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Fungous Diseases on Non-Grass Plants in South Dakota

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Fungous Diseases on Non-Grass Plants in South Dakota

A Check List



Agricultural Experiment Station
South Dakota State University
Brookings

***Fungous Diseases
on
Non-Grass Plants
in
South Dakota***

A Check List

By

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Plant Pathology Department
Agricultural Experiment Station
South Dakota State University, Brookings**

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Fungous Diseases on Non-Grass Plants in South Dakota

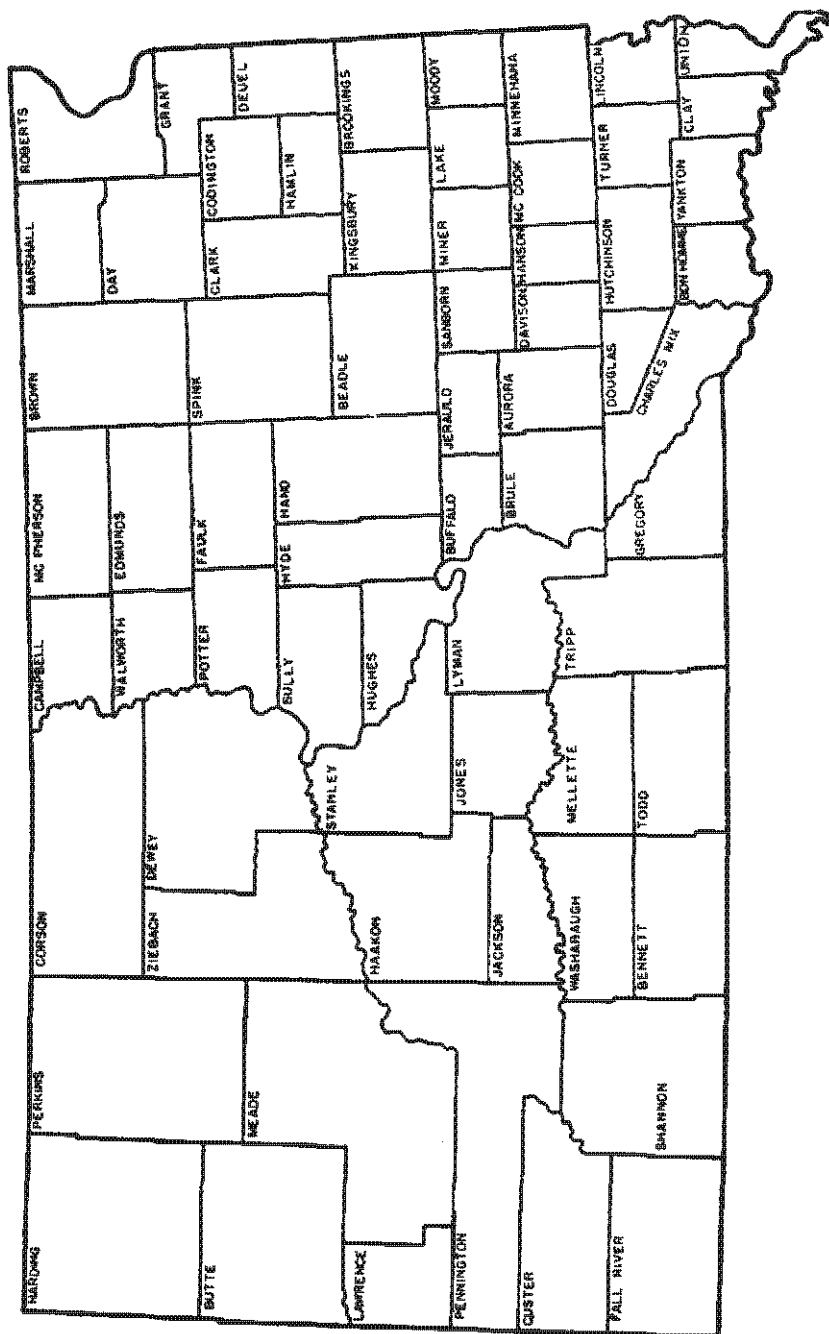
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This list covers only fungous diseases for which collections are present in the herbaria of either the Plant Pathology Department or the Botany Department at South Dakota State University. The list includes 340 cultivated and non-cultivated plants. Non-crop plants and even weeds have a significant place in a plant-disease list since they are often attacked by pathogens that also infect crop plants. The 511 diseases included are produced by 332 fungous pathogens. Host plants are arranged alphabetically, and following each is a similarly arranged list of fungous pathogens with the type

of disease or symptom produced plus the name of the county in which infected plants were found. In a second list the pathogens are arranged alphabetically and the hosts attacked by each is given.

One of the purposes of such a check list is to facilitate identification of pathological specimens by county agents, students and Agricultural Experiment Station staff in South Dakota. Elsewhere research workers and others interested in occurrence and distribution of known plant diseases in South Dakota may also find the list useful.

South Dakota



PART I -- Host Index

ACER NEGUNDO L., Box Elder.

Gloeosporium apocryptum Ell. & Ev., anthracnose, leaf blight, Campbell.

Phyllosticta negundinis Sacc. & Speg., leaf spot, Lincoln.

Sphacopsis albescens Ell. & Ev., die back, Spink, Brookings.

ACER RUBRUM L., Red Maple.

Phyllosticta minima (Berk. & Curt.) Ell. & Ev., eye spot, Yankton.

ACER SACCHARINUM L., Soft Maple.

Rhytisma acerinum Pers. ex. Fr., tar spot, Brookings, Minnehaha.

ALLIUM CANADENSE L., Wild Garlic.

Phoma allicola Sacc. & Roum., leaf spot, Deuel.

ALLIUM CEPA L., Onion (cultivated).

Alternaria porri (Ell.) Cif., purple blotch, Brookings.

Botrytis allii Munn., neck rot, Brookings.

Puccinia asparagi DC., rust, Brookings.

Urocystis colchici (Schlecht.) Roberh., smut, Brookings.

ALLIUM CERNUUM Roth, Wild Onion.

Puccinia granulisporea Ell. & Call., rust, Pennington.

AMARANTHIUS GRAECIZANS L., Tumbleweed.

Albugo bliti (Biv. Bern.) Kuntze, white rust, Lawrence.

AMARANTHIUS RETROFLEXUS L., Rough Pigweed.

Albugo bliti (Biv. Bern.) Kuntze, white rust, Brookings.

AMBROSIA ARTEMISIFOLIA L., Common Ragweed.

Entyloma compositarum Farl., white smut, Spink.

Erysiphe cichoracearum DC., powdery mildew, Brookings.

AMBROSIA PSILOSTACHYA DC., Western Ragweed.

Puccinia xanthii Schw., rust, Kingsbury.

AMBROSIA TRIFIDA L., Giant Ragweed.

Erysiphe cichoracearum DC., powdery mildew, Brookings, Brown.

Puccinia xanthii Schw., rust, Minnehaha Pennington.

AMELANCHIER ALNIFOLIA Nutt., Western Service Berry.

Gymnosporangium juvenescens Kern, rust, Fall River, Lawrence.

Gymnosporangium nidus-avis Thaxt., rust, Pennington.

AMELANCHIER ROTUNDIFOLIA Roem., Service Berry.

Gymnosporangium corniculans Kern, rust, Spink.

AMORPHA CANESCENS Pursh, Leadplant.

Uromyxis amorphae (Curt.) Schroet., rust, Brookings, Brule, Pennington.

AMORPHA FRUTICOSA L., Indigobush.

Cytospora amorphae Ell. & Barth., on twigs, Spink.

Diplodia amorphae (Wallr.) Sacc., leaf spot, Spink.

Uromyxis amorphae (Curt.) Schroet., rust, Brookings, Grant, Pennington.

AMORPHA NANA Nutt., Lead Plant.

Uromyxis amorphae (Curt.) Schroet., rust, Lyman, Stanley.

AMPHICARPA MONOICA (L.) Ell., Hogpeanut.

Synchytrium accidoides (Pk.) Lagh., false rust, leaf gall, Brookings.

ANAPHALIS MARGARITACEA (L.) Benth. & Hook., Pearl Everlasting.

Septoria margaritaceae Pk., leaf spot, Pennington.

Uromyces amoenus Syd., rust, Pennington.

ANEMONE CANADENSIS L., Meadow Anemone.

Didymaria didyma (Unger) Pound, leaf spot, Brookings.

Puccinia rubigo-vera (DC.) Wint., rust, Moody.

ANEMONE CYLINDRICA Gray, Candle Anemone.

Puccinia gigantispora Bub., rust, Brookings.

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

ANEMONE PATENS L., Pasque Flower.

Tranzschelia fusca (Pers.) Diet., rust, Davison.

Urocystis anemones (Pers.) Wint., leaf and stem smut, Brookings, Davison.

- ANEMONE VIRGINIANA L., Thimbleweed.**
Erysiphe polygoni DC., powdery mildew, Brookings.
- ANETHUM GRAVEOLENS L., Dill.**
Cercospora anethi Sacc., leaf and stem spot, Brookings.
- ANTIRRHINUM MAJUS L., Snapdragon.**
Puccinia antirrhini Diet. & Holw., rust, Jackson, Minnehaha.
- APIUM GRAVEOLENS L., Celery.**
Septoria apii (Briosi & Cav.) Chester, early blight, Brookings.
- APOCYNUM CANNABINUM L., Indian Hemp.**
Stagonospora apocyni (Pk.) J. J. Davis, leaf spot, Brookings.
- APOCYNUM SIBIRICUM Jacq., Prairie Dogbane.**
Puccinia seymouriana Arth., rust, Spink.
- AQUILEGIA VULGARIS L., Columbine (Cultivated).**
Erysiphe polygoni DC., powdery mildew, Brookings.
- ARISAEMA TRIPHYLLUM (L.) Schott, Jack-in-the-Pulpit.**
Uromyces caladii (Schw.) Earl., rust, Brookings.
- ARMORACIA RUSTICANA Gaertn., Horseradish.**
Albugo candida (Pers. ex. Chev.) Kuntze, white rust, Brookings.
- ARTEMISIA BIENNIS Willd., Biennial Wormwood.**
Percnospora leptosperma d. By., downy mildew, Brookings.
- ARTEMISIA CANA Pursh., Wormwood.**
Puccinia absinthii (Hedw. f.) DC., rust Brookings, Butte, Fall River, Pennington.
- ARTEMISIA GLAUCA Pallas, Silky Wormwood.**
Puccinia absinthii (Hedw. f.) DC., rust, Fall River.
- ARTEMISIA LUDOVICIANA Nutt., Louisiana Sagebrush.**
Puccinia absinthii (Hedw. f.) DC., rust, Harding.
- ARTEMISIA PABULARIS Rydb., Sagebrush.**
Puccinia absinthii (Hedw. f.) DC., rust, Fall River.
- ARTEMISIA PALUSTRIS Nels., Sagebrush.**
Puccinia absinthii (Hedw. f.) DC., rust, Fall River.
- ARTEMISIA SP.**
Erysiphe cichoracearum DC., powdery mildew, Brookings.
Puccinia absinthii (Hedw. f.) DC., rust, Pennington.
- ASCLEPIAS SPECIOSA Torr., Showy Milkweed.**
Puccinia bartholomaei Diet., rust, Brookings.
Puccinia seymouriana Arth., rust, Beadle, Faulk.
- ASCLEPIAS SYRIACA L., Common Milkweed.**
Puccinia bartholomaei Diet., rust, Brookings.
- ASCLEPIAS VERTICILLATA L., Whorled Milkweed.**
Puccinia bartholomaei Diet., rust, Spink.
- ASPARAGUS OFFICINALIS L., Asparagus.**
Puccinia asparagi DC., rust, Brookings.
- ASTER PANICULATUS Lam., Tall White Aster.**
Erysiphe cichoracearum DC., Powdery mildew, Brookings.
- ASTER SIMPLEX Willd., Aster.**
Colosporium solidaginis (Schw.) Thuem., rust, Brookings, Minnehaha.
Puccinia asteris Duby, rust, Brookings, Lawrence.
- ASTER SP., Aster**
Colosporium solidaginis (Schw.) Thuem., rust, Brookings.
Erysiphe cichoracearum DC., powdery mildew, Brookings.
Puccinia asteris Duby, rust, Brookings.
Puccinia extensicola Plowr. var. *asteris* (Thuem.) Arth., rust, Brookings.
Puccinia stipae Arth., rust, Lyman.
- ASTRAGALUS CANADENSIS L., Milk Vetch.**
Erysiphe polygoni DC., powdery mildew, Brookings.
Uromyces punctatus Schroet., rust, Brookings.
- BERBERIS VULGARIS L., European Barberry.**
Puccinia graminis Pers., rust, Brookings, Clark, Kingsbury.

