

II. ADDITIONS TO THE LIST OF PLANT DISEASES OF ECONOMIC IMPORTANCE IN INDIANA.¹

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The following list of plant diseases represents collections and observations made by the writer and other members of the staff of the Botanical Department of the Agricultural Experiment Station, mainly during the past season. Specimens of the diseases listed have been deposited in the herbarium of the Department of Botany, Purdue University Agricultural Experiment Station. Unless otherwise stated the collections were made by the writer.

Barley, (*Hordeum* sp.).

Leaf Spot. *Helminthosporium sativum* P. K. B. Tippecanoe, June, 1917 (H. S. Jackson). *Helminthosporium teres* Sacc. Tippecanoe, June, 1917.

Bean, (*Phaseolus vulgaris* L.)

Leaf Spot. *Phyllosticta phaseolina* Sacc. Wells, August, 1917 (H. V. Knight). This disease has been reported previously on cow-peas.²

Mosaic. Cause not known, Allen, July, 1917; Tippecanoe, August, 1917. This disease was very common during the past season.

Bean, Lima (*Phaseolus lunatus* var. *macrocarpus* Benth.).

Mosaic. Cause not known. Marshall, August, 1916; Tippecanoe, July, 1917.

Blue Grass (*Poa pratensis* L.).

Ergot, *Claviceps microcephala* (Wal.) Tul. Tippecanoe, July, 1917. This disease has been reported previously on orchard grass and timothy.³

¹ This list is supplementary to "A List of Plant Diseases of Economic Importance in Indiana," by F. J. Pipal, Ind. Acad. Sci. Proc. 1915: 379-413, and to "Additions to the List of Plant Diseases of Economic Importance in Indiana," by Geo. A. Osner, Ind. Acad. Sci. Proc. 1916: 327-332.

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² Osner, Geo. A. Ind. Acad. Sci. Proc. 1916: 328.

³ Osner, Geo. A. Ind. Acad. Sci. Proc. 1916.

Leaf Smut. *Ustilago striaeformis* (West.) Niessl. Marshall, June, 1916; Tippecanoe, July, 1917. (See also under red top.) This disease has been reported previously on timothy.⁴

Calendula (*Calendula officinalis* L.).

Root Rot. *Corticium rugum* B. & C. Tippecanoe, July, 1917 (C. C. Rees). This disease has been reported previously on carnation, celery, potato and bean.⁵

Clover, Red (*Trifolium pratense* L.).

Leaf Spot. *Cercospora zebrina* Pass. Tippecanoe, July, 1917.

Cucumber (*Cucumis sativus* L.).

Leaf Spot. *Stemphylium Cucurbitacearum* Osner. Marshall, September, 1915; St. Joseph, September, 1915 (W. W. Gilbert); Marshall, St. Joseph, Starke, September, 1916.

June Berry (*Amelanchier Botryopium* D. C.).

Leaf Spot. *Fabrea maculata* (Lev.) Atk. Jasper, July, 1917 (Chas. Chupp). This disease has been reported previously on quince and pear.⁶

Mignonette (*Reseda* sp.).

Leaf Spot. *Cercospora Resedae* Fckl. Tippecanoe, August, 1907 (H. B. Dorner).

Pansy (*Viola tricolor* L.).

Leaf Spot. *Asochyta Violae* Sacc. Tippecanoe, July, 1917 (F. J. Pipal).

Potato (*Solanum tuberosum* L.).

Leaf Roll. Cause not known. Laporte, Tippecanoe, July, 1917.

Mosaic. Cause not known. Tippecanoe, September, 1917.

Silver Scurf. *Spondylocladium atrovirens* Harz. Tippecanoe, August, 1917; Laporte, Floyd, December, 1917.

Wilt. *Fusarium oxysporum* Schl. Tippecanoe, Lake, August, 1917.

Raspberry (*Rubus* sp.).

Yellows. Cause not known. Laporte, August, 1917.

Red Top (*Agrostis alba* var. *vulgaris* (With.) Thurb.).

Leaf Smut. *Ustilago striaeformis* (West.) Niessl. Marshall, June, 1916; Clay, June, 1917. (See also under blue grass.)

⁴ Underwood, L. M. Ind. Acad. Sci. Proc. 1893: 48. Pipal, F. J. Ibid. 1915: 394.

⁵ Osner, Geo. A. Ind. Acad. Sci. Proc. 1916: 328, 331. Pipal, F. J. Ibid. 1915: 383.

⁶ Pipal, F. J. Ind. Acad. Sci. Proc. 1915: 391, 392.

Rye (*Secale cereale* L.).

Anthraxnose. *Colletotrichum cereale* Manns. Tippecanoe, June, 1917; Monroe, Allen, July, 1917 (F. J. Pipal). Severe losses were caused by this disease in several fields during the past season. This disease has been reported previously on blue grass, timothy and wheat.⁷

Stem Smut. *Urocystis occulta* (Wal.) Rab. Marshall, June, 1916; Tippecanoe, Putnam, June, 1917.

Loose Smut. *Ustilago* sp. Tippecanoe, Putnam, June, 1917; Jasper, July, 1917 (Chas. Chupp). This disease was rather rare in the three fields in which it was discovered. The fungus shows close resemblance to *Ustilago Tritici* (Pers.) Jens., but in the absence of cross inoculations it is retained as *Ustilago* sp.

Sunflower (*Helianthus* sp.).

Leaf Spot. *Cercospora Helianthi* E. & E. Tippecanoe, July, 1907.

Turnip (*Brassica Rapa* L.).

Albugo candida (Pers.) Rouss. Tippecanoe, October, 1915 (G. N. Hoffer). This disease has been reported previously on a number of other hosts.⁸

Wheat (*Triticum vulgare* L.).

Ergot, *Claviceps purpurea* (Fr.) Tul. Tippecanoe, Elkhart, July, 1917; Jasper, July, 1917 (Chas. Chupp). This disease has been reported previously on rye.⁹

Stinking Smut, *Tilletia Tritici* (Bjerk.) Wint. This species was reported by Pipal in 1915.¹⁰ Further examination shows that the specimen on which the report was based was mislabeled, the species really being *Ustilago Tritici* (Pers.) Jens.

⁷ Pipal, F. J. Ind. Acad. Sci. Proc. 1915: 384, 391, 395.

⁸ Underwood, L. M. Ind. Acad. Sci. Proc. 1893: 31; 1894: 153.

Wilson, G. W. Ibid. 1907: 81.

Van Hook, J. M. Ibid. 1910: 206.

Pipal, F. J. Ibid. 1915: 392.

⁹ Underwood, L. M. Ind. Acad. Sci. Proc. 1893: 31.

Wilson, G. W. Ibid. 1894: 157.

Pipal, F. J. Ibid. 1915: 393.

¹⁰ Pipal, F. J. Ind. Acad. Sci. Proc. 1915: 396.

