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Diseases of Grasses and Cereals in South Dakota

C. J. Mankin

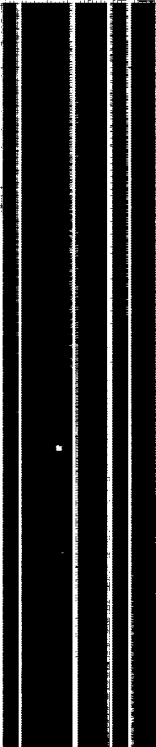
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Technical Bulletin 35
June 1969



Diseases of Grasses and Cereals in South Dakota

A Check List



Agricultural Experiment Station
South Dakota State University
Brookings

**Diseases
of
Grasses and Cereals
in
South Dakota
(A Check List)**

By
C. J. MANKIN
Associate professor, Department of Plant Pathology
Agricultural Experiment Station,
South Dakota State University

Technical Bulletin 35 • June 1969

**Plant Pathology Department
Agricultural Experiment Station
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Diseases of Grasses and Cereals in South Dakota (A Check List)

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This host-pathogen and pathogen-host check list attempts to bring together all available and reliable reports of grass and cereal diseases found in South Dakota. This compilation lists collections and records of the Plant Pathology Department, mycological collections in the Botany Department's herbarium and South Dakota records that appear in the cited publications.

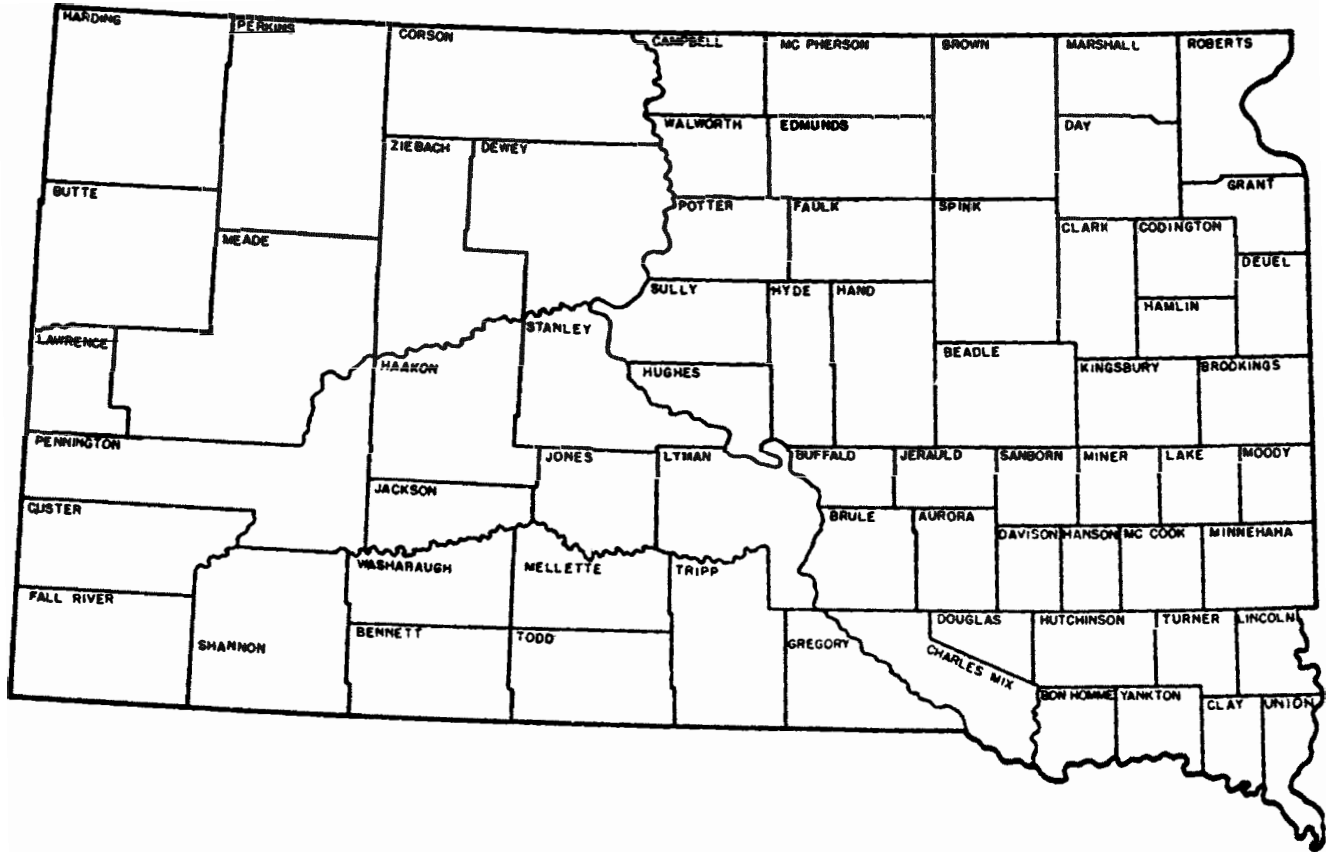
The hosts are arranged alphabetically, followed by a similar arrangement of the causal agents. Following the causal agent is the location within the State where the disease has been found or reported.

The list includes 650 diseases produced by 193 causal agents on 114 hosts. The distribution of these dis-

eases within the State is based on known reports, however, in many cases the diseases may be more widespread than indicated by the reports.

This index will aid in a more rapid identification of grass and cereal diseases by indicating what diseases are known to occur in South Dakota. It may also aid in clarifying some of the confusion that occurs in the pathology of grasses and cereals where these plants are attacked by the same fungus. A relatively complete list of grass diseases should be of use to grass breeders in the selection and breeding for disease resistance. County agents, vocational agriculture teachers, and students interested in identifying grass diseases should also find this list helpful.

South Dakota



Part I

HOST INDEX

AGROPYRON CRISTATUM (L.) Gaertn., Crested Wheatgrass.

- Claviceps purpurea* (Fr.) Tul., ergot, Brookings, common on this host.
Curvularia geniculata (Tracy & Earle) Boed., leaf mold and secondary root rot.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.
Gloeosporium bolleyi Sprague, root necrosis, Brookings.
Helminthosporium sativum Pam., King & Bakke, leaf spot and root rot, Brookings.
Puccinia montanensis Ell., brown stripe rust, Hyde.
Pythium debaryanum Hesse, root necrosis and seedling blight, Brookings.
Pythium graminicola Subr., root browning and seedling blight, Brookings.
Rhizocotonia solani Kuehn, secondary root rot, Brookings.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Gregory, Charles Mix, Shannon, Pennington.
Septoria avenae Frank f. sp. *triticea* T. Johnson, leaf blotch, Brookings.
Ustilago bullata Berk., head smut, Pennington.

AGROPYRON DESERTORUM (Fisch.) Schult. Desert Wheatgrass.

- Ascochyta sorghi* Sacc., leaf spot, Brookings.
Claviceps purpurea (Fr.) Tul., ergot, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.
Gloeosporium bolleyi Sprague, root necrosis, Brookings.
Helminthosporium sativum Pam., King, & Bakke., leaf spot and root rot, Brookings.
Helminthosporium tritici-repentis Died., leaf blight, Brookings.
Pyrenochaeta terrestris (Hans.) Gorenz, J. C. Walker & Larson, pink root, Brookings.
Pythium debaryanum Hesse, root necrosis and seedling blight, Brookings.
Pythium graminicola Subr., root browning and seedling blight, Brookings.
Stagonospora arenaria Sacc., leaf blotch, Brookings.

AGROPYRON INTERMEDIUM (Host.) Beauv., Intermediate Wheatgrass.

- Claviceps purpurea* (Fr.) Tul., ergot, Brookings.
Fusarium acuminatum (Ell. & Ev.), Wr., secondary root rot, Brookings.
Fusarium graminearum Schwabe., scab and seedling blight, Brookings.
Helminthosporium sativum Pam., King, & Bakke., leaf spot and root rot, Brookings.
Puccinia coronata Cda., crown rust, Brookings.
Pythium debaryanum Hesse, root necrosis and seedling blight, Brookings.
Pythium graminicola Subr., root browning and seedling blight, Brookings.
Pythium irregulare Buis., root necrosis and seedling blight, Brookings.
Pythium ultimum Trow, root necrosis and seedling blight, Brookings.
Rhizoctonia solani Kuehn, secondary root rot, Brookings.
Xanthomonas translucens (J.J.R.) Dowson var. *cerealis* (Hagb.) Wallin, bacterial blight, Brookings.

AGROPYRON ORIENTALE (L.) Roem. & Schult.

Puccinia montanensis Ell., brown stripe rust, Hyde, in experimental plots.

AGROPYRON PANORMITAMUM Parl., Wheatgrass.

Puccinia montanensis Ell., brown stripe rust, Hyde, in experimental plots.

AGROPYRON REPENS (L.) Beauv., Quackgrass.

Agropyron mosaic, virus, Brookings.

Claviceps purpurea (Fr.) Tul., ergot, common on this host.

Erysiphe graminis DC., powdery mildew, Brookings.

Fusarium acuminatum (Ell. & Ev.) Wr. secondary root rot, Brookings.

Gloeosporium bolleyi Sprague, root necrosis, Brookings.

Helminthosporium sativum Pam., King, & Bakke, leaf spot and root rot, Brookings.

Helminthosporium tritici-repentis Died., leaf blight, Brookings.

Phyllachora graminis (Pers. ex Fr.) Fckl., tar spot, Brookings, common on this host.

Pseudomonas coronafaciens (Elliot) F. L. Stevens var. *atropurpurea* (Ready & Godkin) Stapp, chocolate spot, Brookings.

Puccinia coronata Cda., crown rust, Brookings.