BETA VULGARIS L., Beet.

Cercospora beticola Sacc., leaf spot, blight, Brookings, Hutchinson.
Uromyces betae (Pers.) Lev., rust, Moody.

BETULA Papyrifera Marsh., Western Paper Birch.

Eutypella cerciculata (Fr.) Sacc., on dead branches, Custer.

BIDENS FRONDOSA L., Beggars Tick.

Sphaerotheca humidi (DC.) Burr., powdery mildew, Brookings.

BOLTONIA ASTEROIDES (L.) T. Her.

Puccinia extensicola Flowl., var. *asteris* (Thuem.) Arth., rust, Brookings.

BORAGO OFFICINALIS L., Borage.

Cercospora angustica Speg., leaf spot, Brookings.

CALTHA PALUSTRIS L., Kingcup, Mayblob.

Puccinia calthae (Grev.) Lk., rust, Grant, Roberts.

CANNABIS SATIVA L., Hemp.

Septoria cannabis (Lasch) Sacc., leaf spot, Lincoln.

CAREX ATHERODES Spreng, Sedge.

Puccinia caricis (Schum.) Schroet., var. *urticata* (Kern) Arth., rust, Brookings.

CAREX FILIFOLIA Nutt., Threadleaf Sedge.

Puccinia universalis Arth., rust, Fall River.

CAREX OBTUSATA Lilj.

Puccinia universalis Arth., rust, Pennington.

CAREX TRICHOCARPA Muhl.

Puccinia caricis (Schum.) Schroet., var. *urticata* (Kern) Arth., rust, Spink.

Septoria carnea Ell. & Ev., on faded leaves, Spink.

CARTHAMUS TINCTORIUS L., Safflower.

Alternaria sp., leaf spot, Brookings, Lyman, Perkins.

Cercospora sp., leaf spot, Brookings.

Erysiphe cicharacearum DC., powdery mildew, Brookings.

Gloeosporium carthami (Fukui) Hori & Hemmi, anthracnose, Brookings.

Plasmopara halstedii (Earl.) Berl. & DeT., downy mildew, Brookings.

Puccinia carthami Cda., rust, Brookings.

Septoria carthami Miroshnitsky, leaf spot, Brookings.

CASTILLEJA SP., Indian Paintbrush.

Cronartium coleosporioides (D. & H.) Arth., rust, Lawrence.

Puccinia andropogonis Schw., var. *micropuncta* (Ell. & Ev.) Arth., rust, Brookings.

CELASTRUS SCANDENS L., Climbing or Shrubby Bittersweet.

Phyllactinia corylea Pers. ex Karst., powdery mildew, Grant.

CELTIS OCCIDENTALIS L., Hackberry.

Phyllosticta celtidis Ell. & Kell., leaf spot, Brule, Lincoln.

CELTIS SP., Hackberry.

Phyllosticta celtidis Ell. & Kell., leaf spot, Lincoln.

CERASTIUM ARVENSE L., Mouse-eared Chickweed.

Melampsorella cerastii (Pers.) Schroet., rust, Brookings.

CERASTIUM BRACHYPODUM (Englm.) Robinson, Chickweed.

Peronospora alsticurarum Cusp., downy mildew, Spink.

CHENOPODIUM ALBUM L., Lambsquarters, Goosefoot.

Cercospora dubia (Riess) Wint., leaf spot, Brookings.

Peronospora effusa (Grev. ex Desm.) Ces., downy mildew, Brookings.

CHENOPODIUM HYBRIDUM L., Maple-leaf Goosefoot.

Cercospora dubia (Riess) Wint., leaf spot, Spink.

CHENOPODIUM RUBRUM L., Red Goosefoot.

Cercospora dubia (Riess) Wint., leaf spot, Spink.

Uromyces pulposa (Wallr.) Schroet., leaf and stem gall, Spink.

CHRYSANthemum MORIFOLIUM (Ramat.) Hemsl., Chrysanthemum (Cultivated).

Erysiphe cicharacearum DC., powdery mildew, Brookings.

Mycosphaerella lignicola K. F. Baker, Dimock., & L. H. Davis, stem canker, Beadle.

Septoria chrysanthemi Allesch., leaf spot, Brookings.

- CICHORIUM INTYBUS L., Chicory.**
Cercospora cichorii J. J. Davis, leaf spot, Brookings.
- CIRSIIUM ALTISSIMUM (L.) Spreng., Thistle.**
Erysiphe cichoracearum DC., powdery mildew, Brookings.
Puccinia cirsii Lasch, rust, Brookings.
- CIRSIIUM ARVENSE (L.) Scop., Canada Thistle.**
Puccinia obtogens (Lk.) Tul., rust, Brookings.
- CIRSIIUM UNDULATUM (Nutt.) Spreng., Thistle.**
Puccinia cirsii Lasch, rust, Campbell, Fall River.
- CITRULLUS VULGARIS Schrad., Watermelon.**
Colletotrichum lagenarium (Pass.) Ell. & Halst., anthracnose, Davison.
- CLEMATIS LIGUSTICIFOLIA Nutt., Western Virgins-bower.**
Puccinia rubigo-vera (DC.) Wint. var. *agropyrina* (Eriks.) Arth., rust, Brookings, Stanley.
- CLEMATIS VIRGINIANA L., Virgins-bower.**
Ascochyta clematidina Thuem. emend. Gloyer, leaf spot, Roberts.
- COLLIINSIA PARVIFLORA Dougl., Blue-eyed Mary.**
Peronospora grisea (Ung.) d By., downy mildew, Custer.
- COLLOMIA LINEARIS Nutt.**
Uromyces acuminatus Arth. var. *polemonii* (Pk.) J. J. Davis, rust, Pennington.
- COMANDRA PALLIDA A. DC., Bastard Toadflax.**
Cronartium comandrae Pk. rust, Kingsbury, Custer, Harding.
- CONVOLVULUS ARVENSIS L. Small Bindweed.**
Puccinia convolvuli (Pers.) Cast., rust, Brookings.
- CORNUS STOLONIFERA Michx. Red Osier Dogwood.**
Cytospora corni West., Dieback?, on twigs, Brookings.
Septoria cornicola Desm., leaf spot, Brookings.
- CORYLUS AMERICANA Marsh., American Hazelnut.**
Microsphaera alni DC. ex Wint., powdery mildew, Roberts.
- COTONEASTER SP.**
Nectria cinnabarina Tode ex Fr., on twigs, Pennington.
- CRATAEGUS SUCCULENTA Schrad., American Hawthorn.**
Gymnosporangium betheli Kern, rust, Lawrence.
Gymnosporangium globosum Farl., rust, Spink.
- CUCUMIS SATIVUS L., Cucumber.**
Cercospora curcubitae Ell. & Ev., leaf spot, Brookings.
Erysiphe cichoracearum DC., powdery mildew, Brookings.
- CUCURBITA PEPO L., Pumpkin.**
Erysiphe cichoracearum DC., powdery mildew, Brookings.
- CUCURBITA PEPO L. var OVIFERA (L.) Alef. Gourd.**
Erysiphe cichoracearum DC., powdery mildew, Brookings.
- DAHLIA VARIABILIS (Willd.) Desf., Dahlia (Cultivated).**
Erysiphe cichoracearum DC., powdery mildew, Brookings.
- DATURA STRAMONIUM L., Jimsonweed.**
Alternaria crassa (Sacc.) Rands, leaf spot, Brookings.
- DAUCUS CAROTA L. var. SATIVA DC., Carrot.**
Cercospora carotae (Pass.) Solh., leaf spot, Brookings.
- DELPHINIUM AJACIS L., Rocket Larkspur.**
Septoria delphinella Sacc., leaf spot, Brookings.
- DELPHINIUM BICOLOR Nutt. Larkspur.**
Puccinia delphini Diet. & Holw., rust, Custer.
Septoria delphinella Sacc., leaf spot, Brookings.
- DELPHINIUM CULTORUM Voss, Cultivated Larkspur.**
Erysiphe cichoracearum DC., powdery mildew, Brookings.
- DESMANTHUS ILLINOENSIS (Michx.) MacM., Prairie Mimosa.**
Cercospora desmanthi Ell. & Kell., leaf spot, Faulk.
- DIANTHUS CARYOPHYLLUS L., Carnation.**
Uromyces caryophyllinus (Schrank) Wint., rust, Brookings.

- DICENTRA CUCULLARIA** (L.) Bernh., Dutchmans Breeches.
Cerotelium dicentrae (Trel.) Mains & F. W. Anderson, rust, Brookings, Lincoln.
- DIGITALIS AMBIGUA** L., Foxglove.
Colletotrichum fuscum Laub., anthracnose, Brookings.
- DIGITALIS LANATA** Ehrh., Foxglove.
Colletotrichum fuscum Laub., anthracnose, Brookings.
- DIGITALIS LUTEA** L., Foxglove.
Colletotrichum fuscum Laub., anthracnose, Brookings.
- DIGITALIS NEVADENSIS** Rydb., Foxglove.
Colletotrichum fuscum Laub., anthracnose, Brookings.
- DRABA NEMOROSA** L., Whildowgrass.
Peronospora parasitica Pers. ex Fr., downy mildew, Spink.
- ELAEAGNUS ANGUSTIFOLIA** L., Russian Olive.
Phyllosticta argyrea Speg., leaf spot, Brookings.
- ELLISIA NYCTELEA** L., Waterweed.
Puccinia rubigo-vera (DC.) Wint., rust, Spink.
- EPILOBIUM ADENOCALYX** Haussk., Willow-herb.
Pucciniastrum pustulatum (Pers.) Diet., rust, Grant, Lawrence.
- EPILOBIUM ANGUSTIFOLIUM** L., Fireweed.
Ramularia Sp., leaf spot, Lawrence.
- EPILOBIUM PANICULATUM** Nutt., Willow-herb.
Puccinia vagans (DC.) Arth. var. *epilobii-tetragoni* DC., rust., Lawrence.
- EPILOBIUM** SP., Willow-herb.
Pucciniastrum pustulatum (Pers.) Diet., rust, Brookings.
- EQUISETUM ARVENSE** L. Horsetail, Scouring-rush.
Gloeosporium equiseti Ell. & Ev., blight, Grant.
- ERIGERON RAMOSUS** (Walt.) B.S.P., White-top Fleabane.
Puccinia extensicola Plow. var. *erigerontis* Arth., rust, Brookings.
Septoria erigerontis Pk., leaf spot, Brookings.
- ERIGERON SUBTRINERVIS** Rydb., Fleabane.
Erysiphe cichoracearum DC., powdery mildew, Custer.
- EUONYMUS AMERICANUS** L., Strawberry Bush.
Microsphaera albi DC., ex Wint., powdery mildew, Brookings.
- EUONYMUS ATROPURPUREUS** Jacq., Burning Bush.
Phyllosticta euonymi Sacc., leaf spot, Lincoln.
- EUPHORBIA DICTYOSPERMA** Fisch. & Mey., Spurge.
Uromyces dictyosperma Ell. & Ev. rust, Douglas, Lawrence.
- EUPHORBIA MARGINATA** Pursh. Snow-on-the-Mountain.
Cercospora pulcherrimae Tharp, leaf spot, Lincoln.
Uromyces proeminens (DC.) Pass. var. *myristica* (Berk. & Curt.) Arth., rust, Yankton.
- EUPHORBIA ROBUSTA** (Engelm.) Small, Large Spurge.
Melampsora monticola Mains, rust, Fall River.
- EUPHORBIA SERPYLLIFOLIA** Pers., Thyme-leaved Spurge.
Peronospora euphorbiae Fekl., downy mildew, Spink.
Uromyces proeminens (DC.) Pass., rust, Fall River.
- FICUS ELASTICA** Roxb., Rubber Plant.
Gloeosporium elasticae (Thum.) Cke. & Mass., anthracnose, Brookings.
Glomerella cingulata (Ston.) Spauld. & Schrenk, leaf spot, Brookings.
- FRAGARIA CHILOENSIS** Duchesne var. **ANANASSA** Bailey, Cultivated Strawberry.
Dendrophoma obscurans (Ell. & Ev.) H. W. Anderson, leaf blight, Brookings.
Diplocarpon earliana (Ell. & Ev.) Wolf, leaf scorch, Brookings.
Mycosphaerella fragariae (Tul.) Lindau, common leaf spot, Brookings.
- FRAGARIA OVALIS** (Lehm.) Rydb., Strawberry.
Ramularia tulasnei Sacc., leaf spot, Lawrence.

