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CC79 Keep Bromegrass Seed Pure

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This circular has been prepared to assist in distinguishing the plants and seeds of the troublesome weeds, hairy chess and downy bromeagress from bromeagress. An alarming increase in the amount of seed of these weeds has been found in bromeagress seed harvested during the past few years and is now one of the major problems of the bromeagress seed industry of Nebraska.

Last year many farmers had fields of bromeagress harvested only to find after the time and expense of harvesting and threshing, the seed was so badly contaminated with hairy chess or downy bromeagress that it was not suitable for seeding purposes.

Over fourteen per cent of the bromeagress seed samples sent to the State Seed Laboratory for analysis in 1943, were found to be so badly contaminated with hairy chess or downy bromeagress that they were not suitable for seeding purposes, and another nineteen per cent of the seed samples were found to contain over five per cent of these weed seeds.

Seed of (1) hairy chess, (2) regular bromeagress, and (3) downy bromeagress

Bromeagress is sometimes called smooth brome, Bromus or awnless brome. The plants is a smooth leaved and smooth stemmed perennial, which spreads by underground rootstocks as well as by seed. The rootstocks develop about 2 months after the plant becomes established and the spread is rapid until a sod is formed. The flowering stems are 2 to 3 feet tall, stiffly erect with a wide branching loose head. The seeds are flat, rough and relatively free of beards or awns.

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Hairy Chess

Hairy chess is often called wild oats, cheat, or June grass. It is common throughout eastern and central Nebraska growing along roadsides, fence rows, in waste places and in bromegrass fields. It is an annual or winter annual, starting from seed in either the fall or early spring. It has hairy leaves and stems, a drooping head, and grows from 1 to 2 feet tall. The seeds are boat-shaped with the edges rolled inward, are light and chaffy, and have an awn or beard as long as the seed. Hairy chess is from 4 to 8 inches shorter than bromegrass and matures from 2 to 3 weeks earlier. A common closely related species, Japanese chess, has a larger chaffier seed than hairy chess with a pronounced bend or knee to the awn. For practical purposes, this species is included with hairy chess.

Downy Bromegrass

Downy bromegrass is frequently called wild oats, June grass or military grass. This weed is abundant in the western and central parts of the state, but less common in eastern Nebraska where the taller hairy chess is so prevalent. The plant is quite similar to hairy chess but grows only from 8 to 16 inches high. It has hairy leaves and stems and a spreading head. The plant matures about two weeks before hairy chess. It generally turns a dark red or purple color as it matures. The seed is long and slender, almost flat, red or purple in color, and has a straight beard or awn longer than the seed.

HOW TO AVOID WEED CONTAMINATED BROMEGRASS

Harvesting and Handling Seed

Every field to be harvested for bromegrass seed should be examined carefully for the short, drooping-headed, hairy plants of hairy chess and downy bromegrass. If these weeds are present in any appreciable amount, the field should not be harvested for seed. Scattered areas of weed infestation should be mowed before the bromegrass is harvested. The cutting bar of a combine can often be kept above the heads of hairy chess and downy bromegrass if it is carefully adjusted and controlled. A small combine with the rubber type beater does a very satisfactory job of recleaning chaff and stems from bromegrass seed. The presence of chaffy, long awned or barbed seeds in a bromegrass seed sample indicates seed of either hairy chess or downy bromegrass. No type of cleaner has yet been found that removes seed of hairy chess and downy bromegrass from bromegrass seed.

All bromegrass seed sold for seeding purposes by farmers or dealers is required by Nebraska Seed Law to be tested and labeled. A representative sample of two ounces of bromegrass seed should be taken for the purity and germination test which requires 14 days for completion. The Seed Laboratory, State Capitol, Lincoln, Nebraska tests up to five seed samples free of charge for each person. Upon request the Seed Laboratory will make a statement by return mail of approximate percentages of weed seeds found in a bromegrass seed sample.

Planting New Bromegrass Fields

Never plant bromegrass seed contaminated with hairy chess, if a crop of seed is to be harvested the first year. A planting of bromegrass seed containing 0.5 per cent or more of hairy chess, generally produces a first year seed crop containing 20 per cent or more of hairy chess. Bromegrass seed containing in excess of 10 per cent hairy chess usually is not suitable for seeding purposes, and should be destroyed by burning or some other means to prevent hairy chess from spreading.