Puccinia graminis Pers., stem rust, Brookings, Day.

Puccinia montanensis Ell., brown stripe rust, Hyde.

Puccinia rubigo-vera (DC.) Wint., leaf rust, Brookings.

Pythium debaryanum Hesse, root necrosis and seedling blight, Brookings.

Pythium graminicola Subr., root browning and seedling blight, Brookings.

Rhizoctonia solani Kuehn, secondary root rot, Brookings.

Rhynchosporium secalis (Oud.) J. J. Davis, scald, Brookings, Hyde.

Sclerophthora macrospora (Sacc.) Thirum, Shaw & Naras, downy mildew, Brookings, Kingsbury.

Scolecotrichum graminis Fckl., leaf streak, Brookings.

Septoria agropyrina Lobik, leaf blotch, Clay.

Septoria avenae Frank f. sp. *triticea* T. Johnson, leaf blotch, Brookings, Hyde.

Septoria elymi Ell. & Ev., leaf mottle, Brookings.

Septoria nodorum Berk., leaf blotch, Hyde.

Urocystis agropyri (Preuss) Schroet., flag smut, Brookings.

Ustilago spegazzinii Hirsch., stem smut, Brookings, Brown, Lincoln.

Xanthomonas translucens (J.J.R.) Dowson var. *cerealis* (Hagb.) Wallin, bacterial blight, Brookings.

AGROPYRON RIPARIUM Scribn. & Sm., Streambank Wheatgrass.

Claviceps purpurea (Fr.) Tul., ergot, Hyde, in plots.

Puccinia graminis Pers., stem rust, Hyde, in plots.

Puccinia montanensis Ell., brown stripe rust, Hyde, in plots.

AGROPYRON SMITHII Rydb., Western Wheatgrass.

Claviceps purpurea (Fr.) Tul., ergot, Hyde.

Curvularia geniculata (Tracy & Earle) Boed., leaf mold and secondary root rot, Brookings.

Epicloa typhina (Pers. ex Fr.) Tul., choke, Stanley.

Erysiphe graminis DC., powdery mildew, Brookings.

Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Jackson.

Gloeosporium bolleyi Sprague, root necrosis, Jackson.

Helminthosporium sativum Pam., King & Bakke, root rot, Jackson.

Helminthosporium tritici-repentis Died., leaf blight, Stanley.

Pseudomonas coronafaciens (Elliot) F. L. Stevens var. *atropurpurea* (Reddy & Godkin) Stapp., chocolate spot, Stanley.

Puccinia graminis Pers., stem rust, Brookings.

Puccinia montanensis Ell., brown stripe rust, Hyde.

Puccinia rubigo-vera (DC.) Wint., leaf rust, Brookings.

Rhizoctonia solani Kuehn, secondary root rot, Jackson.

Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Jackson.

Scolecotrichum graminis Fckl., leaf streak, Harding, Buffalo.

Selenophoma donacis (Pass.) Sprague & A. G. Johnson, selenophoma spot, Jackson, Lyman.

Septoria agropyrina Lobik, leaf blotch, Clay.
Septoria elymi Ell. & Ev., leaf mottle, Stanley, Jackson.
Septoria nodorum Berk., leaf blotch, Hyde.
Tilletia earlei Griff., culm smut, Brown.
Urocystis agropyri (Preuss) Schroet., flag smut, Butte.
Ustilago spetzazzinii Hirsch., stem smut, Jackson.
Ustilago spetzazzinii Hirsch. var. *agrestis* (Syd.) G. W. Fisch. & Hirsch., stem smut, Lyman.
Xanthomonas translucens (J.J.R.) Dowson var. *cerealis* (Hagb.) Wallin, bacterial blight, Brookings.

AGROPYRON TRACHYCAULUM (Link) Malte, Slender Wheatgrass.

Claviceps purpurea (Fr.) Tul., ergot, Brookings, Jerauld.
Curvularia geniculata (Tracy & Earle) Boed., leaf mold, secondary root rot, Jerauld.
Erysiphe graminis DC., powdery mildew, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.
Gloeosporium bolleyi Sprague, root necrosis, Brookings.
Helminthosporium sativum Pam., King & Bakke, leaf spot and root rot, Brookings.
Pseudomonas coronafaciens (Elliot) F. L. Stevens var. *atropurpurea* (Reddy & Godkin) Stapp., chocolate spot, Brookings.
Puccinia coronata Cda., crown rust, Brookings.
Puccinia graminis Pers., stem rust, Brookings, Jerauld, Jackson, Kingsbury, Pennington.
Puccinia montanensis Ell., brown stripe rust, Hyde.
Puccinia rubigo-vera (DC.) Wint., leaf rust, Hyde.
Rhizoctonia solani Kuehn, secondary root rot, Brookings.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Jackson, Turner.
Scolecotrichum graminis Fckl., leaf streak, Brookings.
Septoria agropyrina Lobik, blotch and leaf spot, Hyde.
Septoria elymi Ell. & Ev., leaf mottle, Marshall.
Ustilago bullata Berk., head smut, Brookings.
Ustilago striiformis (West.) Niessl, stripe smut, Brookings.

AGROPYRON TRICHOPHORUM (Lk.) Richt., Stiffhair Wheatgrass.

Puccinia coronata Cda., rust, Hyde, Brookings, in experimental plots.
Puccinia graminis Pers., rust, Hyde, in experimental plots.
Puccinia montanensis Ell., brown stripe rust, Hyde, in experimental plots.
Puccinia rubigo-vera (DC.) Wint., leaf rust, Hyde, in experimental plots.

AGROPYRON x TRITICUM, Hybrid.

Puccinia graminis Pers., stem rust, Brookings, in experimental plots.
Septoria nodorum Berk., blotch, Brookings, in experimental plots.

AGROSTIS ALBA L., Redtop.

Puccinia graminis Pers., stem rust, Brookings.
Scolecotrichum graminis Fckl., leaf streak, Brookings.

AGROSTIS SCABRA Willd., Ticklegrass.

Scolecotrichum graminis Fckl., leaf streak, Ziebach.
Selenophoma donacis (Pass.) Sprague & A. G. Johnson, eye spot, Ziebach.
Selenophoma everhartii (Sacc & Syd.) Sprague and A. G. Johnson, selenophoma stem speckle, Buffalo.

ALOPECURUS AEQUALIS Sobol., Shortawn Foxtail.

Scolecotrichum graminis Fckl., leaf streak, Pennington.

ALOPECURUS PRATENSIS L., Meadow Foxtail.

Claviceps purpurea (Fr.) Tul., ergot, Brookings, in experimental plots.
Puccinia graminis Pers., stem rust, Brookings.

ANDROPOGON GERARDI Vitm., Big Bluestem.

Ascochyta brachypodii (Syd.) Sprague and A. G. Johnson, leaf spot, Gregory.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.
Phyllachora lueto-maculata (Schw.) Orton, tar spot, Brookings, Grant, Moody, Roberts.

- Puccinia andropogonis* Schw., rust, Brookings, Campbell, Minnehaha.
Puccinia ellisiana Thuem., rust, Brookings.
Puccinia tripsaci Diet. & Holw., rust, Brookings.
Pythium debaryanum Hesse, seedling blight, Brookings.
Septoria andropogonis J. J. Davis, leaf spot, Brookings, Deuel, Custer, Kingsbury, Moody.
Sphacelotheca andropogonis (Opiz) Bub., smut, Spink.
Sphacelotheca occidentalis (Seym.) Clint, smut, Brookings.
Stagonospora simplicior Sacc. & Berl., leaf blotch, Brookings.
- ANDROPOGON SCOPARIUS Michx., Little Blue Stem.**
Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, Roberts.
Puccinia andropogonis Schw., rust, Fall River, Yankton.
Puccinia ellisiana Thuem., rust, Fall River.
Pythium debaryanum Hesse, root necrosis, Brookings.
Rhizoctonia oryzae Ryker, root necrosis, Custer.
Selenophoma donacis (Pass.) Sprague & A. G. Johnson, selenophoma spot, Moody.
Septoria andropogonis J. J. Davis, leaf spot, Brookings.
Sorosporium ellisii Wint., smut, Spink.
Stagonospora arenaria Sacc., leaf blotch, Brookings.
- ARISTIDA BASIRAMEA Engelm., Annual Three-awn.**
Sorosporium consanguineum Ell. & Ev., smut, Custer.
- ARRHENATHERUM ELATIUS (L.) Presl. Tall Oatgrass.**
Ustilago avenae (Pers.) Rostr., loose smut, Brookings.
- AVENA FATUA L., Wild Oats.**
Helminthosporium sativum Pam., King & Bakke, leaf spot and secondary root rot, Jerauld.
Puccinia coronata Cda., crown rust, Codington, Spink, Jerauld.
Puccinia graminis Pers., stem rust, Codington, Brookings.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Jerauld.
- AVENA SATIVA L., Common Oats.**
 Barley yellow dwarf, virus, Brookings.
Claviceps purpurea (Fr.) Tul., ergot, Hyde.
Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, Brookings.
Fusarium oxysporum (Schlect.) emend, Synd. & Hans., seed rot, Brookings.
Fusarium poae (Pk.) Wr., root rot, Campbell.
Helminthosporium avenae Eidam, leaf spot, Brown.
Helminthosporium sativum Pam., King & Bakke, root rot, Brookings.
Helminthosporium victoriae Meehan & Murphy, blight, Brookings.
Pseudomonas coronafaciens (Elliott) F. L. Stevens, halo blight, Brookings.
Pseudomonas striafaciens (Elliott) Starr & Burk., bacterial stripe, Brookings.
Puccinia coronata Cda., crown rust, Brookings, Spink, Pennington.
Puccinia graminis Pers., stem rust, Brookings, Butte.
Pyrenochaeta terrestris (Hans.) Gorenz, J. C. Walker, Larson, pink root, Brookings.
Pythium debaryanum Hesse, seedling blight and root necrosis, Brookings.
Pythium graminicola Subr., seedling blight, Brookings.
Rhizoctonia solani Kuehn, root rot, Brookings.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings, Jerauld.
Selenophoma donacis (Pass.) Sprague & A. G. Johnson, leaf spot, Brown.
Ustilago avenae (Pers.) Rostr., loose smut, Brookings, Spink.
Ustilago hordei (Pers.) Lagh., covered smut, Brookings, Spink, Butte.
- BECKMANNIA SYZIGACHNE (Steud.) Fern., American Sloughgrass.**
Erysiphe graminis DC., powdery mildew, Brookings, Butte.
Puccinia coronata Cda., crown rust, Brookings, Spink.
Scolecotrichum graminis Fckl., leaf streak, general in western part of state.
- BOUTELOUA CURTIPENDULA (Michx.) Torr., Side-oats Grama.**
Ascochyta graminea (Sacc.) Sprague & A. G. Johnson, leaf spot, Brookings.
Cercospora boutelouae Chupp & H. C. Greene, narrow spot, Brookings.

