberry growers try to determine the best time to apply straw mulch on their fields for the winter. The timing of mulch application can greatly affect plants ability to survive winter and if applied at the incorrect time can result in yield loss. Too early and the plants may not be dormant yet and soil temperatures too warm under the mulch resulting in weakening of the plant as they try to continue growing under the straw. Too late and the plants could suffer damage due to harsh cold temperatures.

Apply Straw Mulch When...

- 1) **Plants are dormant and**
- 2) **Soil temperatures at the 4-5 inch (10-12cm) depth are +4-5°C for 3 consecutive days and**
- 3) **Air temperatures drop below -1°C but before below -7°C.**

This usually occurs in Manitoba in late October to early November. Growers can use soil temperature testing combined with their own observations to determine when to apply straw mulch.

Apply a wheat (or cereal) straw 4-6 inches (10-15cm) thick which will settle down to 2-3 inches (5-8 cm). This works out to 2-3 tons per acre, which can be 12 round bales (depending on round bale weight). A loose and fluffy straw mulch covering with straw sticking up to help trap snow is ideal.

Applying straw mulch even after a snowfall has occurred is acceptable if soil temperatures are still too warm and plants are not yet dormant. The snow would help protect the plants from cold air temperatures in the short term until plants are dormant and able to apply straw mulch.

Determining When Strawberry Plants are Dormant

A great way to determine if plants are dormant is to place a piece of plywood over some strawberry plants, after a couple days if plants have turned yellow, plants are not dormant. If plants remain green or the same colour they were before then plants are dormant.

References

[Commercial Strawberry Production on the Prairies](#) guide.

[Province of Manitoba | agriculture - Strawberry Production \(gov.mb.ca\)](#)

Contact Us

This fact sheet was developed by Anthony Mintenko, Fruit Crop Specialist, Manitoba Agriculture

For more information, contact the department:

Online: www.manitoba.ca/agriculture

Email: crops@gov.mb.ca

Phone: 1-844-769-6224