



# HORT MATTERS

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## Rye: There Seems to be Some Confusion

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Rye, ryegrass, winter rye and cereal rye – all the same thing or not? I often hear growers talk about ryegrass when I suspect they really mean cereal rye. Rye, winter rye and cereal rye all refer to the same thing – cereal rye (*Secale cereale*) that is an overwintering cereal grain. Ryegrass refers to annual or perennial ryegrass; a very different beast. Lets take a look at the differences.

- Rye grows very aggressively. At heading, rye can have 120 to 150 cm of top growth. The root system is fibrous and extensive, scavenging for water and nutrients through the soil 1m horizontally and as much as 2 m in depth at maturity. Rye grown as a cover crop does not have roots to this degree.
- Rye germinates at 1 to 2 C but vegetative growth requires 4 C, this helps to explain the sometimes amazing growth of rye late in the fall. Rye growth in the fall will not be as great as an oat cover crop; rye similar to wheat requires vernalization for further growth and heading.
- Rye does not winter kill, which means that the soil surface is protected throughout the winter by live plant material but it does mean that spraying or extensive tillage is required in the spring.
- Nitrogen will start to be released for succeeding crops about two weeks after a rye cover crop has been killed provided there are suitable conditions for organic matter breakdown and the rye was not mature or in head when killed. The carbon to nitrogen ratio of the rye residue plays a role in nitrogen release to succeeding crop.



Early spring ryegrass growth—although slow to get going ryegrass makes a dense sod with its extensive fibrous root system

In contrast, ryegrass seems slower to germinate and grow, it remains wispy for a long time. This is the grass that is in most lawn grass mixtures. It is a much finer seed than cereal rye. Perennial ryegrass once established is aggressive and will come to dominate orchard or lawn mixtures if present in amounts greater than 50%. Annual ryegrass (*Lolium multiflorum*) is that shiny, green grass common in less expensive lawn mixtures. It is a biennial under most Ontario conditions and will attempt to set seed in the second year. Ryegrass has a lovely fibrous root system that with time will create a dense sod. It does a good job of capturing leftover nitrogen but appears to be slightly slower in releasing the nitrogen to succeeding crops. It often has a role in more permanent covers like orchard floor cover where the fibrous root system helps to cushion the soil against harvest damage.

So rye or ryegrass – both are in the grass family but very different in their growth habit and use as cover crops. Make sure you get the one that you really want!

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## What's new in Fall Raspberries

Pam Fisher, Berry Crop Specialist

The fall raspberry scene has progressed far beyond Heritage – which is a great berry, but too late for many Ontario growers. Here are some other fall-bearing varieties of interest:

**Anne** (University of Maryland) This variety is yellow, sometimes greenish-yellow, with no pink or amber tinges. Produces large, conic, pale yellow fruit that ripen mid- to late season. It has very good flavor and texture. Tall upright canes sucker sparsely requiring higher planting density. It is resistant to Phytophthora root rot but susceptible to leaf hoppers and rust.

**Autumn Bliss** (England, 1984) Early, approximately 10 days earlier than Heritage. Large, flavourful fruit with large drupelets. Most yield is harvested in the first two weeks of harvest. Somewhat soft. May be crumbly and dark.

**Autumn Britten** (England, 1995) A sibling of Autumn Bliss, Autumn Britten is the Ontario standard. It is more regular in shape and less crumbly than Autumn Bliss. Requires planting at closer spacings because it does not produce an abundance of canes.

**Caroline** (USDA Maryland, 1999) Excellent yield potential, berry size and fruit quality. Yields approx. 1 week earlier than Heritage but too late for most regions in Ontario. Susceptible to late leaf rust, but has moderate to good resistance to Phytophthora.

**Polana** (Poland, 1991) Approximately 2 weeks earlier than Heritage and slightly ahead of Autumn Britten. Early, fall bearing. High yields because buds produce 2 fruiting laterals each. Medium sized fruit of good quality. Susceptible to Phytophthora and verticillium.