FRAXINUS PENNSYLVANICA Marsh. var. **LANCEOLATA** (Borkh.) Sarg., Green Ash.

Diplodia infusca Ell. & Ev., canker, dieback, Spink.

Fomes fraxinophilus (Pk.) Sacc., heart rot, Brookings.

Hysteroglyphium fraxini (Pers. ex Fr.) d Not., on dead branches, Brookings.

Phyllactinia corylea Pers. ex Karst., powdery mildew, Brookings, Pennington.

Phyllosticta fraxinicola (Currey) Ell. & Ev., leaf spot, Brookings.

Piggotia fraxini Berk. & Curt., leaf spot, Brookings, Spink.

Puccinia sparganoides Ell. & Barth., rust, Brookings, Hyde, Meade, Mellette, Sanborn, Moody.

FRAXINUS SP., Ash.

Phyllosticta sp., leaf spot, Brookings.

GALIUM APARINE L., Spring-cleavers, Goosegrass.

Puccinia difformis G. Kunze, rust, Brookings, Fall River.

GALIUM TRIFLORUM Michx., Sweet Scented Bedstraw.

Puccinia punctata Lk., rust, Brookings.

GAURA COCCINEA Pursh.

Uromyces plumbarius Pk., rust, Kingsbury, Pennington.

GENTIANA AFFINIS Griseb., Gentian.

Puccinia gentianae (Strauss) Lk., rust, Brookings.

GENTIANA ANDREWSII Griseb., Closed Gentian.

Puccinia gentianae (Strauss) Lk., rust, Brookings.

GENTIANA PARRYI Engelm., Gentian.

Puccinia gentianae (Strauss) Lk., rust, Brookings.

GENTIANA PUBERULA Michx., Gentian.

Puccinia gentianae (Strauss) Lk., rust, Pennington.

GLADIOLUS HORTULANUS Bailey, Gladiolus (cultivated).

Curcularia lonata (Wakk.) Boed., brown spot of foliage and flowers, Minnehaha.

Fusarium oxysporum Schlecht. f. *gladioli* (Massey) Snyder & Hans., fusarium rot, Brookings.

GLYCINE MAX (L.) Merr., Soybean (See **SOJA MAX**).

GLYCYRRHIZA LEPIDOTA (Nutt.) Pursh, American Licorice.

Uromyces glycyrrhizae (Rab.) Magn., rust, Brookings, Butte, Fall River, Lawrence.

GRINDELIA SQUARROSA (Pursh) Donal, Gumweed.

Erysiphe cichoracearum DC., powdery mildew, Brookings.

HELIANTHUS ANNUUS L., Sunflower (Cultivated).

Erysiphe cichoracearum DC., powdery mildew, Brookings.

Plasmopara halstedii (Farr.) Berl. & Det., downy mildew, Brookings.

Puccinia helianthi Schw., rust, Brookings, Clark, Kingsbury.

HELIANTHUS GIGANTEUS L., Giant Sunflower.

Puccinia helianthi Schw., rust, Spink.

HELIANTHUS GROSSESERRATUS Martens., Sunflower.

Erysiphe cichoracearum DC., powdery mildew, Brookings.

Puccinia helianthi Schw., rust, Brookings.

HELIANTHUS MAXIMILIANI Schrad., Maximilian's Sunflower.

Erysiphe cichoracearum DC., powdery mildew, Brookings, Fall River.

Puccinia helianthi Schw., rust, Brookings, Fall River, Minnehaha.

HELIANTHUS RIGIDUS (Cass.) Desf., Stiff Sunflower.

Erysiphe cichoracearum DC., powdery mildew, Brookings, Farlk.

Puccinia helianthi Schw., rust, Brookings.

HELIANTHUS SUBRHOMBOIDEUS Rydb.

Puccinia helianthi Schw., rust, Lawrence.

HELIANTHUS TUBEROSUS L., Jerusalem Artichoke.

Puccinia helianthi Schw., rust, Minnehaha.

HELIANTHUS SP., Sunflower.

Puccinia helianthi Schw., rust, Brookings, Beadle.

- HERACLEUM LANATUM** Michx., Cow-parsnip.
Ramularia heraclei (Oud.) Sacc., leaf spot, Lawrence.
- HEUCHERA HISPIDA** Pursh., Alumroot.
Puccinia heucherae (Schw.) Diet., rust, Brookings.
Ramularia mitellae Pk., var. *heucherae* Dearm., leaf spot, Brookings.
- HIERACIUM CANADENSE** Michx., Hawkweed.
Puccinia hieracii (Schum.) Mart., rust, Lawrence.
- HIERACIUM UMBELLATUM** L., Hawkweed.
Puccinia hieracii (Schum.) Mart., rust, Brookings.
- HUMULUS LUPULUS** L., Hops.
Septoria humuli West., leaf spot, Brookings.
- HYDROPHYLLUM VIRGINIANUM** L., John's-cabbage.
Puccinia hydrophylli Pk. & C. W. Clint., rust, Brookings, Grant.
Sphaerotheca humuli (DC.) Burr., powdery mildew, Grant.
- IMPATIENS BIFLORA** Walt., Jewelweed.
Puccinia rubigo-vera (DC.) Wint. var. *impatientis* (Arth.) Mains, rust, Brookings.
- IMPATIENS PALLIDA** Nutt., Touch-Me-Not.
Puccinia rubigo-vera (DC.) Wint. var. *impatientis* (Arth.) Mains, rust, Roberts.
- INULA HELENIUM** L., Elecampane.
Erysiphe cichoracearum DC., powdery mildew, Brookings.
- IRIS MISSOURIENSIS** Nutt., Blue Flag.
Puccinia iris (DC.) Waldr., rust, Lawrence.
- IVA AXILLARIS** Pursh, Poverty Weed.
Puccinia intermixta Pk., rust, Brookings, Butte, Pennington.
- IVA XANTHIFOLIA** Nutt., Marsh Elder.
Basidiophora kellermanii (Swing. ex Sacc.) G. W. Wils., downy mildew, Brookings.
- JUGLANS NIGRA** L., Black Walnut.
Marssonina juglandis (Lib.) Magn., leaf spot, Brookings.
- JUNIPERUS HORIZONTALIS** Moench, Creeping Juniper.
Phomopsis juniperovora Hahn, twig blight, Brookings, Codington.
- JUNIPERUS SCOPULORUM** Sarg., Rocky Mountain Juniper.
Gymnosporangium juvenescens Kern, rust, Custer, Pennington.
- JUNIPERUS VIRGINIANA** L., Eastern Redcedar.
Exosporium deflectens Karst., on twigs, Minchalia.
Gymnosporangium juniperi-virginianae Schw., rust, Brookings, Bon Homme.
Gymnosporangium juvenescens Kern., rust, Davison.
- KUHNIA GLUTINOSA** Ell., Western False Boneset.
Puccinia kuhniae Schw., rust, Campbell, Spink.
- LACTUCA CANADENSIS** L., Canada Wild Lettuce.
Puccinia extensicola Plowr. var. *hieraciata* (Schw.) Arth., rust, Brookings.
- LACTUCA PUCHELLA** Pursh, Chicory Lettuce.
Puccinia extensicola Plowr. var. *hieraciata* (Schw.) Arth., rust, Brookings, Hughes, Lawrence, Walworth.
- LACTUCA SATIVA** L., Lettuce (cultivated).
Bremia lactueae Regel, downy mildew, Brookings.
Puccinia extensicola Plowr. var. *hieraciata* (Schw.) Arth., rust, Brookings.
- LATHYRUS OCHROLEUCUS** Hook, Peavine.
Uromyces fabae (Pers.) d By., rust, Lawrence.
- LATHYRUS ODORATUS** L., Sweetpea (cultivated).
Microsphaera alui DC. ex Wint., powdery mildew, Brookings.
- LATHYRUS SYLVESTRIS** L., Everlasting Pea.
Uromyces fabae (Pers.) d By., rust, Roberts.
- LEPIDIUM SP.**, Pepper Grass.
Peronospora parasitica Pers. ex Fr., downy mildew, Hyde.
- LESPEDEZA STRIATA** (Thunb.) H. & A., Common Lespedeza.
Erysiphe polygoni DC., powdery mildew, Brookings.
- LINUM LEWISII** Pursh, Prairie Flax.
Melampsora lini (Pers.) Lev., rust, Fall River.

LINUM SULCATUM Riddell, Wild Flax.

Melampsora lini (Pers.) Lev., rust, Meade.

LINUM USITATISSIMUM L., Common Flax (cultivated).

Fusarium oxysporum Schlecht. f. sp. *lini* (Bolley) Synd. & Hans., wilt, Brookings.

Melampsora lini (Pers.) Lev. f. sp. *liniperda* Koern., rust, Brookings.

Septoria linicola (Speg.) Garassini, pasmo, Brookings.

LITHOSPERMUM INCISUM Lehm., Puccoon.

Puccinia rubigo-vera (DC.) Wint. var. *apocrypta* (Ell. & Tracy) Arth., rust, Brookings.

LOMATHIUM FOENICULACEUM (Nutt.) Coult. & Rose, Biscuitroot.

Puccinia jonesii Pk. var. *typica* Arth., rust, Fall River.

LONICERA SP., Honeysuckle.

Herpobasidium deformans Gould, leaf blight, Brookings.

LUPINUS ARGENTEUS Pursh, Lupine.

Hadrotrichum globiferum (Ell. & Ev.) J. J. Davis, leaf blight, Lawrence.

Ovularia lupinicola Pollack, leaf spot, Lawrence.

Phyllosticta ferax Ell. & Ev., leaf spot, Lawrence.

LYCIUM CHINENSE Mill., Matrimony Vine.

Puccinia tumidipes Pk., rust, Fall River, Spink, Yankton, Tripp.

LYCIUM HALIMIFOLIUM Mill., Matrimony Vine.

Puccinia tumidipes Pk., rust, Fall River, Spink, Yankton, Tripp.

LYCOPERSICON ESCULENTUM Mill., Tomato (cultivated).

Alternaria solani (Ell. & G. Martin) Sor., early blight, Brookings.

Collatotrichum phomoides (Sacc.) Chester, anthracnose, Brookings.

Phytophthora infestans (Mont.) d By., late blight, Brookings.

Septoria lycopersici Speg., blight, Brookings, Hughes.

LYGODESMIA JUNCEA (Pursh) D. Don., Skeleton Weed.

Puccinia stipae Arth., rust, Beadle.

LYSIMACHIA CILIATA L., Fringed Loosestrife.

Septoria lysimachiae West., leaf spot, Brookings.

MAHONIA REPENS (Lindl.) G. Don, Creeping Mahonia, Oregon Grape.

Curvinsiella sanguinea (Pk.) Arth., rust, Fall River, Lawrence, Pennington.

MALUS SYLVESTRIS Mill., Apple (cultivated).

Gymnosporangium juniperi-virginianae Schw., rust, Brookings, Yankton.

Monilinia fructicola (Wint.) Honey, brown rot, Brookings.

Nectria chinabariana Tode ex Fr., twig canker, Ngody, Yankton.

Podosphaera oxycanthae (DC.) d By., powdery mildew, Brookings.

Schizophyllum commune Fr., secondary bark and sapwood rot, Brookings, Spink.

Venturia inaequalis (Cke.) Wint. apud. Thuern., scab, Brookings.

(*Fusicladium dendriticum* (Wallr.) Fekl., scab, conidial stage, Brookings.)

MALUS SP., Apple.

Venturia inaequalis (Cke.) Wint. apud. Thuern., scab, Brookings.

(*Fusicladium dendriticum* (Wallr.) Fekl., scab, conidial stage, Brookings.)

MALVA ROTUNDIFOLIA L., Common Mallow.

Cercospora malvarum Sacc., leaf spot, Brookings.

MALVASTRUM COCCINEUM (Pursh) Gray, Red False Mallow.

Puccinia sherardiana Koern., rust, Hand, Spink, Fall River.

MARRUBIUM VULGARE L., Common Horehound.

Cercospora marrubii Tharp, leaf spot, Brookings.

MEDICAGO SATIVA L., Alfalfa.

Ascochyta imperfecta Pk., black stem, Brookings.

Cercospora medicaginis Ell. & Ev., leaf spot, Brookings.

Peronospora trifoliorum d By., downy mildew, Brookings.

Pseudopeziza jonesii Nanof., yellow leaf blotch, Brookings.

Pseudopeziza medicaginis (Lib.) Sacc., common leaf spot, Brookings, Fall River.

Pseudoplea briasiana (Poll.) Hochn., brown leaf spot, Brookings.

