

as growing in sandy land near Ontario, LaGrange County. Specimens have been collected by C. C. Deam.

Wild Corn. (*Andropogon sorghum*, var. *drummondii* Hack.) A serious problem in corn fields on overflow land along the Ohio and Wabash Rivers in the southwestern part of the state, particularly in Vanderburg and Posey Counties.

CONCLUSION.

The Purdue Agricultural Experiment Station desires to keep in touch with new plants in Indiana that are apt to prove troublesome. Specimens of strange plants that exhibit weedy tendencies will be welcomed. It is thought that a great deal of trouble and expense can be saved to the farmers of the state if prompt action is taken as soon as new weeds are noted.

WILD CORN, A SERIOUS WEED IN INDIANA.¹

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Wild corn is a member of the sorghum tribe that causes heavy losses on overflow land along the Ohio and Wabash Rivers in Posey and Vanderburgh counties, Indiana, and along the Ohio River in Henderson County, Kentucky.

The problem presented is very unusual. The seeds, which are produced in large numbers, are carried by the flood water. When the water subsides, the seeds are left on the soil, ready to germinate with the corn crop. The young wild corn plants resemble corn seedlings so closely that recognition is difficult and they become large plants before they can be identified. The damage done is so heavy that in some cases infested corn crops have been left unharvested. The seriousness of the situation is indicated by the fact that a request for assistance in controlling this weed was recently received from forty-six farmers residing in Kentucky and Indiana. They represented a total of 21,186 acres of corn land 25.9 per cent or 5,487 acres of which was damaged by wild corn during 1921. During a weed survey recently conducted by the Agricultural Extension Department of Purdue University, wild corn was reported as the second worst weed in Posey County by County Agent W. E. Shrode.

Wild corn has been identified as *Andropogon sorghum drummondii* Hack, a wild variety of common sorghum. The plant is said to have been introduced from Africa by the early slave traders. It spread in the southern coastal states, particularly in Louisiana and Mississippi, but it was rarely found further north. In its southern range the plant was commonly called chicken corn. Although classed as a weed, it was sometimes used as a source of wild hay and for fall pasture. The seeds were also gathered occasionally for chicken feed. With the introduction

¹ Contribution from the Botanical Department (Extension Division) of the Purdue University Agricultural Experiment Station.

of cultivated sorghum and the consequent spread of the sorghum midge, wild corn almost disappeared throughout its range, due to the ravages of the insect. The existence of the plant in large areas along the Ohio river in Kentucky was unsuspected until announced by the writer a year ago.² The occurrence of wild corn as a serious weed problem along the Ohio and Wabash rivers in Indiana is an important economic problem. That the species is persisting is probably explained by the fact that Indiana is so far north as to be out of the range of the sorghum midge. Although a native of a warmer climate, the plant seems to be thoroughly acclimated in its northern home.

Controlling wild corn is far from an easy job. In Posey County the only successful control method practiced is thorough cultivation, including regular hoeing as soon as the weed is large enough to be recognized. One difficulty is that chance seedlings spring up throughout the growing season in spite of the most diligent hoeing. Some farmers reduce the damage considerably by delaying planting in the spring until after most of the wild corn seeds have sprouted. The young plants are then destroyed by plowing and preparing the seed bed for corn. There seems little hope for controlling the weed by crop rotation since corn is practically the only crop the farmers will grow on the overflow land.

A solution that suggests itself is the introduction and acclimatization of the sorghum midge. If this could be done, the wild corn would probably soon disappear since the midge prevents the production of viable seeds and wild corn is an annual plant, depending entirely upon seeds to reproduce. The introduction and acclimatization of the sorghum midge is a dangerous experiment, however, since the insect might attack the sorghum crop, which is worth about \$1,000,000 annually in Indiana.

Surface cultivation in the fall in order to induce the germination of the seeds of wild corn seems to offer little hope as a remedy since most of the infested land is subject to overflow during late spring and early fall, and seeds are scattered over the fields during each overflow.

Since wild corn is an annual, it is possible that if all the plants were kept from seeding throughout a single season, the pest would disappear, providing none of the seeds remained viable in the soil during the second winter. Large scale co-operation of this type among farmers is theoretically possible but practically almost impossible. Until further knowledge is secured, late planting and thorough cultivation will have to be depended on as the best control measures available.

In addition to the economic phase of the subject, wild corn presents a problem of considerable interest to the plant ecologist.

²Chicken Corn, an Unusual Weed, Found Growing in River Lowlands in Kentucky. Weekly News Letter, U.S.D.A. June 29, 1921.