Curvularia geniculata (Tracy & Earle) Boed., leaf mold, Beadle.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.
Fusarium oxysporum (Schlecht.) emend. Snyder & Hans., secondary root rot, Brookings.
Fusarium poae (Pk.) Wr., secondary root rot, Brookings.
Helminthosporium buchloes Lefebvre & A. G. Johnson, leaf mold, Brookings.
Phyllachora boutelouae Rhem., tar spot, Brookings, Roberts.
Puccinia bartholomaei Diet., rust, Hand.
Puccinia vexans Farl., rust, Brookings, Deuel, Jones, Lawrence, McPherson.
Septoria andropogonis J. J. Davis, leaf spot, Tripp.

BOUPELOUA GRACILIS (H.B.K.) Lag., Blue Grama.

Ascochyta graminea (Sacc.) Sprague and A. G. Johnson, leaf spot, Custer.
Cercospora boutelouae Chupp & H. C. Greene, narrow spot, Kingsbury.
Curvularia geniculata (Tracy & Earle) Boed., leaf mold, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Harding, Buffalo.
Fusarium oxysporum (Schl.) emend. Snyder & Hans., secondary root rot, Corson.
Fusarium poae (Pk.) Wr., secondary root rot, Corson.
Gloeosporium bolleyi Sprague, root necrosis, Corson.
Helminthosporium buchloes Lefebvre & A. G. Johnson, leaf mold, Beadle.
Helminthosporium sativum Pam., King & Bakke, root rot, Brookings.
Phyllachora boutelouae Rehm., tar spot, Brookings, Hand.
Puccinia bartholomaei Diet., rust, Corson.
Puccinia vexans Farl., rust, Hyde, Fall River.
Pyrenochaeta terrestris (Hans.) Gorenz, J. C. Walker & Larson, pink root, Corson.
Pythium debaryanum Hesse, seedling blight and root necrosis, Corson, Walker.
Pythium irregulare Buis., root necrosis, Corson.
Rhizoctonia solani Kuehn, secondary root rot, Harding.

BOUPELOUA SIMPLEX Lag., Mat Grama.

Ustilago neglecta Niessl., smut, Fall River.

BROMUS COMMUTATUS Schrad., Hairy Chess.

Ustilago bullata Berk., head smut, Brookings, in experimental plots.

BROMUS ERECTUS Huds., Erect Brome.

Ustilago bullata Berk., head smut, Brookings, in experimental plots.

BROMUS INERMIS Leyss., Smooth Brome.

Brome mosaic, virus, Brookings.
Claviceps purpurea, (Fr.) Tul., ergot, Brookings, general.
Curvularia geniculata (Tracy & Earle) Boed., leaf mold and secondary root rot, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.
Fusarium poae (Pk.) Wr., secondary root rot, Brookings.
Gloeosporium bolleyi Sprague, secondary root rot, Brookings.
Helminthosporium sativum Pam., King & Bakke, root rot, Brookings.
Ocularia pusilla (Ung.) Sacc & D. Sacc., round eye spot, Brookings.
Pseudomonas coronafaciens (Elliott) F. L. Stevens, var. *atropurpurea* (Reddy & Godkin) Stapp., chocolate spot, Brookings.
Pyrenochaeta terrestris (Hans.) Gorenz, J. C. Walker & Larson, pink root, Brookings.
Pyrenophora bromi Drechs. (*Helminthosporium bromi* Diehl.) leaf blight, Brookings, general.
Pythium debaryanum Hesse, seedling blight and root necrosis, Brookings.
Pythium gramincola Subr., seedling blight and root browning, Brookings.
Rhizoctonia solani Kuehn., secondary root rot, Brookings.
Rhynchosporium secalis (Oud.) J. J. Davis, scald, Brookings, Hyde.
Sclerophthora macrospora (Sacc.) Thirum. Shaw & Naras, downy mildew, Brookings, widespread in certain types of sites.
Selenophoma bromigena (Sacc.) Sprague & A. G. Johnson, selenophoma spot, Brookings, Brown, Codrington, Tripp, general widespread in state.
Stagonospora bromi A. L. Sm. & Ramsb., leaf spot, Brookings.

- Ustilago striiformis* (West.) Niessl., stripe smut, Brookings.
Xanthomonas translucens (J.J.R.) Dowson var. *cerealis* (Hagb.) Wallin, bacterial streak, Brookings, widespread during favorable years.
- BROMUS JAPONICUS** Thunb., Japanese Cheat.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Jackson.
Gloeosporium bolleyi Sprague, secondary root rot, Jackson.
Helminthosporium bromi Died., leaf mold, Stanley.
Pythium graminicola Subr., seedling blight and root browning, Jackson.
Rhizoctonia solani Kuehn, secondary root rot, Jackson.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Jackson.
Selenophoma bromigena Sprague & A. G. Johnson, selenophoma leaf spot, Meade.
Ustilago bullata Berk., head smut, Jackson, Jerauld, Meade, Roberts, Stanley, very common where this host occurs.
- BROMUS TECTORUM** L., Downy Cheat.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Harding.
Fusarium graminearum Schwabe, root rot, Beadle.
Fusarium oxysporum (Schl.) emend. Snyder & Hans., leaf mold, Lincoln.
Helminthosporium sativum Pam., King & Bakke, root rot, Butte.
Pythium graminicola Subr., seedling blight, Brookings, not common on this host in South Dakota.
Rhizoctonia solani Kuehn, secondary root rot, Brookings.
Ustilago bullata Berk., head smut, Tripp, very common wherever this host occurs.
- BUCHLOE DACTYLOIDES** (Nutt.) Engelm., Buffalo Grass.
Ascochyta graminea (Sacc.) Sprague and A. G. Johnson, leaf spot, Beadle, Harding.
Ascochyta sorghi Sacc., leaf spot, Brookings.
Cercospora seminalis Ell. & Ev., false smut, Beadle, Lyman, Spink, Potter.
Helminthosporium buchloes Lefebvre & A. G. Johnson, leaf mold, Beadle, Brookings, Hand.
- CALAMAGROSTIS CANADENSIS** (Michx.) Beauv., Blue Joint.
Claviceps purpurea (Fr.) Tul., ergot, Brookings.
Rhynchosporium orthosporum Caldwell, scald, Lawrence.
Scolecotrichum graminis Fekl., leaf streak, Lawrence.
- CALAMAGROSTIS EPIGEIOS** (L.) Roth, Reedgrass.
Phyllachora graminis (Pers. ex Fr.) Fekl., tar spot, Brookings.
- CALAMAGROSTIS INEXPANSA** A. Gray, Northern Reedgrass.
Claviceps purpurea (Fr.) Tul., ergot, Codington, Brookings.
Colletotrichum graminicola (Ces.) Wils., anthracnose, Deuel.
- CALAMAGROSTIS NEGLECTA** (Ehrh.) Gaertn., Mey, & Schreb.
Colletotrichum graminicola (Ces.) Wils., anthracnose, Brookings.
Phyllachora graminis (Pers. ex Fr.) Fekl., tar spot, Brookings.
Septoria avenae Frank, leaf spot, Brookings.
Septoria calamagrostidis (Lib.) Sacc., leaf spot, Brookings.
- CALAMOVILFA LONGIFOLIA** (Hook.) Scrib. & Mey, Prairie Sandreed.
Hendersonia calamovilfae Petr., leaf mold, Ziebach.
Puccinia amphigena Diet., rust, Bennett, Fall River, Custer, Brookings.
Septoria calamovilfae Petr., leaf spot, Brookings, Meade.
- CATABROSA AQUATICA** (L.) Beauv., Brookgrass.
Erysiphe graminis DC., powdery mildew, Lawrence.
Puccinia poa-sudeticae (West.) Jorst., leaf rust, Lawrence.
- CENCHRUS PAUCIFLORUS** Benth., Field Sandbur.
Sorosporium cenchri Henn., smut, Union.
- CINNA ARUNDINACEA** L., Stout Woodreed.
Puccinia graminis Pers., stem rust, Brookings.
- DACTYLIS GLOMERATA** L., Orchard Grass.
Helminthosporium sativum Pam., King & Bakke, root rot, Brookings.
Puccinia graminis Pers., stem rust, Brookings.
Pythium debaryanum Hesse, root necrosis, Brookings.
Pythium graminicola Subr., root browning, Brookings.
Scolecotrichum graminis Fekl., leaf streak, Brookings.

