

May 24, 2016

Central Oregon Edition – May 24, 2016

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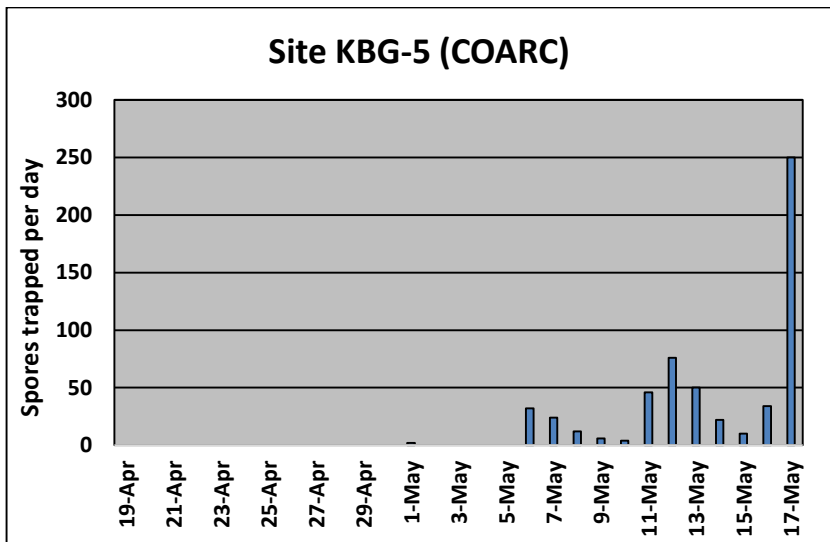
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Welcome to the third issue of the 2016 Ergot Alert Newsletter, brought to you by Oregon State University Extension Service and USDA-ARS, and sponsored by the Washington Turfgrass Seed Commission, the Oregon Seed Council, the Oregon Department of Agriculture Alternatives for Field Burning Research Financial Assistance Program, the Columbia Basin Grass Seed Growers, the Jefferson County Seed Growers Association, and the Union County Grass Seed Growers Association. The goal of this newsletter is to provide timely information about ergot spore production to Kentucky bluegrass and perennial ryegrass seed growers and field personnel in central Oregon, the Columbia Basin, and the Grande Ronde Valley in an effort to aid in decisions related to ergot management during the course of the 2016 growing season.

April 19 thru May 17 Spore Trapping:

A spore trap was setup in artificially-infested plots located at the Central Oregon Agricultural Research Center (COARC) in Jefferson County, Oregon. Spore trapping was initiated on April 19, 2016 and spore trap drums are changed every Tuesday.

Spores were detected for the first time this season on May 1, 2016 (Fig. 1) and spores have been captured every day since May 6. Nearly 500 spores have been captured since the last Ergot Alert Newsletter, and to date a total of 568 spores have been detected at the central Oregon KBG-5 site.



Cumulative Degree Days (Jan 1 thru May 23)*:

Air: 440

Soil (4" depth): 490

In 2014-2015 ergot spores were first detected when cumulative air degree days were between 295 and 332 and cumulative soil degree days were between 176 and 257. This year, the first spore was observed when cumulative air degree days were 255 and cumulative soil degree days were 195. ***Spore production in 2014 and 2015 continued until cumulative air degree days were between 582 and 657 and cumulative soil degree days were between 649 and 692.***

*Cumulative growing degree days are calculated using data from the MRSO weather station in the AgriMet Cooperative Agricultural Weather Network (<http://www.usbr.gov/pn/agrimet/>). A lower baseline of 50° F and an upper baseline of 77° F are used in the calculations for air and soil calculations. Cumulative growing degree days were calculated starting January 1.

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Ergot Management Recommendations

- Commercial Kentucky bluegrass fields scouted near Madras are in various stages of flowering.
- All of the Kentucky bluegrass cultivars being evaluated at COARC have begun flowering and many are in full flower, or Feekes stage 10.51 (Table 1).
- Moderate weather conditions forecasted for central Oregon next week are expected to be generally favorable for spore production.
- ***The above observations, taken together with the high spore counts from recent spore trapping (Fig. 1), indicate that many Kentucky bluegrass cultivars will be exposed to ergot inoculum during the flowering stage and would benefit from protective fungicide applications.***
- Keep monitoring fields as grass seed crops approach the flowering stage and make the first fungicide application as soon as flowering begins if possible. ***Timing your fungicide applications with the first emergence of stigmas or anthers of early emerging flowers is important for ergot management.***
- It is important to monitor fields that had some level of infection in past (honeydew and/or sclerotia), as well as fields that are in close proximity to grass seed fields that had ergot during the last growing season.
- Please consult the PNW Plant Disease Management handbook for fungicide products available for ergot suppression in OR/WA grass seed crops or search the Pesticide Information Center Online. Links to the web resources are listed below:
 - *Pacific Northwest Plant Disease Management Handbook:*
<http://pnwhandbooks.org/plantdisease/grass-seed-ergot>
 - *Washington State Pest Management Resource Service Pesticide Information Center Online Databases:*
<http://cru66.cahe.wsu.edu/LabelTolerance.html>

Ergot Cultivar Trial (thru May 23)

Table 1. Cultivar and growth stage of Kentucky bluegrass cultivars at the KBG-5 ergot spore monitoring site and Kentucky bluegrass cultivar evaluation trial in central Oregon (Jefferson County)

Cultivar	Feekes growth stage ¹
Blue Ghost	10.5 to 11 (average 10.51) ~ 60% of tillers at Feekes 10.51
Gateway	10.5 to 11 (average 10.51) ~60% tillers at Feekes 10.51
Shamrock	10.5 to 10.51 (average 10.51) ~50% of tillers at Feekes 10.51
Merit	10.4 to 10.51 (average 10.5) ~40% of tillers at Feekes 10.51
Gladstone	10.5 to 11 (average 10.51) ~75% of tillers at Feekes 10.51
PST-K4-7	10.4 to 11 (average 10.51) ~80% tillers at Feekes 10.51
Fielder	10.5 to 11 (average 10.51) ~75% of tillers at Feekes 10.51
Midnight II	10.4 to 11 (average 10.5) ~20% of tillers at Feekes 10.51
Jumpstart	10.51 to 11 (average 11) ~20% of tillers at Feekes 10.51
Right	10.5 to 11 (average 10.51) ~60% of tillers at Feekes 10.51
DB-1013	10.5 to 11 (average 10.51) ~50% of tillers at Feekes 10.51

¹Crop phenology was measured on May 23, 2016 using the Feekes scale, Feekes 10.1 to 10.5= various stages of inflorescence emergence during boot stage, whereby the appearance of stigmas and/or anthers is considered the beginning of flowering (stage 10.51).

Please contact Jeremiah Dung with any questions, comments, or ergot observations:

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