Pythium debaryanum Hesse., damping off, Brookings.

Pythium ultimum Trow., damping off, Brookings.

Uromyces striatus Schroet. var. *medicaginis* (Pass.) Arth., rust, Brookings.

- MELILOTUS OFFICINALIS (L.) Lam., Yellow Sweet Clover.**
Ascochyta caulicola Laub., stem canker, Brookings.
Cercospora zebrina Pass., leaf spot, Brookings.
Phytophthora cactorum (Leb. & Cohn) Schroet., crown rot, Brookings.
Stagonospora meliloti (Lasch) Petr., leaf spot, Brookings, Gregory, Spink, Todd.
- MENISPERMUM CANADENSE L., Yellow Parilla.**
Entyloma menispermii Farl. & Trel., leaf smut, Brookings.
- MENTHA ARVENSIS L., Field Mint.**
Puccinia menthae Pers., rust, Brookings.
Ramularia menthicola Sacc., leaf spot, Pennington.
Septoria menthicola Sacc. & Letendre, leaf spot, Spink.
- MENTHA CANADENSIS (L.) Briq. Field Mint.**
Puccinia menthae Pers., rust, Brookings.
- MENTHA SPICATA L., Spearmint.**
Puccinia angustata Pk. var. *typica* Arth., rust, Brookings.
- MENTHA SP., Mint.**
Ramularia menthicola Sacc., leaf spot, Brookings.
- MENTZELIA DECAPETALA (Pursh) Urban & Gilg., Blazing Star.**
Septoria mentzelinae Ell. & Kell., leaf spot, Union.
- MONARDA FISTULOSA L. VAR. MENTHAEFOLIA (Grah.) Fern., Wild Bergamot.**
Puccinia menthae Pers., rust Lawrence, Brookings, Minnehaha, Spink.
- MORUS SP., Mulberry.**
Nectria cinnabarina Tode ex Fr., twig canker, Moody.
- MUSINEON DIVARICATUM (Purs.) Nutt., Wild Parsley.**
Puccinia jonesii Pk., rust, Lawrence.
- OENOTHERA BIENNIS L., Common Evening Primrose.**
Synchytrium fulgens Schroet., leaf gall, Minnehaha.
- OSMORHIZA LONGISTYLIS (Torr.) DC., Anise-root.**
Puccinia pimpinellae (Strauss) H. Mart., rust, Brookings.
- OXALIS CORNICULATA L., Creeping Woodsorrel.**
Microsphaera russellii G. W. Clint., powdery mildew, Brookings.
Puccinia sorgi Schw., rust, Brookings.
- OXALIS STRICTA L., Woodsorrel.**
Ustilago oxalidis Ell. & Tracey, seed smut, Spink.
- OXALIS SP., Woodsorrel.**
Microsphaera russellii G. W. Clint., powdery mildew, Brookings.
- PAEONIA OFFICINALIS L., Peony.**
Cercospora paeoniae Tehon & Daniels, leaf spot, Brookings.
Phytophthora cactorum (Leb. & Cohn) Schroet., tip blight, Brookings.
- PARIETARIA PENNSYLVANICA Muhl., Pellitory.**
Septoria parietariae J. J. Davis, leaf spot, Spink.
- PARTIENOCISSUS QUINQUEFOLIA (L.) Planch., Virginia Creeper.**
Cercospora ampelopsidis Pk., leaf spot, Brookings.
Coniothyrium fuckelli Sacc., stem canker, Brookings.
Phyllosticta ampelopsidis Ell. & C. Martin, leaf spot, Jones.
Uncinula necator (Schw.) Burr., powdery mildew, Brookings.
- PENSTEMON AIBIDUS Nutt., White Beardtongue.**
Puccinia andropogonis Schw. var. *pentstemonis* (Schw.) Arth., rust, Brookings.
- PENSTEMON GRACILIS Nutt., Beardtongue.**
Puccinia andropogonis Schw. var. *pentstemonis* (Schw.) Arth., rust, Bennett.
Septoria pentstemonicola Ell. & Ev. leaf spot, Bennett.
- PENSTEMON GRANDIFLORUS Nutt., Beardtongue.**
Cercospora pentstemonis Ell. & Kell., leaf spot, Tripp.
Puccinia andropogonis Schw. var. *pentstemonis* (Schw.) Arth., rust, Grant, Wash-
 abough.
Puccinia pentstemonis Pk., rust, Gregory.
- PETALOSTEMON COMPACTUM (Spreng.) Swezey, Prairie Clover.**
Uropyxis petaloestmonis (Farl.) de T., rust, Lawrence.

- MELILOTUS OFFICINALIS (L.) Lam., Yellow Sweet Clover.**
Ascochyta caulicola Laub., stem canker, Brookings.
Cercospora zebrina Pass., leaf spot, Brookings.
Phytophthora cactorum (Leb. & Cohn) Schroet., crown rot, Brookings.
Stagonospora meliloti (Lasch) Petr., leaf spot, Brookings, Gregory, Spink, Todd.
- MENISPERMUM CANADENSE L., Yellow Parilla.**
Entyloma menispermii Farl. & Trel., leaf smut, Brookings.
- MENTHA ARVENSIS L., Field Mint.**
Puccinia menthae Pers., rust, Brookings.
Ramularia menthicola Sacc., leaf spot, Pennington.
Septoria menthicola Sacc. & Letendre, leaf spot, Spink.
- MENTHA CANADENSIS (L.) Briq. Field Mint.**
Puccinia menthae Pers., rust, Brookings.
- MENTHA SPICATA L., Spearmint.**
Puccinia angustata Pk. var. *typica* Arth., rust, Brookings.
- MENTHA SP., Mint.**
Ramularia menthicola Sacc., leaf spot, Brookings.
- MENTZELIA DECAPETALA (Pursh) Urban & Gilg., Blazing Star.**
Septoria mentzelinae Ell. & Kell., leaf spot, Union.
- MONARDA FISTULOSA L. VAR. MENTHAEFOLIA (Grah.) Fern., Wild Bergamot.**
Puccinia menthae Pers., rust Lawrence, Brookings, Minnehaha, Spink.
- MORUS SP., Mulberry.**
Nectria cinnabarina Tode ex Fr., twig canker, Moody.
- MUSINEON DIVARICATUM (Purs.) Nutt., Wild Parsley.**
Puccinia jonesii Pk., rust, Lawrence.
- OENOTHERA BIENNIS L., Common Evening Primrose.**
Synchytrium fulgens Schroet., leaf gall, Minnehaha.
- OSMORHIZA LONGISTYLIS (Torr.) DC., Anise-root.**
Puccinia pimpinellae (Strauss) H. Mart., rust, Brookings.
- OXALIS CORNICULATA L., Creeping Woodsorrel.**
Microsphaera russellii G. W. Clint., powdery mildew, Brookings.
Puccinia sorgi Schw., rust, Brookings.
- OXALIS STRICTA L., Woodsorrel.**
Ustilago oxalidis Ell. & Tracey, seed smut, Spink.
- OXALIS SP., Woodsorrel.**
Microsphaera russellii G. W. Clint., powdery mildew, Brookings.
- PAEONIA OFFICINALIS L., Peony.**
Cercospora paeoniae Tehon & Daniels, leaf spot, Brookings.
Phytophthora cactorum (Leb. & Cohn) Schroet., tip blight, Brookings.
- PARIETARIA PENNSYLVANICA Muhl., Pellitory.**
Septoria parietariae J. J. Davis, leaf spot, Spink.
- PARTHENOCISSUS QUINQUEFOLIA (L.) Planch., Virginia Creeper.**
Cercospora ampelopsidis Pk., leaf spot, Brookings.
Coniothyrium fuckelli Sacc., stem canker, Brookings.
Phyllosticta ampelopsidis Ell. & C. Martin, leaf spot, Jones.
Uncinula necator (Schw.) Burr., powdery mildew, Brookings.
- PENSTEMON AIBIDUS Nutt., White Beardtongue.**
Puccinia andropogonis Schw. var. *pentstemonis* (Schw.) Arth., rust, Brookings.
- PENSTEMON GRACILIS Nutt., Beardtongue.**
Puccinia andropogonis Schw. var. *pentstemonis* (Schw.) Arth., rust, Bennett.
Septoria pentstemonicola Ell. & Ev. leaf spot, Bennett.
- PENSTEMON GRANDIFLORUS Nutt., Beardtongue.**
Cercospora pentstemonis Ell. & Kell., leaf spot, Tripp.
Puccinia andropogonis Schw. var. *pentstemonis* (Schw.) Arth., rust, Grant, Wash-
 abough.
Puccinia pentstemonis Pk., rust, Gregory.
- PETALOSTEMON COMPACTUM (Spreng.) Swezey, Prairie Clover.**
Uropyxis petaloestmonis (Farl.) de T., rust, Lawrence.

- Metampsora medusae* Thuem., rust, Brookings.
Rosellinia subcompressa Ell. & Ev., on dead branches, Brown.
Septoria mustica, Pk., leaf spot, Brookings.
Tubercularia sp., on twigs Brookings.
- POPULUS NIGRA L., VAR. ITALICA** Muenchh., Lombardy Poplar.
Cytospora chrysosperma Pers. ex Fr., twig and branch canker, Brookings.
- POPULUS TREMULOIDES** Michx., Quaking Aspen.
Ucinula salicis DC. ex Wint., powdery mildew, Custer.
- POPULUS SARGENTII** Dode, Great Plains Cottonwood.
Metampsora medusae Thuem., rust, Butte.
- POTULACA OLERACEA L., Purslane.**
Albugo portulacae (DC.) Kuntze, white rust, Brookings.
- POTENTILLA FRUTICOSA L., Bush Cinquefoil.**
Phragmidium andersonii Shear, rust Custer.
- POTENTILLA NORVEGICA L., Cinquefoil.**
Mollisia deluuii (Rabih.) Karst., on stems, Brookings.
Ramularia arvensis Sacc., leaf spot, Brookings.
- POTENTILLA PARADOXA** Nutt., Cinquefoil.
Marssonina potentillae (DesM.) Magn., leaf spot, Faulk.
- POTENTILLA PENNSYLVANICA L., Cinquefoil.**
Phragmidium potentillae (Pers.) Karst., rust, Brookings, Pennington.
- PRUNUS AMERICANA** Marsh., American Plum.
Monilinia fructicola (Wint.) Honey, brown rot, Brookings, Clark.
Taphrina communis (Sadeb.) Gies., plum pockets, Brookings, Brule.
Valsa leucostoma Pers. ex Fr., dieback, canker, Spink.
- PRUNUS AVIUM L., Sweet Cherry.**
Podosphaera oxycanthae (DC.) d. By., powdery mildew, Brule.
- PRUNUS BESSEYI** Bailey, Western Sand Cherry.
Monilinia fructicola (Wint.) Honey, brown rot, Brookings.
Podosphaera oxycanthae (DC.) d. By., powdery mildew, Brookings, Lincoln.
Taphrina communis (Sadeb.) Gies., plum pockets, Brookings.
Tranzschelia pruni-spinosae (Pers.) Diet., rust, Brookings, Lincoln.
- PRUNUS CERASUS L., Sour Cherry.**
Podosphaera oxycanthae (DC.) d. By., powdery mildew, Brookings.
- PRUNUS VIRGINIANA L., Common Chokecherry.**
Coccomyces lutescens Higgins, shot hole, Brookings.
Dibotryon morbosum (Schw.) Th. & Syd., black knot, Brookings.
Monilinia fructicola (Wint.) Honey, blossom blight, brown rot, Gregory.
- PRUNUS VIRGINIANA L., VAR. MELANOCARPA** (A. Nels.) Sarg., Western Chokecherry.
Dibotryon morbosum (Schw.) Th. & Syd., black knot, Brookings.
Podosphaera oxycanthae (DC.) d. By., powdery mildew, Brookings, Brown.
Taphrina confusa (Atk.) Gies., Hypertrophy of leaf, fruit, and shoot, Brookings, Harding.
- PRUNUS SP., Plum.**
Cercospora circumscissa Sacc., leaf spot, Brookings.
Cytospora cincta Sacc., on dead branches, Brookings.
Dibotryon morbosum (Schw.) Th. & Syd., black knot, Brookings.
Massaria conspurcata (Wallr.) Sacc., on dead branches, Brookings.
Monilinia fructicola (Wint.) Honey, blossom blight, brown rot, Brookings, Yankton.
Podosphaera oxycanthae (DC.) d. By., powdery mildew, Brookings.
- PSORALEA ARGOPHYLLA** Pursh, Scurf pea.
Pseudotelia perisporioides (Berk. & Curt.) Speg., black mildew, Clark.
Uromyces psoraleae Pk. var. *argophyllae* (Seym.) Arth., rust, Brookings.
- PSORALEA CUSPIDATA** Pursh, Scurf pea.
Uromyces psoraleae Pk. var. *argophyllae* (Seym.) Arth., rust, Hughes, Lyman.