- DIGITARIA ISCHAEMUM** (Schreb.) Muhl., Smooth Crabgrass.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings, Clay.
Ustilago syntherismae (Schwein.) Peck, smut, Clay.
- DIGITARIA SANGUINALIS** (L.) Scop., Hairy Crabgrass.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings.
Ustilago syntherismae (Schwein.) Peck, smut, Clay.
- DISTICHLIS STRICTA** (Torr.) Rydb., Desert Saltgrass.
Phyllachora diplocarpa Ell. & Ev., tar spot, Beadle, Hutchinson, Marshall.
Puccinia aristidae Tracy, rust, Beadle, Stanley.
- ECHINOCHLOA CRUSGALLI** (L.) Beauv., Barnyard Grass.
Cercospora sorghi Ell. & Ev., leaf streak, Brookings.
Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Lawrence.
Fusarium culmorum (W. G. Sm.) Sacc., root rot, Butte.
Fusarium graminearum Schwabe, root rot, Butte.
Phytophthora cactorum (Leb. & Cohn.) Schroet., seedling rot, Butte.
Pythium graminicola Subr., root browning, Butte.
Tolyposporium bullatum Schroet., smut, Spink.
Ustilago crus-galli Tracy & Earle, node smut, Brookings.
- ELYMUS CANADENSIS** L., Canada Wild-rye.
Claviceps purpurea (Fr.) Tul., ergot, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Lawrence.
Gloeosporium bolleyi Sprague, root necrosis, Lawrence.
Helminthosporium sativum Pam., King & Bakke, root rot, Pennington.
Phyllachora graminis (Pers. ex Fr.) Fckl., tar spot, Brookings.
Pseudomonas coronafaciens (Elliott) F. L. Stevens var. *atropurpurea* (Reddy & Godkin) Stapp, chocolate spot, Brookings.
Puccinia graminis Pers., stem rust, Brookings, general.
Puccinia montanensis Ell. brown stripe rust, Campbell.
Puccinia rubigo-vera (DC.) Wint., leaf rust, Brookings.
Pythium debaryanum Hesse, root necrosis, Butte.
Rhizoctonia solani Kuehn, secondary root rot, Butte.
Scolecotrichum graminis Fckl., leaf streak, Brookings, common on this host.
Septoria agropyrina Lobik, leaf spot, Brookings.
Septoria elymi Ell. & Ev., leaf mottle, Butte, Brookings.
Urocystis agropyri (Preuss) Schroet., flag smut, Butte.
Ustilago macrospora Desm., large spored stripe smut, Spink.
Ustilago striiformis (West.) Niessl., stripe smut, Spink.
- ELYMUS INNOVATUS** Beal, Wild Rye.
Puccinia coronata Cda., crown rust, Pennington.
Rhynchosporium secalis (Oud.) J. J. Davis, scald, Pennington.
- ELYMUS JUNCEUS** Fisch., Russian Wildrye.
Helminthosporium sativum Pam., King & Bakke, root rot, Spink.
Puccinia graminis Pers., stem rust, Spink.
Pythium graminicola Subr., seedling blight and root browning, Spink.
Rhizoctonia solani Kuehn, secondary root rot, Spink.
- ELYMUS MACOUNII** Vasey, Macoun Wildrye.
Claviceps purpurea (Fr.) Tul., ergot, Kingsbury.
Phyllachora graminis (Pers. ex Fr.) Fckl., tar spot, Kingsbury.
Puccinia graminis Pers., stem rust, Jerauld, Lyman.
Septoria agropyrina Lobik, leaf blotch, Kingsbury, Jerauld.
Ustilago striiformis (West.) Niessl., stripe smut, Jerauld, Spink.
- ELYMUS VIRGINICUS** L., Virginia Wildrye.
Claviceps purpurea (Fr.) Tul., ergot, Brookings.
Epichloe typhina (Pers. ex Fr.) Tul., choke, Brown.
Phyllachora graminis (Pers. ex Fr.) Fckl., tar spot, Brookings.
Puccinia graminis Pers., stem rust, Brookings.

- Puccinia montanensis* Ell., brown stripe rust, Hyde, in experimental plots.
Puccinia rubigo-vera (DC.) Wint., leaf rust, Hyde, in experimental plots.
Ustilago spengazzinii Hirsch. var. *agrestis* (Syd.) G. W. Fisch. & Hirsch., stem smut, Brookings.
- ERAGROSTIS CILIANENSIS** (All.) Lk., Stinkgrass.
Sclerophthora macrospora (Sacc.) Thirum. Shaw & Naras, downy mildew, Bennett, Brookings.
- ERAGROSTIS PECTINACEA** (Michx.) Nees.
Sclerophthora macrospora (Sacc.) Thirum. Shaw & Naras, downy mildew, Bennett, Brookings.
- ERAGROSTIS REPTANS** (Michx.) Nees.
Ustilago spermophora Berk. & Curt., smut, Meade.
- FESTUCA OCTOFLORA** Walt., Sixweeks Fescue.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Meade.
Gloeosporium bolleyi Sprague, root necrosis, Meade.
Puccinia graminis Pers., stem rust, Stanley.
Rhizoctonia solani Kuehn, secondary root rot, Harding.
Selenophoma everhartii (Sacc. & Syd) Sprague & A. G. Johnson, speckle, Harding.
Septoria tenella Cke. & Ell., leaf spot, Harding.
- FESTUCA OVINA** L., Sheep Fescue.
Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, Brookings.
Selenophoma donacis (Pass.) Sprague & A. G. Johnson var. *stomatocicola* (Baeumler.) Sprague & A. G. Johnson, stem speckle, Pennington.
- FESTUCA RUBRA** L., Red Fescue.
Claviceps purpurea (Fr.) Tul., ergot, Brookings.
Scolecotrichum graminis Fckl., leaf streak, Brookings, general.
Septoria tenella Cke. & Ell., tan leaf spot, Brookings.
- GLYCERIA FLUITANS** (L.) R. Br., Mannagrass.
Ustilago davisii Liro, smut, Brown.
- GLYCERIA GRANDIS** S. Wats., American Mannagrass.
Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, Kingsbury.
Puccinia rubigo-vera (DC.) Wint., leaf rust, Kingsbury.
Scolecotrichum graminis Fckl., leaf streak, Brookings.
Ustilago longissima (Sow. ex Schlecht.) Meyen, smut, Brookings.
- HIEROCHOLOE ODORATA** (L.) Beauv., Sweetgrass.
Ascochyta sorghi Sacc., leaf spot, Pennington.
- HORDEUM JUBATUM** L., Foxtail Barley.
Ascochyta sorghi Sacc., brown leafspot, Brookings.
Curvularia geniculata (Tracy & Earle) Boed., head mold, Spink.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brown.
Gloeosporium bolleyi Sprague, root necrosis, Brown.
Helminthosporium sativum Pam., King & Bakke, root rot, Hughes.
Helminthosporium tritici-repentis Died., leaf spot, Brookings.
Puccinia graminis Pers., stem rust, Brookings.
Puccinia rubigo-vera (DC.) Wint., leaf rust, Hughes.
Puccinia striiformis West., stripe rust, Hughes.
Pythium debaryanum Hesse, root necrosis, Brown.
Pythium graminicola Subr., root browning, Brown, Spink.
Rhizoctonia solani Kuehn, secondary root rot, Brown.
Scolecotrichum graminis Fckl., leaf streak, Clark, Pennington.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings.
Septoria passerinii Sacc., leaf blotch, Brookings.
Urocystis agropyri (Preuss) Schroet., flag smut, Spink.
Ustilago bullata Berk., head smut, Roberts.
Ustilago striiformis (West.) Niessl., stripe smut, Spink.
- HORDEUM PUSILLUM** Nutt., Little Barley.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brown.
Gloeosporium bolleyi, Sprague, root necrosis, Brown.

