yields, although rather late in maturing. The yields frequently exceed 150 bushels per acre of good quality grain. Very late winter varieties such as Winter Turf and Pioneer may not mature fully, but still produce a fair yield.

However during the same period Algerian oats have shown poor performance when sown in the spring at the Aberdeen Substation. They are extremely late, produce comparatively few heads and poor grain. The straw is decidedly weak, usually resulting in early and severe lodging.

In 1956 Dubois and Algerian oats were seeded in the same area at Aberdeen at approximately the same time. These two were the only winter oats that reacted in the manner described for Algerian. Other varieties developed normally and made creditable yields of good quality grain.

Apparently Dubois carries a recombination of genes derived from the Algerian ancestors of both of its parents and thus reacts like Algerian when spring sown. Unfortunately this character is also transmitted to many segregates of Dubois crosses.

It is inadvisable to sow Dubois oats in the spring, although it is a most promising, hardy, productive, high-quality, stiff-strawed winter oat when fall sown.—FRANKLIN A. COFFMAN, Agronomist, Crops Research Division, A.R.S., U.S.D.A. Received February 1, 1957.

WEEDS CONTAINING NITRATES

MANY Wisconsin farmers have sustained economic losses from abortion when cattle have grazed unimproved, lowland pastures. Abortions in both beef and dairy cattle have occurred annually on such pastures during the past 50 years. Over 400 abortions were reported to the Wisconsin, Agricultural Agent of Portage County during recent years. Abortions from unknown causes have been reported from about 42 Wisconsin counties during the past 50 years. One hundred and five such abortions were reported by farmers in 10 counties during 1956. The number of abortions per herd have ranged from one to all of the pregnant heifers on the farm. Many abortions undoubtedly were caused by brucellosis and were not reported. Abortions were declared modified brucellosis-free, as brucellosis-free certification was not available for such farms in 1956. Abortions from unknown causes have occurred in other similar lowland areas that have been improved by draining, cropping and reseeding.

It has been established by the Wisconsin, Diagnostic Laboratory and by qualified local veterinarians that these abortions were not caused by any of the known reproductive diseases such as brucellosis, vibriosis, etc.

Numerous theories for the cause of these abortions have been proposed by farmers, agronomists and other insects. Included are poisonous weeds, fungi on dead grass, stagnant water, mineral deficiencies and minerals.

Inspection of a large number of pastures revealed that weeds might be responsible. A survey was conducted on several farms during a search of poisonous plants. As many as 90 species of weedy grasses and woody perennials were found in these pastures. No one poisonous plant was generally present on all pastures where abortions occurred.

A grazing study was conducted during 1956 on improved lowland pasture having a known history of abortions and containing a large number of weeds.Abortions were reported in both beef and dairy cattle on the untreated areas. The results of this study indicated the close-clipping method practical if set percentage must be sacrificed.

It should be emphasized that low percentage seed set is the major cause of poor efficiency in oat crossing. Consequently, the oat breeder would not find this method practical if set percentage must be sacrificed. The close-clipping method was practical if set percentage must be sacrificed.

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