- PSORALEA TENUIFLORA** Pursh, Scurf Pea.
Uromyces psoraleae Pk. var. *argophyllae* (Seym.) Arth., rust, Fall River, Pennington.
- PYROLA ROTUNDIFOLIA** L., var. **AMERICANA** (Sweet) Fern. Shinleaf.
Pucciniastrum pyrolae (Pers.) Schroet, rust, Custer.
- QUERCUS MACROCARPA** Michx., Burr Oak.
Marssonina martini (Sacc. & Ell.) Magn., leaf spot, Brookings.
Phyllosticta livida Ell. & Ev., leaf spot, Pennington.
- RANUNCULUS ABORTIVUS** L., Small-flowered Crowsfoot.
Erysiphe polygoni DC., powdery mildew, Brookings.
Puccinia ranunculifolia Arth. var. *ranunculi* Mains, rust, Brookings.
- RATIBIDA COLUMNARIS** (Sims) D. Don, Prairie-Coneflower.
Entyloma compositarum Farl., white smut, Spink.
- RIHAMNUS CATHARTICA** L., Common Buckthorn.
Puccinia coronata Cda., rust, Brookings, Spink.
- RHAMNUS DAURICUS** Pall., Buckthorn.
Puccinia coronata Cda., rust, Brookings.
- RHEUM RHAPONTICUM** L., Garden Rhubarb.
Puccinia phragmitis (Schum.) Koern., rust, Brookings.
Vernicularia polygoni-virginica Schw., leaf spot, Brookings.
- RHUS RADICANS** L., Poison Ivy.
Pileolaria toxicodendri (Berk. & Rav.) Arth., rust, Brookings, Beadle, Campbell, Lawrence.
- RIBES AMERICANUM** Mill., American Black Currant.
Puccinia caricis (Schum.) Schroet. var. *grossulariata* Arth., rust, Brookings.
- RIBES CEREUM** Dougl., Wax Currant.
Coleosporium jonesii (Pk.) Arth. rust, Fall River.
- RIBES FLORIDUM** L'Her., Wild Black Currant.
Pleonectria berolinensis Sacc., on dead branches, Brown.
Puccinia caricis (Schum.) Schroet, var. *grossulariata* Arth. rust, Brookings.
- RIBES SP.**, Gooseberry.
Cylindrosporium ribis J. J. Davis, leaf spot, Brookings.
Puccinia caricis (Schum.) Schroet. var. *grossulariata* Arth., rust, Brookings.
Septoria ribis Desm., leaf spot, Brookings.
- ROBINIA PSEUDOACACIA** L., Sunburst Locust.
Tubercularia vulgaris Tode, on declining limbs, Brookings.
- ROSA ACICULATA** (Cockerell) Rydb., Rose.
Phragmidium speciosum (Fr.) Cke., rust, Brookings.
- ROSA ARKANSANA** Porter, Wild Rose.
Cercospora rosicola Pass., leaf spot, Brookings.
Phragmidium rosae-arkansanae Diet., rust, Hughes, Walworth.
Phragmidium subcorticinum (Schr.) Wint., rust, Brookings.
Sphaerotheca pannosa (Wallr.) Lev. var. *rosae* Wor., powdery mildew, Brookings.
- ROSA CALLICA** L., French or Provence Rose.
Cytospora sp., cane canker, Brookings.
- ROSA MACOUNII** Green, Rose.
Phragmidium subcorticinum (Schr.) Wint., rust, Butte.
- ROSA RUGOSA** Thumb., Cultivated Rose.
Phragmidium speciosum (Fr.) Cke., rust, Minnehaha, Union.
- ROSA SP.**, Rose.
Diplocarpon rosae Wolf, black spot, Brookings.
Phragmidium americanum (Pk.) Diet., rust, Spink.
Phragmidium mucronatum (Pers.) Schlecht., rust, Brookings.
Phragmidium speciosum (Fr.) Cke., rust, Roberts.
Phragmidium subcorticinum, (Schr.) Wint., rust, Hamlin.
- RUBUS OCCIDENTALIS** L., Black Raspberry.
Elsinoe veneta (Burk.) Jenkins, anthracnose, Brookings.
Septoria rubi West., leaf spot, Brookings.

- RUBUS STRIGOSUS** Michx., Red Raspberry.
Elsinoe cuneata (Barkh.) Jenkins, anthracnose, Brookings, Lincoln.
Septoria rubi West., leaf spot, Brookings.
- RUMEX CRISPUS** L., Yellow Dock.
Cercospora acetosellae Ell., leaf spot, Brookings.
- RUMEX MEXICANUS** Meissn., Willow-leaved Dock.
Septoria rumicis Trail, leaf spot, Charles Mix.
- RUMEX PATIENTIA** L., Spinach-leaved Dock.
Ramularia macrospora Auct., leaf spot, Faulk.
- RUMEX VENOSUS** Pursh, Winged Dock.
Puccinia pluragmitis (Schum.) Koern., rust, Pennington.
- SALIX ALBA** L., White Willow.
Gloeosporium salicis West., leaf spot, Brookings.
- SALIX AMYGDALOIDES** Andress., Peach-leaved Willow.
Melampsora bigelowii Thuem., rust, Butte, Walworth.
Rhytisma salicinum Pers. ex Fr., tar spot, Brookings, Lawrence.
- SALIX CORDATA** Muhl., Heartleaf Willow.
Cryptodiaporthe salicina (Curr.) Wehm., on branches and twigs, Spink.
Rhytisma salicinum (Pers. ex Fr.) rust, Brookings.
Uncinula salicis DC. ex Wint., powdery mildew, Brookings.
- SALIX DISCOLOR** Muhl., Pussywillow.
Cytospora chrysosperma Pers. ex Fr., twig canker, Brookings.
- SALIX FRAGILIS** L., Crack Willow.
Valsa translucens de N., on twigs, Spink.
- SALIX LUTEA** Nutt., Yellow Willow.
Uncinula salicis DC. ex Wint., powdery mildew, Lawrence.
- SALIX SCOULERIANA** Barratt.
Melampsora bigelowii Thuem., rust, Lawrence.
- SALIX SP.**
Cercospora salicina Ell. & Ev., leaf spot, Brookings.
Daedalea confragosa Bolt. ex Fr., wood rot, Brookings.
Fomes applanatus (Pers. ex Fr.) Gill., butt rot, Brookings.
Gloeosporium salicis West., leaf spot, Brookings.
Marssonina kriegeri (Bres.) Magn., leaf spot, Brookings.
Melampsora bigelowii Thuem., rust, Butte, Spink.
Melampsora paradoxa Diet. & Holw., rust, Lincoln.
Pleurotus ostreatus Jacq. ex Fr., sapwood rot, Brookings.
Pleurotus ulmarius Bull. ex Fr., sapwood rot, Brookings.
Rhytisma salicinum Pers. ex Fr., tar spot, Brookings.
- SALVIA REFLEXA** Hornem., Sage.
Puccinia caudicola Tracy & Call., rust, Lawrence.
- SCIRPUS AMERICANUS** Pers., Chair-makers Rush.
Puccinia obtecta Pk., rust, Hand.
- SCIRPUS ATROVIRENS** Muhl., Bulrush.
Puccinia angustata Pk. var. *typica* Arth., rust, Brookings.
- SCIRPUS LACUSTRIS** L., (SCIRPUS VALIDUS Vahl.) Giant Reed.
Puccinia obtecta Pk., rust, Codington.
- SENECIO AUREUS** L., Squaw-weed.
Puccinia subcircinata Ell. & Ev., rust, Custer.
- SHEPHERDIA ARGENTEA** (Pursh) Nutt., Silver Buffalo-berry.
Fomes fraxinophilus (Pk.) Sacc. f. *ellisianus* (F. W. Anderson) Baxter, white heart rot, Harding.
Puccinia carcis-shepherdiae J. J. Davis, rust, Faulk.
- SHEPHERDIA CANADENSIS** (L.) Nutt., Russet Buffalo-berry.
Puccinia carcis-shepherdiae J. J. Davis, rust, Pennington, Lawrence.
- SILENE ANTIRRHINA** L., Sleepy Catchfly.
Peronospora silenes G. W. Wils., downy mildew, Spink.

- SILPHIUM PERFOLIATUM L.**, Indian-cup.
Plasmopara halstedii (Farl.) Berl. & De T., downy mildew, Brookings.
Puccinia silphii Schw., rust, Brookings.
- SMILACINA STELLATA (L.) Desf.**, False Solomon's Seal.
Puccinia sessilis Schneid., rust, Pennington.
- SOJA MAX (L.) Piper, Soybean (See GLYCINE MAX).**
Cercospora kikuchii T. Mats. & Tomovasi, leaf spot, purple stain of seed, Moody.
Peronospora manshurica (Nann.) Syd. ex Gaum., downey mildew, Codington, Brookings.
Septoria glycines Henn., brown spot, Moody.
- SOLANUM TUBEROSUM L.**, Potato.
Alternaria solani (Ell. & G. Martin) Sor., early blight, Brookings.
Phytophthora infestans (Mont.) d By., late blight, Brookings, Kingsbury.
- SOLIDAGO CANADENSIS L.**, Goldenrod.
Coleosporium solidaginis (Schw.) Thuem., rust, Brookings, Minnehaha.
Erysiphe cichoracearum DC., powdery mildew, Brookings.
Septoria solidaginicola Pk., leaf spot, Spink.
- SOLIDAGO GIGANTEA Ait.**, Giant Goldenrod.
Coleosporium solidaginis (Schw.) Thuem., rust, Brookings.
- SOLIDAGO MISSOURIENSIS Nutt.**, Missouri Goldenrod.
Cercospora stomatica Ell. & J. J. Davis, leaf spot, Brookings.
- SORBUS SP.**, Mountain Ash.
Cytospora sp., twig canker, Pennington.
- SPHAERALCEA COCCINEA (Nutt.) Rydb.**, Scarlet Mallow.
Puccinia sphaeralciana Koern., rust, Beadle.
- SPINACIA OLERACEA L.**, Spinach.
Peronospora effusa (Grev. ex Desm.) Ces. downy mildew, Spink.
- STACHYS PALUSTRIS L.**, Woundwort.
Erysiphe galopsidis DC., Powdery mildew, Brookings.
- STEIRONEMA CILIATUM (L.) Raf.**, Fringed Loosestrife.
Uromyces acuminatus Arth. var. *steironematis* (Arth.) J. J. Davis, rust, Brookings.
- STROPHOSTYLES PAUCIFLORA (Benth.) Watson**, Wildbean.
Uromyces phaseoli (Pers.) Wint. var. *strophostyles* Arth., rust, Minnehaha.
- SYMPHORICARPOS OCCIDENTALIS Hook.**, Wolfberry.
Anthostoma melanotos (B. & Br.) Sacc. var. *symphoricarpi* Brenkle, on dead branches, Spink.
Canthosporium umbonatum Brenkle, on dead branches, Spink.
Didymosphaeria albescentis Niesl., on dead branches, Spink.
Lapidella cornucervae Brenkle, on dying branches, Spink.
Microsphaera diffusa Ck. & Pk., powdery mildew, Spink.
Pacllaria atrata (Hedw.) Fr., leaf spot, Spink.
Teichospora umbonata Ell. & Ev., on dying twigs, Spink.
- SYMPHORICARPOS ORBICULATUS Moench**, Coralberry.
Microsphaera diffusa Cke. & Pk., powdery mildew, Brookings.
- SYMPHORICARPOS SP.**
Cercospora symphoricarpi Ell. & Ev., leaf spot, Lawrence.
- SYRINGA VULGARIS L.**, Lilac.
Microsphaera alni DC. ex Wint., powdery mildew, Brookings.
Phytophthora cactorum (Leb. & Cohn) Schroet., dieback, Brookings.
Sphaetopsis syringae Pk. & G. W. Clint., on leaves and twigs, Moody.
- TANACETUM VULGARE L.**, Tansey.
Erysiphe cichoracearum DC., powdery mildew, Brookings.
- TARAXACUM OFFICINALE Weber**, Common Dandelion.
Erysiphe cichoracearum DC., powdery mildew, Brookings.
Puccinia hieracii (Schum.) Mart., rust, Brookings, Beadle, Edmunds.
Puccinia variables Grev., rust, Brookings.
Sphaerotheca humuli (DC.) Burr., powdery mildew, Brookings.