- Puccinia graminis* Pers., stem rust, Brookings.
Rhizoctonia solani Kuehn, secondary root rot, Spink.
Scolecotrichum graminis Fckl., leaf streak, Brule.
- HORDEUM VULGARE L., Common Six-row Barley.**
 Barley stripe mosaic, virus, Brookings.
 Barley yellow dwarf, virus, Brookings.
Claviceps purpurea (Fr.) Tul., ergot, Brookings.
Erysiphe graminis DC., powdery mildew, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.
Fusarium culmorum (W.G. Sm.) Sacc., root rot, Brookings.
Fusarium graminearum Schwabe, scab, Brookings.
Helminthosporium gramineum Rabh., stripe, Stanley.
Helminthosporium sativum Pam., King & Bakke, spot blotch, root rot, Brookings, wide-spread and common.
Helminthosporium teres Sacc., net blotch, Hyde.
Puccinia graminis Pers., stem rust, Brookings.
Puccinia hordei Otth., leaf rust, Brookings.
Puccinia rubigo-vera (DC.) Wint., leaf rust, Brookings.
Puccinia striiformis West., stripe rust, Hyde, in experimental plots.
Pythium debaryanum Hesse, root necrosis, seedling blight, Brookings.
Pythium graminicola Subr., root browning, Brookings.
Rhizoctonia solani Kuehn, secondary root rot, Brookings.
Rhynchosporium secalis (Oud.) J. J. Davis, scald, Brookings, Hyde, Kingsbury.
Sclerophthora macrospora (Sacc.) Thürom. Shaw & Naras, downy mildew, Brookings, Brown, Lake.
Septoria passerinii Sacc., leaf blotch, Brookings, Hyde.
Ustilago avenae (Pers.) Rostr., black loose smut, Brookings.
Ustilago hordei (Pers.) Lagerh., covered smut, Stanley.
Ustilago nuda (Jens.) Rostr., loose smut, Brookings, Codrington, general.
Xanthomonas translucens (J.J.R.) Dowson var. *cerealis* (Hgb.) Wallin, bacterial leaf blight, Brookings.
- HYSTRIX PATULA Moench., Bottle Brush.**
Phyllachora graminis (Pers. ex Fr.) Fckl., tar spot, Roberts.
- KOELERIA CRISTATA (L.) Pers., Junegrass.**
Epichloe typhina (Pers. ex Fr.) Tul., choke, Brown, Brookings.
Helminthosporium avenae Eidam, leaf blotch, Harding.
Puccinia graminis Pers., stem rust, Brookings.
Puccinia koeleriae Arth., rust, Brookings.
Puccinia liatridis (Webber) Bethel, rust, Spink.
Selenophoma donacis (Pass.) Sprague & A. G. Johnson var. *stomaticola*, (Baeumler), Sprague & A. G. Johnson, selenophoma spot, Harding, Pennington, Ziebach.
- LEERSIA ORYZOIDES (L.) Swartz, Rice Cutgrass.**
Uromyces halstedii Det., rust, Beadle.
- MUHLENBERGIA ASPERFOLIA (Nees & Mey.) Parodi., Scratchgrass.**
Phyllachora vulgata Th. & Syd., Tar Spot, Union.
Puccinia schedonnardi Kell. & Swing., rust, Tripp.
Sclerophthora macrospora (Sacc.) Thürom. Shaw & Naras, downy mildew, Turner.
- MUHLENBERGIA CUSPIDATA (Torr.) Rydb., Plains Muhly.**
Phyllachora vulgata Th. & Syd., tar spot, Brookings.
Puccinia schedonnardi Kell. & Swing., rust, Brookings.
- MUHLENBERGIA MEXICANA (L.) Trin., Wirestem Muhly.**
Phyllachora vulgata Th. & Syd., tar spot, Brookings.
- MUHLENBERGIA RACEMOSA (Michx.) B.S., Marsh Muhly.**
Phyllachora vulgata Th. & Syd., tar spot, Brookings, Roberts.
Puccinia schedonnardi Kell. & Swing., rust, Brookings.
Pythium graminicola Subr., seedling blight and root rot, Grant.
Rhizoctonia solani Kuehn., secondary root rot, Grant.
Scolectrichum graminis Fckl., leaf streak, Hamlin.

ORYZOPSIS ASPERFOLIA Michx., Woodland Ricegrass.

Hendersonia culmicola Sacc., white spot, Lawrence.

Phyllachora oryzopsidis (Rehm) Th. & Syd., tar spot, Lawrence.

Puccinia pygmaea Eriks., rust, Lawrence.

ORYZOPSIS HYMENOIDES (Roem. & Schult.) Rick., Indian Ricegrass.

Curularia geniculata (Tracy & Earle) Boed., leaf mold, Perkins.

Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Harding.

Helminthosporium sativum Pam., King & Bakke., secondary root rot, Harding.

Pyrenochaeta terrestris (Hans.) Gorenz, J. C. Walker & Larson, pink root, Perkins.

Pythium debaryanum, Hesse, root necrosis, Perkins.

Rhizoctonia solani Kuehn, secondary root rot, Perkins.

Selenophoma donacis (Pass.) Sprague & A. G. Johnson, selenophoma speckle, Harding.

ORYZOPSIS MICRANTHA (Trin. & Rupr.) Thurb., Littleseed Ricegrass.

Puccinia micrantha Griff., rust, Potter.

PANICUM CAPILLARE L., Witchgrass.

Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.

Helminthosporium sativum Pam., King & Bakke, secondary root rot, Brookings.

Puccinia emaculata Schw., rust, Brookings.

Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings, widespread in favorable sites.

Sorosporium cenchri, Henn., smut, Brookings.

PANICUM MILIACEUM L., Proso Millet.

Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.

Fusarium oxysporum (Schlecht.) emend. Syndl. & Hans., secondary root rot, Perkins.

Gloeosporium bolleyi Sprague, root necrosis, Perkins.

Pseudomonas panici (Elliot) Dowson, leaf blight, Brookings.

Pseudomonas syringae v. Hall., bacterial eye spot, Brookings.

Pyrenochaeta terrestris (Hans.) Gorenz, J. C. Walker, & Larson, pink root, Brookings.

Pythium debaryanum Hesse, seedling blight, root necrosis, Brookings.

Pythium graminicola Subr., seedling blight, Perkins.

Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings.

Sclerospora graminicola (Sacc.) Schroet., downy mildew, Brookings.

Spacelotheca destruens (Schlecht.) Stevenson & A. G. Johnson, head smut, Brookings.

PANICUM VIRGATUM L., Switchgrass.

Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, Brookings.

Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Perkins.

Phyllachora graminis (Pers. ex. Fr.) Fckl., tar spot, Deuel.

Puccinia panici Diet., rust, Brookings, Minnehaha.

Rhizoctonia solani Kuehn, secondary root rot, Perkins.

Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Jackson.

Selenophoma donacis (Pass.) Sprague & A. G. Johnson, selenophoma eyespot, Brookings.

Uromyces graminicola Burr., rust, Moody.

PHALARIS ARUNDINACEA L., Reed Canary Grass.

Claviceps purpurea (Fr.) Tul., ergot, Brookings, Minnehaha.

Ovularia hordei (Cav.) Sprague, tan streak, Lawrence.

Puccinia sessilis Schneid, rust, Brookings.

Rhizoctonia solani Kuehn, secondary root rot, Pennington.

Rhynchosporium secalis (Oud.) J. J. Davis, scald, Pennington.

Sclerophthora macrospora (Sacc.) Thirum. Shaw & Naras, downy mildew, Brookings, Turner.

Selenophoma donacis (Pass.) Sprague & A. G. Johnson, selenophoma spot, Clark.

Stagonospora foliicola (Bres.) Bub., purple leaf blotch, Brookings.

Ustilago macrospora Desm., large spored stripe smut, Spink.

PHLEUM PRATENSE L., Timothy.

Claviceps purpurea (Fr.) Tul., ergot, Brookings.

Puccinia graminis Pers., stem rust, Codington, Brookings.

Sclerophthora macrospora Thirum., Shaw & Naras, downy mildew, Brookings, Kingsbury.

Scolecotrichum graminis Fekl., leaf streak, Pennington.

PHRAGMITES COMMUNIS Trin., Common Reed.

Napicladium arundinaceum (Cda.) Sacc., black leaf mold, Spink.

Puccinia magnusiana Koern, rust, Brookings.

Scolecotrichum maculicola Ell. & Kell., eyespot, Brookings, Grant.

Selenophoma donacis (Pass.) Sprague & A. G. Johnson, leaf spot, Moody.

POA ALSODES A., Gray, Bluegrass.

Erysiphe graminis DC., powdery mildew, Lawrence.

POA ARIDA Vasey, Plains Bluegrass.

Septoria macropoda Pass., var. *grandis* Sprague, leaf spot, Meade.

POA CANBYI (Scribn.) Piper, Canby Bluegrass.

Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, Butte.

Erysiphe graminis DC., powdery mildew, Butte.

Hendersonia crastophila Sacc., mold, Butte.

Scolecotrichum graminis Fekl., leaf streak, Butte.

Septoria macropoda Pass. var. *grandis* Sprague, leaf spot, Butte.

POA COMPRESSA L., Canada Bluegrass.

Curvularia geniculata (Tracy & Earle) Boed., leaf mold, Brown.

Scolecotrichum graminis Fekl., leaf streak, Brown.

Septoria macropoda Pass. var. *septulata* (Ganz. Frag.) Sprague, leafspot, Brown.

POA INTERIOR Rydb., Inland Bluegrass.

Erysiphe graminis DC., powdery mildew, Pennington.

Puccinia poae-sudeticae (West.) Jorst., leaf rust, Pennington.

POA PALUSTRIS L., Fowl Bluegrass.

Claviceps purpurea (Tul.) Fr., ergot, Lawrence.

Colletotrichum graminicola (Ces.) Wils., anthracnose, Pennington.

Erysiphe graminis DC., powdery mildew, Lawrence.

Puccinia poae-sudeticae (West.) Jorst., leaf rust, Pennington.

Pythium debaryanum Hesse, root necrosis, Custer.

Pythium graminicola Subr., root browning, Custer.

Rhizoctonia solani Kuehn, secondary root rot, Custer.

Septoria norodum Berk., leaf blotch, Lawrence.

Ustilago striiformis (West.) Niessl., stripe smut, Spink.

POA PRATENSIS L., Kentucky Bluegrass.

Ascochyta sorghi Sacc., leaf spot, Brookings.

Entyloma dactylidis (Pass.) Cif., spot smut, Brookings.

Erysiphe graminis DC., powdery mildew, Brookings.

Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.

Helminthosporium sativum Pam., King & Bakke, root rot, Custer.

Helminthosporium vagans Drechs., leaf spot, Brookings, common.

Puccinia poae-sudeticae (West.) Jorst., leaf rust, Brookings.

Pythium debaryanum Hesse, seedling blight, root necrosis, Brookings.

Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings, Turner, widespread in favorable sites.

Septoria macropoda Pass. var. *septulata* (Ganz. Frag.) Sprague, leaf blotch, Brookings, Codington, Pennington.

Urocystis agropyri (Preuss) Schroet., flag smut, Brookings.

Uromyces dactylidis Otth, black leaf rust, Brookings.

Ustilago striiformis (West.) Niessl., stripe smut, Brookings, Kingsbury.

POA SECUNDA Presl., Sandberg Bluegrass.

Entyloma dactylidis (Pass.) Cif., spot smut, Harding.

Puccinia rubigo-vera (DC.) Wint., leaf rust, Meade.

