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Wild Proso Millet

Identification and Control

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Wild proso millet (*Panicum miliaceum* L.) may become a serious weed problem in southern Idaho row crops, especially sweet corn. Presently, it is known to occur only in isolated areas in Ada, Canyon, Gooding and Twin Falls counties. However, it has the potential to be a problem for irrigated field crop production throughout southern Idaho.

Cultivated proso millet is grown in the north-central states as a feed grain and birdseed crop. It is grown in other countries as a human food. Wild proso millet apparently developed its weedy growth habit from some of the cultivated varieties.

Wild proso millet is in the Paniceae (millet) tribe of the grass family and is closely related to corn and sorghum. It is erect, grows 2 to 6 feet tall but may have some prostrate stems. The leaf blades vary from smooth to hairy and are $\frac{1}{2}$ to $\frac{3}{4}$ inch wide. The sheaths around the stem are covered with long, spreading hairs. Each stem terminates in a spreading seedhead 6 to 12 inches wide that may not be fully extended from the sheath. The spikelets



Fig. 1. Note the different size spikelets of witchgrass on left and wild proso millet on the right.

are $\frac{1}{5}$ inch long, ovate, pointed at the tip and strongly nerved with 7 to 9 nerves. The seed is smooth, shiny and olive-brown to brownish-black. It is about $\frac{1}{10}$ inch long and has definite nerves on the surface.

Witchgrass (*Panicum capillare*) is a shorter plant (generally less than 3 feet tall) and has smaller spikelets and seeds than wild proso millet (Fig. 1). If wild proso millet seedlings are carefully removed from the soil, the seed will remain attached to the root, a characteristic that can be used to distinguish wild proso millet from witchgrass (Fig. 2).

Wild proso millet is a vigorous competitor in row crops and a prolific seed producer. The mature seed shatters readily and is easily spread from field to field. After infested fields have been harvested, equipment should be cleaned to prevent spread of wild proso millet seed to other fields. Movement of seed on harvest equipment has been largely responsible for the rapid spread of wild proso millet in the north-central states.

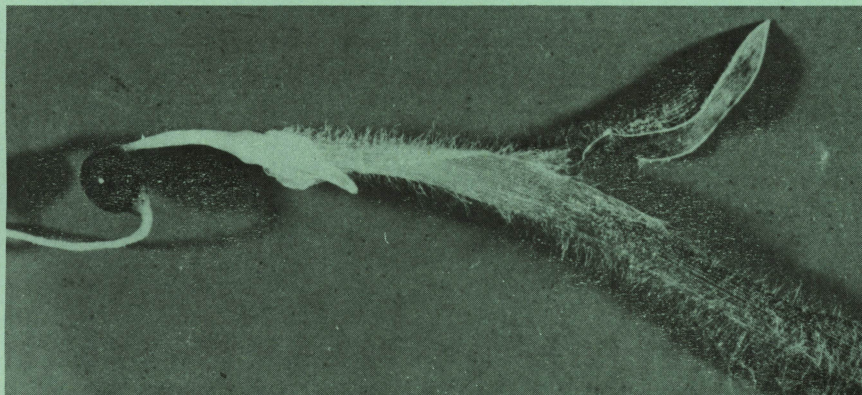


Fig. 2. Wild proso millet seedling showing seed attached to root.

Wild proso millet seed may be transported by irrigation water in Idaho. Wild proso millet can seriously infest a field before the grower recognizes the problem. Its spread is indicative of this weed's potential. From a few scattered infestations in 1970, wild proso millet now occurs on more than 1,000,000 acres in Wisconsin.

Wild proso millet is difficult to control in corn because it is tolerant to most of the herbicides registered for corn. An early postemergence treatment of pendimethalin (Prowl) plus cyanazine (Bladex) has been shown to have good activity on wild proso millet in the north-central states. However, pendimethalin can only be applied to soils with 1.5 percent or more organic matter. The best time to apply this treatment is when corn is in the spike stage, but it may be used up to the 2-leaf stage. This treatment should not be used if cyanazine was a component for the preplant incorporated treatment.

Another treatment that has been fairly successful in Wisconsin is a directed postemergence treatment of ametryn (Evik). Severe crop injury may occur if ametryn penetrates the whorl of the corn plant. Check the label before using any of these herbicides. Several herbicides are labelled for use on field corn but not on sweet corn. Some lines may be particularly sensitive to some herbicides, so growers should consult a seed company fieldman regarding the tolerance of seed production inbred lines.

Satisfactory control of wild proso millet may be achieved by rotating an infested field out of corn into another crop that is more competitive with wild proso millet or for which effective grass herbicides are registered. In Wisconsin, alfalfa has been planted in fields infested with wild proso millet. Cutting the alfalfa before the wild proso millet heads out will prevent further seed production and will deplete the reserve of wild proso millet seed in the soil.

Since wild proso millet seed remains viable for a long period of time in the soil, affected fields should remain in alfalfa for several years. Dormant treatments are available that have good activity on other

grassy weeds and may have activity on wild proso millet. Early-seeded small grains have been shown to be very competitive with wild proso millet if a vigorous, uniform stand is established before wild proso millet seeds germinate. An effort should be made to control the weed in field borders and in areas within the field where the stand is poor. Wild proso millet will develop rapidly after grain harvest if moisture is available. Also, tillage or nonselective, foliar-applied herbicides can be used to control wild proso millet that emerges after harvest.

Wild proso millet will become a very serious weed problem if it is allowed to spread throughout the irrigated crop production region of southern Idaho. Early identification and control of wild proso millet may prevent its spread to other areas. The location of plants that fit the description of wild proso millet should be reported to your local Extension county agent. Information from growers, fieldmen and county agents about the distribution of wild proso millet will be greatly appreciated.

Trade Names

Trade names are used in this publication to simplify the information presented. Such use does not imply endorsement of any product nor criticism of similar products that are not mentioned.

Chemical Recommendations

The chemical recommendations are based on the best information available at the time of printing. Before using any pesticide, read the instructions on the label. Follow all precautions and restrictions for safe product use.

The grower is responsible for residues on his crops. He also is responsible for drift from his property to adjacent properties or crops.

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