TEUCRIUM BOTRYS L., Wood Sage.

Erysiphe cichoracearum DC., powdery mildew, Brookings.

THALICTRUM DASYCARPUM Fisch. & Lall., Meadow Rue.

Cylindrosporium thalictri (Ell. & Ev.) J. J. Davis, leaf spot, Brookings.

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

THALICTRUM PURPURASCENS L., Meadow Rue.

Erysiphe polygoni DC., powdery mildew, Brookings.

Tranzschelia pruni-spinosae (Pers.) Diet., rust, Brookings.

TILIA AMERICANA L., American Linden.

Cercospora microspora Sacc. leaf spot, Brookings.

TRADESCANTIA VIRGINIANA L., Spiderwort.

Septoria tradescantiae (Ell. & Kell.) J. J. Davis, leaf spot, Brookings.

TRAGOPOGON PORRIFOLIUS L., Salsify.

Albugo tragopogonis Pers. ex S. F. Gray, white rust, Butte.

TRIFOLIUM HYBRIDUM L., Alsike Clover.

Uromyces trifolii (Hedw. f.) Lev. var. *fallens* (Desm.) Arth., rust, Brookings.

TRIFOLIUM INCARNATUM L., Crimson Clover.

Uromyces trifolii (Hedw. f.) Lev. var. *fallens* (Desm.) Arth., rust, Brookings

TRIFOLIUM MEDIUM L., Zig-zag Clover.

Uromyces trifolii (Hedw. f.) Lev. var. *fallens* (Desm.) Arth., rust, Brookings

TRIFOLIUM PRATENSE L., Red Clover.

Cercospora zebrina Pass., leaf spot, Brookings.

Cymadothea trifolii (Pers. ex Fr.) Wolf, sooty blotch, Brookings.

Pseudopeziza trifolii (Biv.-Bern.) Fekl., leaf spot, Brookings.

Stemphylium sarcinaeforme (Cav.) Wiltshire, leaf spot, Brookings.

Uromyces trifolii (Hedw. f.) Lev. var. *fallens* (Desm.) Arth., rust, Brookings.

ULMUS AMERICANA L., American Elm.

Ceratocystis ulmi (Buisson) C. Moreau, Dutch elm disease, Bon Homme, Charles Mix, Minnehaha.

Gnomonia ulmiae (Schw. ex Fr.) Thuem., black spot, Brookings, Buffalo, Hutchinson, Minnehaha.

Pleurotus ostreatus Jacq. ex Fr., white sapwood rot, Brookings.

Pleurotus ulmarius Bull. ex Fr., brown ring rot, wound rot, Brookings.

ULMUS PUMILA L., Siberian Elm.

Gnomonia ulmiae (Schw. ex Fr.) Thuem., black spot, Brookings, Minnehaha.

Phyllosticta sp., leaf spot, Brookings, Charles Mix.

ULMUS RUBRA Muhl., Slippery Elm.

Diptyododermium ulmicola Ell. & Kell., on dead branches, Lincoln.

URTICA DIOICA L., Stinging Nettle.

Ramularia urticae Ces., leaf spot, Lincoln.

VERBENA HASTATA L., Blue Verbena.

Septaria verbenae Rob. ex Desm., leaf spot, Spink.

VERBENA STRICTA Vent., Hoary Verbena.

Erysiphe cichoracearum DC., powdery mildew, Brookings.

VERBENA URTICIFOLIA L., White Verbena.

Erysiphe cichoracearum DC., powdery mildew, Brookings.

VERNONIA FASCICULATA Michx., Western Ironweed.

Puccinia vernoniae Schw., rust, Brookings, Brown, Spink.

VICIA AMERICANA Muhl., Vetch.

Uromyces coloradensis Ell. & Ev., var. *campester* Arth., rust, Brookings.

VIGNA SINENSIS (Torner) Savi, Black-eyed Pea.

Uromyces phaseoli (Pers.) Wint. var. *riguae* (Bartl.) Arth., rust, Brookings.

VIOLA CANADENSIS L., Canada Violet.

Puccinia violae (Schum.) DC., rust, Brookings.

VIOLA CUCULLATA Ait., March Blue Violet.

Puccinia violae (Schum.) DC., rust Minnehaha.

VIOLA SP., Violet.

Cercospora granuliformis Ell. & Holw., leaf spot, Brookings.

Puccinia violae (Schum.) DC., rust, Brookings.

VITIS VINIFERA L., Grape (cultivated).

Phyllosticta viticola (Berk. & Curt.) Thuem., leaf spot, Brookings.

Plasmopara viticola (Berk. & Curt.) Berl. & de T., downy mildew, Brookings.

Uncinula necator (Schw.) Burr., powdery mildew, Brookings.

VITIS SP., Grape.

Plasmopara viticola (Berk. & Curt.) Berl. & de T., downy mildew, Brookings.

Uncinula necator (Schw.) Burr., powdery mildew, Brookings.

XANTHIUM CANADENSE Mill., Cocklebur.

Puccinia xanthii Schw., rust, Moody, Walworth.

XANTHIUM COMMUNE Brit., Common Cocklebur.

Puccinia xanthii Schw., rust, Minnehaha.

XANTHIUM OVIFORME Wall., Cocklebur.

Puccinia xanthii Schw., rust, Fall River.

XANTHIUM SPECIOSUM Kern, Spiney Cocklebur.

Puccinia xanthii Schw., rust, Pennington.

YUCCA GLAUCA Nutt., Soapweed.

Kellermannia yuccaegena Ell. & Ev., leaf blight, Charles Mix, Hughes, Lyman.

ZANTHOXYLUM AMERICANUM Mill., Prickly Ash.

Septoria pachyspora Ell. & Holw., leaf spot, Lincoln.

ZIGADENUS GRAMINEUS Rydb., Camas.

Uromyces zygadeni Pk., rust, Lyman.

ZIZIA APTERA (A. Gray) Fern., Golden Alexanders.

Cercospora ziziae Ell. & Ev., leaf spot, Brookings.

PART II

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- ALBUGO BLITI**
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Amaranthus retroflexus
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- ALBUGO PORTULACAE**
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- ALBUGO TRAGOPOGONIS**
Tragopogon porrifolius
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Datura stramonium
- ALTERNARIA PORRI**
Allium cepa
- ALTERNARIA SOLANI**
Lycopersicon esculentum
Solanum tuberosum
- ALTERNARIA SP.**
Carthamus tinctorius
- ANTHOSTOMA MELANOTES**
Symphoricarpos occidentalis
- ASCOCHYTA CAULICOLA**
Melilotus officinalis
- ASCOCHYTA CLEMATIDINA**
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- BASIDIOPHORA KELLERMANII**
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- CERCOSPORA AMPELOPSIDIS**
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- CERCOSPORA ANETHI**
Anethum graveolens
- CERCOSPORA ANGSTICA**
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- CERCOSPORA AVICULARIS**
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- CERCOSPORA CIRCUMSCISSA**
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- CERCOSPORA CUCURBITAE**
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- CERCOSPORA DUBIA**
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Chenopodium rubrum
- CERCOSPORA GRANULIFORMIS**
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- CERCOSPORA KIKUCHII**
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- CERCOSPORA MALVARUM**
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- CERCOSPORA MARRUBII**
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- CERCOSPORA MEDICAGINIS**
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- CERCOSPORA MICROSORA**
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Pentstemon grandiflorus
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- CERCOSPORA ZIZIAE**
Zizia aptera
- CERCOSPORA SP.**
Carthamus tinctorius
- CEROTELIUM DICENTRAE**
Dicentra cucullaria

CHRYSOMYXA LEDI*Picea glauca***COCCOMYCES LUTESCENS***Prunus virginiana***COLEOSPORIUM JONESII***Ribes cereum***COLEOSPORIUM SOLIDAGINIS***Aster simplex**Aster* sp.*Solidago canadensis**Solidago gigantea***COLLETOTRICHUM FUSCUM***Digitalis ambigua**Digitalis lanata**Digitalis lutea**Digitalis nevadensis***COLLETOTRICHUM LAGENARIUM***Citullus vulgaris***COLLETOTRICHUM PHOMOIDES***Lycopersicon esculentum***CONIOTHRYIUM FUECKELII***Parthenocissus quinquefolia***CRONARTIUM COLEOSPORIOIDES***Castilleja* sp.*Pinus ponderosa***CRONARTIUM COMANDRAE***Comandra pallida***CRYPTODIAPORTHE SALICINA***Salix cordata***CRYPTOSPHERA POPULINA***Populus deltoides***CUMMINSIELLA SANGUINEA***Mahonia repens***CURVULARIA LUNATA***Gladiolus hortulanus***CYLINDROSPORIUM RIBIS***Ribes* sp.**CYLINDROSPORIUM THALICTRI***Thalictrum dasycarpum***CYMATOTHA TRIFOLII***Trifolium pratense***CYTOSPORA AMORPHAE***Amorpha fruticosa***CYTOSPORA CHRYSOSPERMA***Populus deltoides**Populus nigra**Salix discolor***CYTOSPORA CINCTA***Prunus* sp.**CYTOSPORA CORNI***Cornus stolonifera***CYTOSPORA KUNZEI***Picea pungens***CYTOSPORA SP.***Rosa gallica**Sorbus* sp.**DAEDALEA CONFRAGOSA***Salix* sp.**DENDROPHOMA OBSCURANS***Fragaria chiloensis* var. *ananassa***DIBOTRYON MORBOSUM***Prunus virginiana**Prunus virginiana* var. *metanocarpa**Prunus* sp.**DICOCCEUM POPULINUM***Populus alba* var. *pyramidalis***DICTYODESMIUM ULMICOLA***Ulmus rubra***DIDYMARIA DIDYMA***Anemone canadensis***DIDYMOSPHERA ALBESCENS***Symphoricarpos occidentalis***DIPLOCARPON EARLIANA***Fragaria chiloensis* var. *ananassa***DIPLOCARPON ROSAE***Rosa* sp.**DIPLODIA AMORPHAE***Amorpha fruticosa***DIPLODIA INFUSCANS***Fraxinus pennsylvanica* var. *lancoolata***DOTHICHIZA POPULEA***Populus alba* var. *pyramidalis***ELSINOE VENETA***Rubus occidentalis**Rubus strigosus***ENTYLOMA COMPOSITARUM***Ambrosia artemisiifolia**Ratibida columnaris***ENTYLOMA MENISPERMI***Menispermum canadense***ERYSIPHE CICHORACEARUM***Ambrosia artemisiifolia**Ambrosia trifida**Artemisia* sp.*Aster paniculatus**Aster* sp.*Carthamus tinctorius**Chrysanthemum monifolium**Cirsium altissimum**Cucumis sativus**Cucurbita pepo**Cucurbita pepo* var. *ovifera**Dahlia variabilis**Delphinium cultorum**Engelmannia subtrinervis**Erigeron squarrosus**Helianthus annuus**Helianthus grosseserratus**Helianthus maximiliani**Helianthus rigidus**Imula helenium**Plantago major**Solidago canadensis*