- Selenophoma donacis* (Pass.) Sprague & A. G. Johnson var. *stomaticola* (Baeumler) Sprague & A. G. Johnson, selenophoma speckle, Butte.
Septoria macropoda Pass. var. *grandis* Sprague, leaf blotch, Butte.
Uromyces dactylidis Otth., black leaf rust, Meade.
- POA TRIVIALIS L., Rough Bluegrass.**
Ustilago spegazzinii Hirsch., stem smut, Meade.
- PUCCINELLIA AIROIDES (Nutt.) Wats. & Coult., Hitchc., Nuttall Alkali-grass.**
Selenophoma donacis (Pass) Sprague & A. G. Johnson var. *stomaticola* (Baeumler) Sprague & A. G. Johnson, selenophoma spot, Meade.
- REDFIELDIA FLEXUOSA (Thurb.) Vasey, Blowout Grass.**
Pythium graminicola Subr., root browning, Bennett.
Rhizoctonia solani Kuehn, secondary root rot, Bennett.
- SCHEDONNARDUS PANICULATUS (Nutt.) Trel., Tumblegrass.**
Helminthosporium halodes Drechs., secondary root rot, Walworth.
Puccinia schedonnardi Kell. & Swing., rust, Meade.
Pythium graminicola Subr., root browning, Pennington.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Pennington.
- SCOLOCHLOA FESTUCACEA (Willd.) Lk., Fluminea Grass.**
Puccinia coronata Cda., crown rust, Spink.
Septoria avenae Frank, purple leaf blotch, Brown.
Ustilago arthuri Hume, stripe smut, Spink.
- SECALE CEREALE L., Rye.**
Claviceps purpurea (Fr.) Tul., ergot, Brookings, common.
Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, Hutchinson.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.
Gloeosporium bolleyi Sprague, root necrosis, Brookings.
Helminthosporium sativum Pam., King & Bakke, crown necrosis, Brookings.
Puccinia graminis Pers., stem rust, Brookings.
Puccinia rubigo-vera (DC.) Wint., leaf rust, Brookings.
Pythium debaryanum Hesse, root necrosis, Stanley, Brookings.
Pythium graminicola Subr., root browning, Kingsbury.
Rhizoctonia solani Kuehn, secondary root rot, Brookings.
Septoria secalis Prill. & Del., leaf spot, Hyde.
Urocystis occulata (Wallr.) Rabh., flag smut, Stanley.
Xanthomonas translucens (J.J.R.) Dowson var. *cerealis* (Hagb.) Wallin, bacterial blight, Brookings.
- SETARIA ITALICA (L.) Beauv., Foxtail Millet.**
Fusarium oxysporum (Schlecht.) emend. Synd. & Hans., secondary root rot, Grant.
Helminthosporium halodes Drechs., secondary root rot, Grant.
Helminthosporium sativum Pam., King & Bakke, root rot, Brookings.
Piricularia grisea (Cke.) Sacc., gray leaf spot, Brookings.
Pseudomonas syringae v. Hall, bacterial eyespot, Brookings.
Pythium debaryanum Hesse, root necrosis, Grant, Brookings.
Pythium graminicola Subr., root browning, Grant, Brookings.
Sclerospora graminicola (Sacc.) Schroet., downy mildew, Brookings.
Ustilago crameri Koern, kernel smut, Moody.
- SETARIA LUTESCENS (Weigel) F. T. Hubb, Yellow Bristlegrass.**
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Grant.
Gloeosporium bolleyi, Sprague, root necrosis, Grant.
Piricularia grisea (Cke.) Sacc., gray spot, Brookings.
Pseudomonas syringae v. Hall, bacterial eyespot, Brookings.
Pythium debaryanum Hesse, root necrosis, Grant.
Pythium graminicola Subr., root browning, Grant.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings, Brown, Clay.
Sclerospora, graminicola (Sacc.) Schroet., downy mildew, Brookings.
Ustilago neglecta Niessl., smut, Brookings, common, widespread.

SETARIA VIRIDIS (L.) Beauv., Green bristlegrass (Pigeon Grass).

- Curvularia geniculata* (Tracy & Earle) Boed., secondary root rot, Roberts.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Roberts.
Fusarium oxysporum (Schlecht) emend. Synd. & Hans., secondary root rot, Roberts.
Gloeosporium bolleyi Sprague, root necrosis, Roberts.
Helminthosporium halodes Drechs., leaf mold, secondary root rot, Roberts.
Helminthosporium sativum Pam., King & Bakke, root rot, Tripp.
Helminthosporium setariae Saw., leaf blotch, root rot, Campbell.
Helminthosporium turcicum Pass., leaf blotch, secondary root rot, Roberts, Tripp.
Pseudomonas syringae v. Hall, bacterial eyespot, Brookings.
Pythium debaryanum Hesse, root necrosis, Brookings.
Pythium graminicola Subr., root browning, Brookings.
Rhizoctonia solani Kuehn, root rot, Brookings.
Sclerophthora macrospora (Sacc.) Thirum. Shaw & Naras, downy mildew, Brookings.
Sclerospora graminicola (Sacc.) Schroet., downy mildew, Brookings.
Wheat streak mosaic, virus, Lyman.
Ustilago crameri, Koern, smut, Moody.

SITANION HYSTRIX (Nutt.) J.G. Sm., Squirreltail.

- Puccinia graminis* pers., stem rust, Brookings.
Scolecotrichum graminis Fckl., leaf streak, Meade.

SORGHASTRUM NUTANS (L.) Nash, Indian Grass.

- Ellisiella caudata* (Pk.) Sacc., leaf spot on old leaves, Deuel.
Myriogenospora paspali Atk., dwarfing and fasciation, Brookings, Deuel.
Phyllachora luteo-maculata (Schw.) Orton, tar spot, Brookings.
Puccinia virgata Ell. & Ev., rust, Brookings.

SORGHUM VULGARE Pers., Sorghum.

- Cercospora sorghi* Ell. & Ev., cercospora leaf spot, Brookings, in experimental plots.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings.
Fusarium moniliforme Sheldon, secondary root rot, stalk rot, Brookings, Hyde.
Fusarium oxysporum (Schlecht.) emend. Snyder & Hans., seed rot, Brookings.
Gloeosporium bolleyi, Sprague, root necrosis, Brookings.
Helminthosporium turcicum Pass., leaf spot, Brookings, Minnehaha.
Macrophomina phaseoli (Maubl.) Ashby, charcoal rot, Brookings.
Pseudomonas andropogonia (E. F. Sm.) Stapp, bacterial stripe, Brookings.
Pseudomonas syringae v. Hall, holcus spot, Brookings, general widespread.
Pythium debaryanum Hesse, root necrosis and seedling blight, Brookings.
Pythium graminicola Subr., root browning, Brookings.
Rhizoctonia solani Kuehn, secondary root rot, Brookings.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings, Turner, Lincoln, Hutchinson.
Sphacelotheca reiliana (Kuehn) Clint., head smut, Hutchinson.
Spacelotheca sorghi (Lk.) Clint., covered kernel smut, Brookings, Hughes, Hutchinson, Lake, Stanley.
Xanthomonas holcicola (Elliot) Starr & Burkh., bacterial streak, Brookings.

SORGHUM VULGARE var. SUDANENSE (Piper) Hitchc., Sudan Grass.

- Ascochyta sorghina* Sacc., leaf spot, Brookings.
Helminthosporium turcicum Pass., leaf blight, Brookings.
Pseudomonas syringae v. Hall, holcus spot, Brookings.
Pythium debaryanum Hesse, root necrosis, Brookings.
Pythium graminicola Subr., root browning, Brookings.
Sclerophthora macrospora (Sacc.) Thirum., Shaw & Naras, downy mildew, Brookings, Kingsbury.

SPARTINA GRACILIS Trin., Alkali Cordgrass.

- Puccinia distichlidis* Ell. & Ev., rust, Pennington.
Puccinia peridermiospora (Ell. & Tracy) Arth., rust, Meade.

SPARTINA PECTINATA Lk., Prairie Cordgrass.

- Claviceps purpurea* (Fr.) Tul., ergot, Brookings.
Puccinia distichlidis Ell. & Ev., rust, Pennington.