**New for trials:** The following 5 varieties (except Josephine) are new and on trial at 3 observation plots in Ontario, planted in 2007.

**Himbo Top** (Switzerland) produces good quality, large fruit on primocanes. The fruit is bright red with good flavor. Plants are vigorous and upright and medium in height that will benefit from trellising. Reported to be resistant to Phytophthora root rot.

**Jaclyn** (University of Maryland) is an early season variety with large firm berries ripening 2 weeks before Heritage. Plants are vigorous and erect but susceptible to yellow leaf rust. Fruit is dark red and adheres tightly until fully ripe.

**Joan J** (United Kingdom) Good quality firm fruit with small drupelets and good flavor. The fruit will hold and ship well, as it is dry. Considered early.

**Josephine** (University of Maryland) Fruit is large with average flavor ripening mid-season. Berries are firm and cohesive. Plants are upright and vigorous needing little containment trellising. It is resistant to leaf hopper and Phytophthora root rot.



Figure 1: Josephine raspberry fruit in high tunnels at Cornell University.

**Polka** (Poland) has medium large primocane fruit that ripen in the early season. Widely grown in Europe, it is reported to have good fruit quality and good yields.

**Thanks to Courtney Weber**, Associate Professor, Cornell University's New York State Agricultural Experiment Station for the descriptions for Anne, Himbo, Polka, Jaclyn, Josephine, from "*Raspberry Variety Review: Old Reliable And New Potential*" in New York Berry Times Vol 6 # 7 July 2007

### Here are some links of interest:

**New York:** New York Berry Times Vol 6 # 7 July 2007  
<http://www.nysaes.cornell.edu/pp/extension/tfabp/newslett.shtml>

**Ontario:** Variety Descriptions: Raspberry  
<http://www.omafra.gov.on.ca/english/crops/facts/raspvarc.htm>

**British Columbia:** Raspberry varieties  
[http://www.agf.gov.bc.ca/berries/production\\_guide\\_pdf/raspberry\\_variety\\_newplant.pdf](http://www.agf.gov.bc.ca/berries/production_guide_pdf/raspberry_variety_newplant.pdf)

**Michigan:** Raspberry Variety testing at MSU  
<http://www.canr.msu.edu/vanburen/raspvar.htm>

## Premier's Award for Agri-Food Innovation Excellence

Innovation is a crucial ingredient in the success of Ontario's farmers. To recognize and further foster innovation in the agri-food industry, the government established the Premier's Award for Agri-Food Innovation Excellence in 2006 to reward outstanding farmer-innovators. This five year program will award \$2.5 million to outstanding farm innovators.

There will be up to 55 regional award winners annually, with a cash prize of \$5,000 each. From these winners a Minister's Award of up to \$50,000 and a Premier's Award of up to \$100,000 will be selected.

Farmers, primary producers, groups of farmers, combinations of agri-food businesses, or a agri-food related organizations are all eligible for recognition under this initiative. However, a farmer must be one of the applicants of any group. In order to apply for the award, the innovation must have been developed and be in use on an Ontario farm or be in the planning stages of development with a business plan towards implementation. The innovation must also have potential for use on a broader basis and demonstrate a positive effect on the agricultural industry.

Only one application/nomination per applicant/nominee can be submitted in any one year. Applications/nominations will not be carried over to the next year. New forms must be submitted.

Examples of innovation include, but are not limited to, the following:

- improved farm practices (e.g. technology, business practices, processes, etc.)
- response to consumer demands (e.g. value added, marketing, strategic alliances, etc.)
- environmental stewardship
- health and safety on the farm
- energy innovations
- education and marketing of agriculture to society.

The following criteria will be used to identify the winning innovations: uniqueness and originality, development, adoption and/or commercialization, impact or benefits, broader use, and on-farm use.

Details of the process, as well as applications and guidelines, are available at:

[www.ontario.ca/agrifoodinnovation](http://www.ontario.ca/agrifoodinnovation)

1-877-424-1300

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