- Tanacetum vulgare*
Taraxacum officinale
Teucrium botrys
Verbena stricta
Verbena urticifolia
- ERYSIPHE GALEOPSISIDIS**
Stachys palustris
- ERYSIPHE POLYGONI**
Anemone virginiana
Aquilegia vulgaris
Astragalus canadensis
Lespedeza striata
Pisum sativum
Polygonum aviculare
Polygonum erectum
Ranunculus abortivus
Thalictrum purpurascens
- EUTYPELLA CERVICULATA**
Betula papyrifera
- EXOSPORIUM DEFLECTENS**
Juniperus virginiana
- FOMES APPLANATUS**
Populus deltoides
Salix sp.
- FOMES FRAXINOPHILUS**
Fraxinus pennsylvanica var. *lanceolata*
- FUSARIUM OXYSPORUM** f. sp.
GLADIOLI
Gladiolus hortulanus
- FUSARIUM OXYSPORUM** f. sp. LINI
Linum usitatissimum
- GLOEOPORIUM APOCRYPTUM**
Acer negundo
- GLOEOPORIUM CARTHAMI**
Carthamus tinctorius
- GLOEOPORIUM ELASTICAE**
Ficus elastica
- GLOEOPORIUM Equiseti**
Equisetum arvense
- GLOEOPORIUM NERVESEQUUM**
Plantain occidentalis
- GLOEOPORIUM SALICIS**
Salix alba
Salix sp.
- GLOMERELLA CINGULATA**
Ficus elastica
- GNOMONIA ULMEA**
Ulmus americana
Ulmus pumila
- GYMNOSPORANGIUM BETHELII**
Cateagus succulenta
- GYMNOSPORANGIUM CORNICULANS**
Amelanchier rotundifolia
- GYMNOSPORANGIUM GLOBOSUM**
Crataegus succulenta
- GYMNOSPORANGIUM JUNIPER-VIRGINIANAE**
Juniperus virginiana
Malus sylvestris
- GYMNOSPORANGIUM JUVENESCENS**
Amelanchier alnifolia
Juniperus scopulorum
Juniperus virginiana
- GYMNOSPORANGIUM NIDUS-AVIS**
Amelanchier alnifolia
- HADROTRICHUM GLOBIFERUM**
Lupinus argenteus
- HERPOBASIDIUM DEFORMANS**
Lonicera sp.
- HYSTEROGRAPHIUM FRAXINI**
Fraxinus pennsylvanica var. *lanceolata*
- KEILERMANIA YUCCAEGENA**
Yucca glauca
- LABRIDELLA CORNU-CERVAE**
Symphoricarpos occidentalis
- LENZITES SAEPIARIA**
Picea glauca
Pinus ponderosa
- LOPHODERMIIUM PINASTRI**
Pinus ponderosa var. *scopulorum*
- MACROPHOMINA PHASEOLI**
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- MARSSONINA CASTAGNEI**
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Populus deltoides
- MARSSONINA JUGLANDIS**
Juglans nigra
- MARSSONINA KRIEGERIANA**
Salix sp.
- MARSSONINA MARTINI**
Quercus macrocarpa
- MARSSONINA POTENTILLAE**
Potentilla paradoxa
- MASSARIA CONSPURCATA**
Prunus sp.
- MELAMPSORA BIGELOWII**
Salix amygdaloides
Salix scouleriana
Salix sp.
- MELAMPSORA LINI**
Linum lewisii
Linum sulcatum
- MELAMPSORA LINI VAR. LINIPERDA**
Linum usitatissimum
- MELAMPSORA MEDUSAE**
Populus deltoides
Populus sargentii
- MELAMPSORA MONTICOLA**
Euphorbia robusta
- MELAMPSORA PARADOXA**
Salix sp.

MELAMPSORELLA CERASTH*Cerastium arvense***MICROSPHAERA ALNI***Corylus americana**Euonymus americanus**Lathyrus odoratus**Syringa vulgaris***MICROSPHAERA DIFFUSA***Symphoricarpos occidentalis**Symphoricarpos orbiculatus***MICROSPHAERA RUSSELLII***Oxalis corniculata**Oxalis* sp.**MOLLISIA DEJUNII***Potentilla norvegica***MONILINIA FRUTICOLA***Malus sylvestris**Prunus besseyi**Prunus virginiana**Prunus* sp.**MYCOSPHAERELLA FRAGARIAE***Fragaria chiloensis* var. *ananassa***MYCOSPHAERELLA LIGULICOLA***Chrysanthemum morifolium***NECTRIA CINNABARINA***Cotoneaster* sp.*Malus sylvestris**Morus* sp.**OVULARIA LUPINICOLA***Lupinus argenteus***PARODIELLA PERISPORIOIDES***Psoralea argophylla***PATELLARIA ATRATA***Symphoricarpos occidentalis***PERONOSPORA ALTA***Plantago major***PERONOSPORA ALSINEARUM***Cerastium brachypodium***PERONOSPORA EFFUSA***Chenopodium album**Spiraea oleracea***PERONOSPORA EUPHORBIAE***Euphorbia serpyllifolia***PERONOSPORA GRISEA***Collinsia parviflora***PERONOSPORA LEPTOSPERMA***Artemisia biennis***PERONOSPORA MANSHURICA***Soja max***PERONOSPORA PARASITICA***Draba nemorosa**Lepidium* sp.**PERONOSPORA SILENES***Silene antirrhina***PERONOSPORA TRIFOLIORUM***Medicago sativa***PHOMA ALLICOLA***Allium canadense***PHOMOPSIS JUNIPEROVORA***Juniperus horizontalis***PIIRAGMIDIUM AMERICANUM***Rosa* sp.**PIIRAGMIDIUM ANDERSONII***Potentilla fruticosa***PIIRAGMIDIUM MUCRONATUM***Rosa* sp.**PIIRAGMIDIUM POTENTILLAE***Potentilla pensylvanica***PIIRAGMIDIUM****ROSAE-ARKANSANAE***Rosa arkansana***PIIRAGMIDIUM SPECIOSUM***Rosa aciculata**Rosa rugosa**Rosa* sp.**PIIRAGMIDIUM SUBCORTICINUM***Rosa arkansana**Rosa macounii**Rosa* sp.**PHYLIACTINIA CORYLEA***Celastrus scandens**Fraxinus pennsylvanica* var. *lanceolata***PHYLLOSTICTA AMPELOPSIDIS***Parthenocissus quinquefolia***PHYLLOSTICTA ARGYREA***Elaeagnus angustifolia***PHYLLOSTICTA CELTIDIS***Celtis occidentalis**Celtis* sp.**PHYLLOSTICTA EUONYMI***Euonymus atropurpureus***PHYLLOSTICTA FERAX***Lupinus argenteus***PHYLLOSTICTA FRAXINICOLA***Fraxinus pennsylvanica* var. *lanceolata***PHYLLOSTICTA LIVIDA***Quercus macrocarpa***PHYLLOSTICTA MINIMA***Acer rubrum***PHYLLOSTICTA NEGUNDINIS***Acer negundo***PHYLLOSTICTA VITICOLA***Vitis vinifera* (hybrid)**PHYLLOSTICTA SP.***Fraxinus* sp.*Ulmus pumila***PHYTOPHTHORA CACTORUM***Melilotus officinalis**Paeonia officinalis**Syringa vulgaris***PHYTOPHTHORA INFESTANS***Lycopersicon esculentum**Solanum tuberosum*

PIGGOTIA FRAXINI
Fraxinus pennsylvanica var. *lanceolata*

PILEOLARIA TOXICODENDRI
Rhus radicans

PLASMOPARA HALSTEDII
Callthamus tinctorius
Helianthus annuus
Silphium perfoliatum

PLASMOPARA VITICOLA
Vitis califera
Vitis sp.

PLEONECTRIA BEROLINENSIS
Ribes floridum

PLEUROTUS OSTREATUS
Ulmus americana
Salix sp.

PLEUROTUS ULMARIUS
Ulmus americana
Salix sp.

PODOSPHAERA OXYACANTHAE
Prunus avium
Prunus besseyi
Prunus cerasus
Prunus virginiana var. *melanocarpa*
Prunus sp.

PSEUDOPEZIZA JONESII
Medicago sativa

PSEUDOPEZIZA MEDICAGINIS
Medicago sativa

PSEUDOPEZIZA TRIFOLII
Trifolium pratense

PSEUDOPLEA BRIOSIANA
Medicago sativa

PUCCINIA AMBIGUA
Galium aparine

PUCCINIA ANDROPOGONIS VAR.
MICROPUNCTA
Castilleja sp.

PUCCINIA ANDROPOGONIS VAR.
PENTSTEMONIS
Penstemon albidus
Penstemon gracilis
Penstemon grandiflorus

PUCCINIA ANGUSTATA VAR.
TYPICA
Mentha spicata
Scirpus atrovirens

PUCCINIA ANTIRRHINI
Antirrhinum majus

PUCCINIA ASPARAGI
Allium cepa
Asparagus officinalis

PUCCINIA ASTERIS
Aster simplex
Aster sp.

PUCCINIA BARTHOLOMAEI
Asclepias speciosa

Asclepias syriaca
Asclepias verticillata

PUCCINIA CALTHAE
Caltha palustris

PUCCINIA CARICIS VAR.
GROSSULARIATA
Ribes americanum
Ribes floridum
Ribes sp.

PUCCINIA CARICIS VAR.
SHEPHERDIAE
Shepherdia argentea
Shepherdia canadensis

PUCCINIA CARICIS VAR. **UTRICATA**
Carex altherodes
Carex trichocarpa

PUCCINIA CARTHAMI
Carthamus tinctorius

PUCCINIA CAULICOLA
Salvia reflexa

PUCCINIA CIRSII
Cirsium latissimum
Cirsium undulatum

PUCCINIA CONVOLVULI
Convolvulus arvensis

PUCCINIA CORONATA
Rhamnus cathartica
Rhamnus davuricus

PUCCINIA DELPHINII
Delphinium bicolor

PUCCINIA DIFFORMIS
Artemisia canna
Artemisia glauca
Artemisia ludoviciana
Artemisia pabularis
Artemisia palustris
Artemisia sp.
Galium aparine

PUCCINIA EATONIAE VAR.
RANUNCULI
Ranunculus abortivus

PUCCINIA EXTENSICOLA VAR.
ASTERIS
Aster sp.
Boltonia asteroides

PUCCINIA EXTENSICOLA VAR.
ERIGERONTIS
Erigeron ramosus

PUCCINIA EXTENSICOLA VAR.
HIERACIATA
Lactuca canadensis
Lactuca puchella
Lactuca sativa

PUCCINIA GENTIANAE
Gentiana affinis
Gentiana andrewsii
Gentiana parryi
Gentiana puberula

PUCCINIA GIGANTISPORA
Anemone cylindrica
PUCCINIA GRAMINIS
Berberis vulgaris
PUCCINIA GRANULISPORA
Allium cernuum
PUCCINIA HELIANTHI
Helianthus annuus
Helianthus giganteus
Helianthus grosseserratus
Helianthus maximiliani
Helianthus rigidus
Helianthus subrhomboides
Helianthus tuberosus
Helianthus sp.
PUCCINIA HEUCHERAE
Heuchera hispida
PUCCINIA HIERACII
Hieracium canadense
Hieracium umbellatum
Taraxacum officinale
PUCCINIA HYDROPHYLLI
Hydrophyllum virginianum
PUCCINIA INTERMIXTA
Iva axillaris
PUCCINIA IRIDIS
Iris missouriensis
PUCCINIA JONESII
Muscineon divaricatum
PUCCINIA JONESII VAR. TYPICA
Lomatium foeniculaceum
PUCCINIA KUHNIAE
Kuhnia glutinosa
PUCCINIA MENTHAE
Mentha arvensis
Mentha canadensis
Monarda fistulosa var. *menthaefolia*
PUCCINIA OBTECTA
Scirpus americanus
Scirpus lacustris
PUCCINIA OBTEGENS
Cirsium arvense
PUCCINIA PENTSTEMONIS
Penstemon grandiflorus
PUCCINIA PHRAGMITES
Rhenn rhaponticum
Rumex venosus
PUCCINIA PIMPINELLAE
Osmorhiza longistylis
PUCCINIA PLUMBARIA
Phlox pilosa
PUCCINIA POLYGONI-AMPHIBII
VAR. CONVOLVULI
Polygonum convolvulus
Polygonum sp.
PUCCINIA POLYGONI-AMPHIBII
Polygonum coccineum
Polygonum hartwrightii

PUCCINIA PUNCTATA
Galium triflorum
PUCCINIA RUBIGO-VERA
Anemone canadensis
Anemone cylindrica
Elisia nyctelea
Thalictrum dasycarpum
PUCCINIA RUBIGO-VERA VAR. AGROPYRINA
Clennatis ligusticifolia
PUCCINIA RUBIGO-VERA VAR. APOCRYPTA
Lithospermum incisum
PUCCINIA RUBIGO-VERA VAR. IMPATIENTIS
Impatiens biflora
Impatiens pallida
PUCCINIA SESSILIS
Polygonatum commutatum
Smilacina stellata
PUCCINIA SEYMOURIANA
Apocynum sibiricum
Asclepias speciosa
PUCCINIA SHERARDIANA
Malvastrum coccineum
Sphaeralcea coccinea
PUCCINIA SILPHII
Silphium perfoliatum
PUCCINIA SORGI
Oxalis corniculata
PUCCINIA SPARGANIOIDES
Fraxinus pennsylvanica var. *lanceolata*
PUCCINIA STIPAE
Aster sp.
Lygodesmia juncea
PUCCINIA SUBCIRCINATA
Senecio aureus
PUCCINIA TUMIDIPES
Lycium chinense
Lycium helimifolium
PUCCINIA UNIVERSALIS
Carex filifolia
Carex obtusata
PUCCINIA VARIABLES
Taraxacum officinale
PUCCINIA VEGANS VAR. EPILOBII-TETRAGONI
Epilobium paniculatum
PUCCINIA VERNONIAE
Vernonia fasciculata
PUCCINIA VIOLAE
Viola canadensis
Viola cucullata
Viola sp.
PUCCINIA XANTHII
Ambrosia psilostachya
Ambrosia trifida
Xanthium canadense