- Puccinia peridermiospora* (Ell. & Tracy) Arth., rust, Brookings, Minnehaha.
Septoria spartinae (Trel.) Sprague, leaf spot, Brown.
Stagonospora spartinicola Sprague, streak spot, Brookings.
Uromyces acuminatus Arth., rust, Brown.
- SPHENOPHOLIS INTERMEDIA** Rydb., Slender Wedgegrass.
Puccinia eatoniae Arth., rust, Brookings.
- SPHENOPHOLIS OBTUSATA** (Michx.) Scribn.
Colletotrichum graminicola (Ces.) G. W. Wils, anthracnose, Ziebach.
Puccinia eatoniae Arth., rust, Meade.
- SPOROBOLUS ASPER** (Michx.) Kunth., Tall Dropseed.
Puccinia vilfae Arth. & Holw., rust, Fall River.
Uromyces sporoboli Ell. & Ev., rust, Hughes.
- SPOROBOLUS CRYPTANDRUS** (Torr.) A. Gray, Sand Dropseed.
Puccinia graminis Pers., stem rust, Hughes.
Puccinia simulans (Pk.) Barth., rust, Hughes, Fall River.
Pythium graminicola Subr., root browning, Harding.
Pythium monospermum Pringsh, root rot, Harding.
Rhizoctonia solani Kuehn, secondary root rot, Harding.
Selenophoma donacis (Pass.) Sprague & A.G. Johnson var. *stomaticola* (Baeumer)
 Sprague & A. G. Johnson, selenophoma spot, Harding.
Uromyces sporoboli Ell. & Ev., rust, Brown.
- SPOROBOLUS NEGLECTUS** Nash
Sclerophthora macrospora (Sacc.) Thirum. Shaw & Naras, downy mildew, Brookings.
Uromyces sporoboli Ell. & Ev., rust, Brookings.
Ustilago vilfae Wint., smut, Brookings.
- SPOROBOLUS VAGINIFLORUS** (Torr.) Wood, Annual Dropseed.
Uromyces sporoboli Ell. & Ev., rust, Brookings.
- STIPA COMATA** Trin. & Rupr., Needle-and-thread.
Pseudomonas coronafaciens (Elliot) F.L. Stevens var. *atropurpurea* (Reddy & Godkin) Stapp, chocolate spot, Harding.
Puccinia stipae Arth., rust, Spink.
Sclerotrichum graminis Fckl., leaf streak, Clark.
Selenophoma donacis (Pass.) Sprague & A. G. Johnson, selenophoma spot, Harding, Perkins, Tripp.
Septoria andropogonis J.J. Davis f. sp. *sporobolicola* Sprague, brown leaf blotch, Campbell.
Urocystis fraserii Clint. & Zundel, smut, Hyde.
Ustilago hypodytes (Schlecht.) Fr., stem smut, Spink.
- STIPA ROBUSTA** Scribn., Sleepy grass.
Puccinia scaber (Ell. & Ev.) Barth., rust, Fall River.
- STIPA SPARTEA** Trin., Porcupine Grass.
Puccinia stipae Arth., rust, Brookings.
Ustilago hypodytes (Schlecht.) Fr., stem smut, Brookings.
Ustilago minima Arth., stem smut, Lincoln.
Ustilago spegazzinii Hirsch., stem smut, Brookings.
Ustilago williamsii (Griff.) Lavrov., stem smut, Lincoln.
- STIPA VIRIDULA** Trin., Green Needle Grass.
Claviceps purpurea (Fr.) Tul., ergot, Beadle.
Colletotrichum graminicola (Ces.) G.W. Wils., anthracnose, Brookings.
Curcularia geniculata (Tracy & Earle) Boed., secondary root rot, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Hughes.
Gloeosporium bolleyi Sprague, root necrosis, Hughes.
Helminthosporium sativum Pam., King & Bakke, root rot, Brookings.
Pseudomonas coronafaciens (Elliot) F.L. Stevens var. *atropurpurea* (Reddy & Godkin) Stapp, chocolate spot, Harding, Brown.
Puccinia scaber (Ell. & Ev.) Barth., rust, Brookings, Pennington.
Selenophoma donacis (Pass.) Sprague & A.G. Johnson, selenophoma spot, Meade.
Septoria andropogonis J.J. Davis f. sp. *sporobolicola* Sprague, brown blotch, Meade.

Septoria nodorum Berk., glume blotch, Brookings.
Septoria secalis Prill & Del. var *stipae* Sprague, white leaf spot, Clay, Day.
Ustilago hypodytes (Schlecht.) Fr., stem smut, Brookings, Deuel, Kingsbury.
Ustilago spengazzinii Hirsch., stem smut, Brookings, Hand.

TRITICUM AESTIVUM L., Wheat.

Barley yellow dwarf, virus, Brookings, scattered and variable.
Erysiphe graminis DC., powdery mildew, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., secondary root rot, Brookings, universal.
Fusarium culmorum (W.G. Sm.) Sacc., root rot, Brookings, rather uncommon.
Fusarium graminearum Schwabe, root rot and scab, Brookings, severe in eastern South Dakota in favorable years.
Fusarium poae (Pk.) Wr., secondary root rot, Brookings, Beadle.
Gloeosporium bolleyi Sprague, secondary root rot, Brookings.
Helminthosporium sativum Pam., King & Bakke, leaf blotch, root rot, Brookings.
Olpidium brassicae (Wor.) Dang., rootlet necrosis, Brookings, rather common but overlooked.
Ophiobolus graminis Sacc., take-all, Faulkton, Lyman, Tripp, distribution limited.
Pseudomonas atrofaciens (McCull.) F.L. Stevens, basal glume blotch, Brookings.
Puccinia graminis Pers., stem rust, Brookings, found in all parts of the state.
Puccinia rubigo-vera (DC) Wint., leaf rust, Brookings, found in all parts of the state.
Puccinia striiformis West., stripe rust, Bennett, Codington, Kingsbury.
Pythium arrhenomanes Drechs., root browning, Brookings, confused with *P. graminicola*.
Pythium debaryanum Hesse, root necrosis, universal.
Pythium graminicola Subr. root browning, Brookings, prevalent in all parts of the state.
Pythium irregulare Buis., root necrosis, Brookings.
Pythium ultimum Trow., root necrosis, Brookings, weakly parasitic on wheat.
Rhizoctonia solani Kuehn, secondary root rot, Brookings, usually rather common in early season.
Septoria nodorum Berk., glume blotch and leaf spot, Brookings.
Septoria tritici Rob. ex Desm., leaf blotch, Gregory, more common on winter wheat.
Striate mosaic, virus, winter wheat area of state, less common than wheat streak mosaic.
Barley stripe mosaic, virus, Brookings, less common on wheat than barley.
Tilletia foetida (Wallr.) Liro, stinking smut, Beadle, Brookings, Moody, Butte, seldom seen now.
Ustilago nuda (Jens.) Rostr., loose smut, Brookings, scattered throughout state.
Wheat streak mosaic, virus, winter wheat area of state; severe some seasons.
Xanthomonas translucens (J.J.R.) Dowson var. *cerealis* (Hagb.) Wallin, black chaff, Brookings, prevalence variable, but occurs in all parts of state.

TRITICUM DURUM Desf., Durum wheat.

Fusarium graminearum Schwabe, scab, root rot, Brookings.
Helminthosporium sativum Pam., King & Bakke, spot blotch, root rot, Brookings.
Pseudomonas atrofaciens (McCull.) F.L. Stevens, basal glume rot, Brookings.
Puccinia graminis Pers., stem rust, Brookings.
Puccinia rubigo-vera (DC.) Wint., leaf rust, Brookings.
Pythium debaryanum Hesse, root necrosis, Brookings.
Pythium graminicola Subr. root browning, Brookings.
Rhizoctonia solani Kuehn, secondary root rot, Brookings.
Septoria nodorum Berk., leaf spot, glume blotch, Codington.
Xanthomonas translucens (J.J.R.) Dowson var. *cerealis* (Hagb.) Wallin, black chaff, Brookings.

ZEA MAYS L., Corn.

Bacterium stewartii E.F. Sm., Stewart's wilt, Brookings.
Diplodia zeae Schw. Lev., ear and stalk rot, Brookings.
Fusarium acuminatum (Ell. & Ev.) Wr., seed rot and secondary root rot, common.

- Fusarium graminearum* Schwabe, seedling blight, ear and stalk rot, Brookings.
- Fusarium oxysporum* (Schlecht.) emend. Snyder & Hans., seed rot in cold wet soils, Brookings.
- Helminthosporium turcicum* Pass., leaf blight, Brookings, Turner, more common in southeastern counties.
- Macrophomina phaseoli* (Maubl.) Ashby, charcoal rot, Beadle, Hamlin, Moody.
- Nigrospora sphaerica* (Sacc.) Mason, stalk rot, Deuel, Brookings.
- Physoderma maydis*, Miyabe, brown spot, rarely found; once in extreme southeastern part of state.
- Pseudomonas syringae* v. Hall, holcus spot, Brookings, occurrence scattered and variable.
- Puccinia sorghi* Schw., rust, Brookings, rather common on sweetcorn.
- Pythium arrhenomanes* Drechs., root browning, Brookings, confused with *P. graminicola*.
- Pythium debaryanum* Hesse, root necrosis, Brookings.
- Pythium graminicola* Subr., root browning, Brookings.
- Pythium ultimum* Trow., root necrosis, Brookings, Perkins.
- Rhizoctonia solani* Kuehn, secondary root rot, Brookings, Perkins.
- Sclerophthora macrospora* (Sacc.) Thirum. Shaw & Naras, downy mildew, Brookings,
- Sclerophthora macrospora* (Sacc.) Thirum. Shaw & Naras, downy mildew, Brookings, Hutchinson, Minnehaha, Turner, Yankton.
- Ustilago maydis* (DC.) Cda., boil smut, Brookings, common throughout state.
- ZIZANIA AQUATICA L. Annual Wildrice.**
- Entyloma lineatum* (Cke.) J.J. Davis, blister smut, Beadle.

