

November 10, 2006

Special points of interest:

- Emergence Problems in Winter Canola

Cropping Systems Newsletter

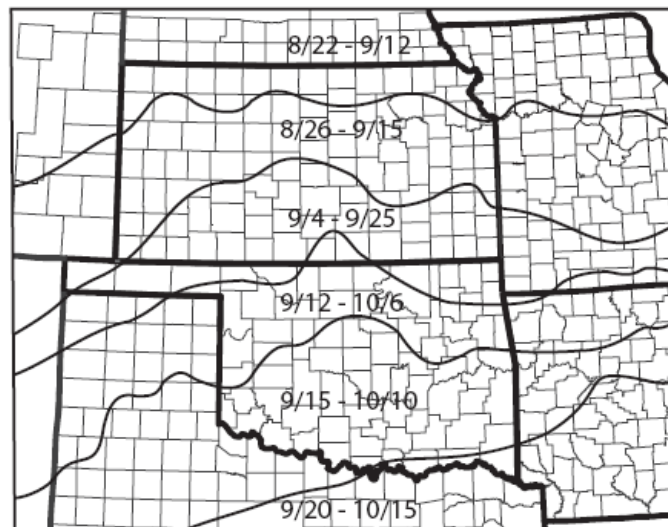


Getting Winter Canola Established before Winter Dormancy

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The long and dry summer has carried over to the fall in many areas of the state. The lack of soil moisture this fall has given producers challenges in establishing winter canola. In the northwest there has been an overall lack of soil moisture to germinate canola seed, while in the southwest there has been adequate moisture as of late. However, at the ideal seeding time many locations in the southwest were also dry in the surface inch. Under ideal conditions canola should be seeded six weeks prior to the first killing frost (Figure 1).

Figure 1. Canola planting dates for the southern Great Plains.



Dry seedbed conditions have resulted in uneven canola emergence. Initial emergence in a lot of fields has been observed within 7-10 days which is typical. However, seed that was placed in dry soil did not germinate until rainfall was received. Stands where emergence has been uneven do not look aesthetically pleasing but as long as the late germinated plants have time to develop 4-5 true leaves, plants will increase their ability to survive the winter. Maximum winter hardiness in canola has been observed when plants have 7-8 true leaves and the canopy height is about 10 inches. True leaves are defined as leaves that emerge from the growing point (crown) after the two cotyledon leaves emerge from the soil. A new leaf will appear every 4-7 days during the fall before winter dormancy. Even emergence with winter canola is not as important as with crops such as corn and sorghum. After canola re-growth begins in the spring plants should look similar.

If canola did not emerge until the last couple of weeks winter survival may be low. Winter survival is dependent in a large part upon carbohydrates stored in the plant's roots. Plants require an adequate amount of time (4-6 weeks) to develop leaf area and begin photosynthesis to enable carbohydrate storage in roots. Ideally, a large tap root (1/2-inch diameter) would provide adequate carbohydrate reserves in the root to help the plant survive.

Useful Links:

www.soybean.okstate.edu

www.canola.okstate.edu

<http://alfalfa.okstate.edu>

www.wheat.okstate.edu

<http://forage.okstate.edu>

Winter canola will tolerate freezing temperature for short periods of time as long as the temperature does not get below 25°F. Leaf margins may be hurt but as long as the crown remains unharmed the plant is alive and will begin re-growth as soon as temperatures warm up.



Uneven emergence in a SW Oklahoma canola field. Larger plants are a result of moisture in the seed zone at drilling. Smaller plants germinated after a rain.



Winter canola plant at the 3-4 leaf stage.

New Soybean Webpage

A recently re-designed soybean webpage was released. Updated information on production technologies, variety test results, disease and weed management can be found at the following location <http://www.soybean.okstate.edu/>

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