Xanthium comarum
Xanthium oviforme
Xanthium speciosum
PUCCINIASTRUM PUSTULATUM
Epilobium adenocaulon
Epilobium sp.
PUCCINIASTRUM PYROLAE
Pyrola rotundifolia
PYTHIUM DEBARYANUM
Medicago sativa
PYTHIUM ULTIMUM
Medicago sativa
RAMULARIA ARVENSIS
Potentilla norvegica
RAMULARIA HERACLEI
Heracleum lanatum
RAMULARIA MACROSPORA
Rumex patientia
RAMULARIA MENTHICOLA
Mentha arvensis
Mentha sp.
RAMULARIA MITELLAE VAR. HEUCHERAE
Heuchera hispida
RAMULARIA TULASNEI
Frigaria ovalis
RAMULARIA URTICAE
Urtica dioica
RAMULARIA SP.
Epilobium angustifolium
RHYTISMA ACERINUM
Acer saccharinum
RHYTISMA SALICINUM
Salix amygdaloides
Salix cordata
Salix sp.
ROSELLINIA SURCOMPRESSA
Populus deltoides
SCHIZOPHYLLUM COMMUNE
Malus sylvestris
SEPTORIA API
Apium graveolens
SEPTORIA CANNABIS
Cannabis sativa
SEPTORIA CARNEA
Carex trichocarpa
SEPTORIA CARTHAMI
Carthamus tinctorius
SEPTORIA CHRYSANTHEMI
Chrysanthemum morifolium
SEPTORIA CORNICOLA
Cornus stolonifera
SEPTORIA DELPHINELLA
Delphinium ajacis
Delphinium bicolor
SEPTORIA ERIGERONTIS
Erigeron ramosus

SEPTORIA GLYCINES
Soja max
SEPTORIA HUMULI
Humulus lupulus
SEPTORIA LEPTOSTACHYAE
Phryma leptostachya
SEPTORIA LYCOPERSICI
Lycopersicon esculentum
SEPTORIA LYSIMACHIAE
Lysimachia ciliata
SEPTORIA MARGARITACEAE
Anaphalis margaritacea
SEPTORIA MENTHICOLA
Mentha arvensis
SEPTORIA MENTZELIAE
Mentzelia decapetala
SEPTORIA MUSIVA
Populus deltoides
SEPTORIA PACHYSPORA
Zanthoxylum americanum
SEPTORIA PARIETARIAE
Parietaria pensylvanica
SEPTORIA PENTSTEMONICOLA
Pentstemon gracilis
SEPTORIA PISI
Pisum sativum
SEPTORIA POLYGONORUM
Polygonum aviculare
SEPTORIA RIBIS
Ribes sp.
SEPTORIA RUBI
Rubus occidentalis
Rubus strigosus
SEPTORIA RUMICIS
Rumex mexicanus
SEPTORIA SOLIDAGNICOLA
Solidago canadensis
SEPTORIA TRADESCANTIAE
Tradescantia virginiana
SEPTORIA VERBENAE
Verbena hastata
SPIAEROPSIS ALBESCENS
Acer negundo
SPIAEROPSIS SYRINGAE
Syringa vulgaris
SPIAEROPSIS ULMAE
Ulmus sp.
SPIAEROTHECA HUMULI
Bidens frondosa
Hydrophyllum virginicum
Taraxacum officinale
SPIAEROTHECA PANNOSA
Rosa arkansana
STAGONOSPORA APOCYNI
Apocynum cannabinum
STAGONOSPORA MELILOTI
Melilotus officinalis

STEMPHYLIUM SARCINAEFORME
Trifolium pratense
SYNCHYTRIUM AECIDIOIDES
Amphicarpa monoica
SYNCHYTRIUM FULGENS
Oenothera biennis
TAPHIRINA COMMUNIS
Prunus americana
Prunus besseyi
TAPIRINA CONFUSA
Prunus virginiana var. *melanocarpa*
TEICHOSPORA UMBONATA
Symphoricarpos occidentalis
THLEPHORA TERRESTRIS
Pinus ponderosa
TRANZSCHELIA FUSCA
Anemone patens
TRANZSCHELIA PRUNI-SPINOSAE
Prunus besseyi
Thalictrum purpurascens
TUBERCULARIA VULGARIS
Robina pseudouacacia
TUBERCULARIA SP.
Populus deltoides
UNCINULA NECATOR
Vitis vinifera
Vitis sp.
UNCINULA SALICIS
Populus tremuloides
Salix cordata
Salix lutea
UROCYSTIS ANEMONES
Anemone patens
UROCYSTIS COLCHICI
Allium cepa
UROMYCES ACUMINATUS VAR.
POLEMONII
Collomia linearis
UROMYCES ACUMINATUS VAR.
STEIRONEMATIS
Steironema ciliatum
UROMYCES AMOENUS
Anaphalis margaritacea
UROMYCES BETAE
Beta vulgaris
UROMYCES CALADII
Arisaema triphyllum
UROMYCES CARYOPHYLLINUS
Dianthus caryophyllus
UROMYCES COLORADENSIS VAR.
CAMPESTER
Vicia americana
UROMYCES DICTYOSPERMA
Euphorbia dictyosperma
UROMYCES FABAE
Lathyrus ochroleucus

Lathyrus sylvestris
Vicia americana
UROMYCES GLYCYRRHIZAE
Glycyrrhiza lepidota
UROMYCES PHASEOLI
Phaseolus vulgaris
UROMYCES PHASEOLI VAR.
STROPHOSTYLES
Strophostyles pauciflora
UROMYCES PHASEOLI VAR.
VIGNAE
Vigna sinensis
UROMYCES PLUMBARIUS
Carya coccinea
UROMYCES POLYGONI
Polygonum aviculare
Polygonum erectum
UROMYCES PROEMINENS
Euphorbia scrypyllifolia
UROMYCES PSORALEAE VAR.
ARGOPHYLLAE
Psoralea agrophylla
Psoralea cuspidata
Psoralea tenuiflora
UROMYCES PUNCTATUS
Astragalus canadensis
UROMYCES STRIATUS
Medicago sativa
UROMYCES TRIFOLII VAR.
FALLENS
Trifolium hybridum
Trifolium incarnatum
Trifolium medium
Trifolium pratense
UROMYCES ZYGADENI
Zizadenus gramineus
UROPHLYCTIS PULPOSA
Chenopodium rubrum
UROPYXIS AMORPHAE
Amorpha canescens
Amorpha fruticosa
Amorpha nana
UROPYXIS PETALOSTEMONIS
Petalostemon compactum
USTILAGO OXALIDIS
Oxalis stricta
VALSA LEUCOSTOMA
Prunus americana
VALSA TRANSIUCENS
Salix fragilis
VENTURIA INAEQUALIS
Malus sylvestris
Malus sp.
VERMICULARIA POLYGONI-
VIRGINICI
Rheum rhaponticum

COMMON NAMES

Hosts are indexed here according to their most frequently used common name. Some hosts, however, have no common name.

Alfalfa	10	Chicory	6	Golden-alexander	18
Alumroot	9	Chrysanthemum	5	Goldenrod	16
Apple	10	Cinquefoil	13	giant	16
Anemone		bush	13	missouri	16
candle	3	Clover		Gooseberry	14
meadow	3	alsike	17	Goosefoot	
pasqueflower	3	crimson	17	maple-leaf	5
thimbleweed	4	prairie	11	red	5
Anisroot	11	yellow sweet	11	Gourd	6
Ash		red	17	Grape	
green	8	zig-zag	17	cultivated	18
mountain	16	Cocklebur	18	oregon	10
prickly	18	common	18	wild	18
Asparagus	4	spiny	18	Gumweed	8
Aster	4	Columbine	4	Hackberry	5
tall white	4	Coralberry	16	Hawkweed	9
Barberry	4	Cotoneaster	6	Hawthorne	6
Bean		Cottonwood	13	Hazelnut	6
cultivated	12	Crowsfoot	14	Hemp	5
wild	16	Cucumber	6	Heggsnut	3
Beardtongue	11	Currant		Honeysuckle	10
white	11	american black	14	Hops	9
Beadstraw	8	wax	14	Horehound	10
Beet	5	Dahlia	6	Harscradish	4
Beggarticks	5	Dandelion	16	Horsetail	7
Bergamot	11	Dill	4	Indian-cup	16
Bindweed	12	Dock		Indian hemp	4
small	6	spinach-leaved	15	Indian paintbrush	5
Birch	5	willow-leaved	15	Indigobush	3
Biscuitroot	10	winged	15	Ironweed	17
Bittersweet	5	yellow	15	Ivy	
Blazing-star	11	Dogwood	6	poison	14
Blue-eyed-mary	6	Dogbane	4	Jack-in-the-pulpit	4
Blueflag	9	Dutchmans-breeches	7	Jewelweed	9
Borage	5	Eleanore	9	Jimson-weed	6
Buckthorn	14	Eln		Johns-cabbage	9
Buffaloberry		american	17	Juniper	
russet	15	siberian	17	creeping	9
silver	15	slippery	17	rocky mountain	9
Bulrush	15	Evening-primrose	11	Kingcup	5
Burning-bush	7	False-boneset	9	Knotweed	
Camas	18	Fireweed	7	erect	12
Celery	4	Flax		prostrate	12
Cherry		common	10	Larkspur	6
common choke	13	prairie	9	cultivated	6
sour	13	wild	10	rocket	6
sweet	13	Fleabane	7	Leadplant	3
western choke	13	whiteweed	7	Lettuce	
western sand	13	Foxglove	7	canada wild	9
Carnation	6	Fringed loosestrife	16	chicory	9
Carrot	6	Garlic	3	cultivated	9
Chickweed	5	Centian	8	Lespedeza	9
mouse-eared	5	Cladious	8	Licorice	8

Lilac	16	Poverty weed	9	Spurge	
Loosestrife	10	Prairie-coneflower	14	large	7
Lopseed	12	Prairie dogbane	4	snow-on-the-mountain	7
Lupine	10	Puccoon	10	thyme leaved	7
Mallow	10	Pumpkin	6	Squaw-weed	15
red false	10	Purslane	13	Stinging-nettle	17
scarlet	16	Quaking aspen	13	Strawberry	
Maple		Ragweed		bush	7
boxelder	3	common	3	cultivated	7
red	3	giant	3	Sunflower	
soft	3	western	3	cultivated	8
Marshelder	9	Raspberry		jerusalem-artichoke	8
Matrimony-vine	10	black	14	maximilian's	8
Maybop	5	red	15	stiff	8
Meadow rue	17	Redcedar	9	Sweet pea	9
Milkweed		Reed		Tansy	16
common	4	giant	15	Tomato	10
showy	4	Rhubarb	14	Thistle	6
whorled	4	Rose		canada	6
Mimosa	6	cultivated	14	Toadflax	6
Mint		wild	14	Touch-me-not	9
field	11	Rubber plant	7	Tumbleweed	3
spear-	11	Rush		Verbena	
Mulberry	11	chairmakers	15	blue	17
Onion		Russian-olive	7	hoary	17
cultivated	3	Safflower	5	white	17
wild	3	Sage	15	Vetch	17
Parsnip		wood	15	milk	4
cow	9	Sagebrush	4	Violet	18
Pea		lonisana	4	blue	17
black-eyed	17	Salsify	17	canada	17
garden	12	Scurfpea	13	Virginia-creeper	11
everlasting	9	Sedge	5	Virgins-bower	6
Pearleverlasting	3	threadleaf	5	western	6
Peavine	9	Serviceberry	3	Walnut	9
Pellitory	11	western	3	Watermelon	6
Peony	11	Shinleaf	14	Waterweed	7
Peppergrass	9	Skeleton-weed	10	Whitlowgrass	7
Phlox	12	Sleepy catchfly	15	Willow	
Pigweed	3	Smartweed	12	crack	15
Pine		Snapdragon	4	heart-leaf	15
western yellow	12	Soapweed	18	peach-leaf	15
rocky mountain yellow	12	Solomons-seal	12	pussy	15
Plantree	12	false	16	yellow	15
Plantain	12	Soybean	8	Willow-herb	7
Plum	13	Spiderwort	17	Wolfberry	16
Poison-ivy	14	Spinach	16	Woodsorrel	11
Poplar		Spring-cleavers	8	creeping	11
bolleana	12	Spruce		Wormwood	4
lombardy	13	blue	12	biennial	4
white	12	white	12	silky	4
Potato	16			Woundwort	16
				Yellow parilla	11