Part II

PATHOGEN INDEX

Fungus Diseases

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ASCOCHYTA SORGHI

Agropyron desertorum

Buchloe dactyloides

Hierochloe odorata

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HENDERSONIA CULMICOLA
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MACROPHOMINA PHASEOLI
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OPHIOBOLUS GRAMINIS
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OVULARIA PUSILLA
Bromus inermis
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Bouteloua curtipendula
Bouteloua gracilis

PHYLLACHORA DIPLOCARPA
Distichlis stricta
PHYLLACHORA GRAMINIS
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Andropogon gerardi
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PUCCINIA ELLISIANA
Andropogon gerardi
Andropogon scoparius

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PYRENOPHORA BROMI*Bromus inermis***PYTHIUM ARRHENOMANES***Triticum aestivum**Zea mays***PYTHIUM DEBARYANUM***Agropyron cristatum**Agropyron desertorum**Agropyron intermedium**Agropyron repens**Andropogon gerardi**Andropogon scoparius**Avena sativa**Bouteloua gracilis**Bromus inermis**Dactylis glomerata**Elymus canadensis**Hordeum jubatum**Hordeum vulgare**Oryzopsis hymenoides**Panicum miliaceum**Poa palustris**Poa pratensis**Secale cereale**Setaria italica**Setaria lutescens**Setaria viridis**Sorghum vulgare**Sorghum vulgare* var. *sudanense**Triticum aestivum**Triticum durum**Zea mays***PYTHIUM GRAMINICOLA***Agropyron cristatum**Agropyron desertorum**Agropyron intermedium**Agropyron repens**Avena sativa**Bromus inermis**Bromus tectorum**Dactylis glomerata**Echinochloa crusgalli**Elymus junceus**Hordeum jubatum**Hordeum vulgare**Muhlenbergia racemosa**Panicum miliaceum**Poa palustris**Redfieldia flexuosa**Schedonardus paniculatus**Secale cereale**Setaria italica**Setaria lutescens**Setaria viridis**Sorghum vulgare**Sorghum vulgare* var. *sudanense**Sporobolus cryptandrus**Triticum aestivum**Triticum durum**Zea mays***PYTHIUM IRREGULARE***Agropyron intermedium**Bouteloua gracilis**Triticum aestivum***PYTHIUM MONOSPERMUM***Sporobolus cryptandrus***PYTHIUM ULTIMUM***Agropyron intermedium**Triticum aestivum**Zea mays***RHIZOCTONIA ORYZAE***Andropogon scoparius***RHIZOCTONIA SOLANI***Agropyron cristatum**Agropyron intermedium**Agropyron repens**Agropyron smithii**Agropyron trachycaulum**Avena sativa**Bouteloua gracilis**Bromus inermis**Bromus japonicus**Bromus tectorum**Elymus canadensis**Elymus junceus**Festuca octoflora**Hordeum jubatum**Hordeum pusillum**Hordeum vulgare**Muhlenbergia racemosa**Oryzopsis hymenoides**Panicum virgatum**Phalaris arundinacea**Poa palustris**Redfieldia flexuosa**Secale cereale**Setaria viridis**Sorghum vulgare**Sporobolus cryptandrus**Triticum aestivum**Triticum durum**Zea mays***RHYNCHOSPORIUM****ORTHOSPORUM***Calamagrostis canadensis***RHYNCHOSPORIUM SECALIS***Agropyron repens**Bromus inermis**Elymus innovatus**Hordeum vulgare**Phalaris arundinacea***SCLEROPHTHORA MACROSPORA***Agropyron cristatum**Agropyron repens**Agropyron smithii*

- Agropyron trachycaulum*
Avena fatua
Avena sativa
Bromus inermis
Bromus japonicus
Digitaria ischaemum
Digitaria sanguinalis
Eragrostis ciliaris
Eragrostis pectinacea
Hordeum jubatum
Hordeum vulgare
Muhlenbergia asperifolia
Panicum capillare
Panicum miliaceum
Panicum virgatum
Phalaris arundinacea
Phleum pratense
Poa pratense
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Agropyron trachycaulum
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Agrostis scabra
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Dactylis glomerata
Elymus canadensis
Festuca rubra
Glyceria grandis
Hordeum jubatum
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Bouteloua curtipendula
- SEPTORIA ANDROPOGONIS F. SP. SPOROBOLICOLA**
- Stipa comata*
Stipa viridula
- SEPTORIA AVENAE**
- Calamagrostis neglecta*
Scolochloa festucacea
- SEPTORIA AVENAE F. SP. TRITICEA**
- Agropyron cristatum*
Agropyron repens
- SEPTORIA CALAMAGROSTIDIS**
- Calamagrostis neglecta*
- SEPTORIA CALAMOVILFAE**
- Calamovilfa longifolia*
- SEPTORIA ELYMI**
- Agropyron repens*
Agropyron smithii
Agropyron trachycaulum
Elymus canadensis
- SEPTORIA MACROPODA VAR. GRANDIS**
- Poa arida*
Poa canbyi
Poa secunda
- SEPTORIA MACROPODA VAR. SEPTULATA**
- Poa compressa*
Poa pratensis

SEPTORIA NODORUM
Agropyron repens
Agropyron smithii
Agropyron x triticum
Poa palustris
Stipa viridula
Triticum aestivum
Triticum durum
SEPTORIA PASSERINII
Hordeum jubatum
Hordeum vulgare
SEPTORIA SECALIS
Secale cereale
SEPTORIA SECALIS VAR. STIPAE
Stipa viridula
SEPTORIA SPARTINAE
Spartina pectinata
SEPTORIA TENELLA
Festuca octoflora
Festuca rubra
SEPTORIA TRITICI
Triticum aestivum
SOROSPORIUM CENCHRI
Cenchrus pauciflorus
Panicum capillare
SOROSPORIUM CONSANGUINEUM
Aristida basiramea
SOROSPORIUM ELLISII
Andropogon scoparius
SPHACELÓTHECA ANDROPOGONIS
Andropogon gerardi
SPHACELÓTHECA DESTRUENS
Panicum miliaceum
SPHACELÓTHECA OCCIDENTALIS
Andropogon gerardi
SPHACELÓTHECA REILIANA
Sorghum vulgare
SPHACELÓTHECA SORGHII
Sorghum vulgare
STAGNOSPORA ARENARIA
Agropyron desertorum
Andropogon scoparius
STAGNOSPORA BRÖMI
Bromus inermis
STAGNOSPORA FOLIICOLA
Phalaris arundinacea
STAGNOSPORA SIMPLICOR
Andropogon gerardi
STAGNOSPORA SPARTINICOLA
Spartina pectinata
TILLETIA EARLEI
Agropyron smithii
TILLETIA FOETIDA
Triticum aestivum
TOLYPOSPORIUM BULLATUM
Echinochloa crusgalli
UROCYSTIS AGROPYRI
Agropyron repens
Agropyron smithii
Elymus canadensis
Hordeum jubatum
Poa pratensis
UROCYSTIS FRASERII
Stipa comata
UROCYSTIS OCCULTA
Secale cereale
UROMYCES ACUMINATUS
Spartina pectinata
UROMYCES DACTYLIDIS
Poa pratensis
Poa secunda
UROMYCES GRAMINICOLA
Panicum virgatum
UROMYCES HALSTEDII
Leersia oryzoides
UROMYCES SPORBOLI
Sporobolus asper
Sporobolus cryptandrus
Sporobolus vaginiflorus
USTILAGO ARTHURI
Scolochloa festucacea
USTILAGO AVENAE
Arrhenatherum elatius
Avena sativa
Hordeum vulgare
USTILAGO BULLATA
Agropyron cristatum
Agropyron trachycaulum
Bromus commutatus
Bromus erectus
Bromus japonicus
Bromus tectorum
Hordeum jubatum
USTILAGO CRAMERI
Setaria italica
Setaria viridis
USTILAGO CRUS-GALLI
Echinochloa crusgalli
USTILAGO DAVISII
Glyceria fluitans
USTILAGO HORDEI
Avena sativa
Hordeum vulgare
USTILAGO HYPODYTES
Stipa comata
Stipa spartea
Stipa viridula
USTILAGO LONGISSIMA
Glyceria grandis
USTILAGO MACROSPORA
Elymus canadensis
Phalaris arundinacea
USTILAGO MAYDIS
Zea mays
USTILAGO MINIMA
Stipa spartea

USTILAGO NEGLECTA*Bouteloua simplex*
*Setaria lutescens***USTILAGO NUDA***Hordeum vulgare*
*Triticum aestivum***USTILAGO SPEGAZZINII***Agropyron repens*
Agropyron smithii
Poa trivialis
Stipa spartea
*Stipa viridula***USTILAGO SPEGAZZINII VAR.****AGRESTIS***Agropyron smithii*
*Elymus virgincus***USTILAGO SPERMOPHORA***Eragrostis reptans***USTILAGO STRIFORMIS***Agropyron trachycaulum*
Bromus inermis
Elymus canadensis
Elymus macounii
Hordeum jubatum
Poa palustris
*Poa pratensis***USTILAGO SYNTERISMAE***Digitaria ischaemum*
*Digitaria sanguinalis***USTILAGO VILFAE***Sporobolus neglectus***USTILAGO WILLIAMSII***Stipa spartea***Bacterial Diseases****BACTERIUM STEWARTII***Zea mays***PSEUDOMONAS ANDROPOGONIS***Sorghum vulgare***PSEUDOMONAS ATROFACIENS***Triticum aestivum*
*Triticum durum***PSEUDOMONAS CORONAFACIENS***Avena sativa***PSEUDOMONAS CORONAFACIENS****VAR. ATROPURPUREA***Agropyron repens*
Agropyron smithii
Agropyron trachycaulum
Bromus inermis
Elymus canadensis
Stipa comata
*Stipa viridula***PSEUDOMONAS PANICI***Panicum miliaceum***PSEUDOMONAS STRIAFACIENS***Avena sativa***PSEUDOMONAS SYRINGAE***Panicum miliaceum*
Setaria lutescens
Setaria viridis
Sorghum vulgare
Sorghum vulgare var. sudanese
*Zea mays***XANTHOMONAS HOLCICOLA***Sorghum vulgare***XANTHOMONAS TRANSLUCENS****VAR. CEREALIS***Agropyron intermedium*
Agropyron repens
Agropyron smithii
Bromus inermis
Hordeum vulgare
Secale cereale
Triticum aestivum
*Triticum durum***Virus Diseases****AGROPYRON MOSAIC***Agropyron repens***BARLEY STRIPE MOSAIC***Hordeum vulgare*
*Triticum aestivum***BARLEY YELLOW DWARF***Avena sativa*
*Hordeum vulgare**Triticum aestivum***BROME MOSAIC***Bromus inermis***STRIATE MOSAIC***Triticum aestivum***WHEAT STREAK MOSAIC***Setaria viridis*
Triticum aestivum

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INDEX TO COMMON NAMES OF HOSTS

Hosts are indexed here according to their most frequently used common name; some have no common name.

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