AGRI SCIENCE

FIELD CROPS

Agdex: 120.20

Source: C. R. Elliott
Northern Research Group
Canada Agriculture Research Station
Beaverlodge, Alberta

Grass Seed Production

EFFECT OF SEEDING DATE AND COMPANION CROPS

Although grass species follow the same sequence of phasic development, the environments required to promote the successive stages differ considerably. The stages at which the plants are receptive to these stimuli also vary. For most grasses, induction in preparation for flowering is completed in late autumn, but only in those tillers with one full season of uninhibited growth. Floral initiation occurs the following spring shortly after spring thaw. (If spring temperatures rise too rapidly in relation to lengthening daylight, this initiation does not take place. For this stage of flowering, northwestern Canada's spring climate is ideal.)

Seeding Dates

The tillers of various grass species respond at different ages to the short day, low temperature treatment of late summer and autumn. A study was conducted to determine the effect of date of seeding on yield. Seed yields the year after seeding declined sharply for the following grasses if they were seeded later than the date indicated:

Russian wildrye	May 23
Crested wheatgrass	June 13
Intermediate wheatgrass	July 17
Creeping red fescue	July 17
Reed canarygrass	July 17
Bromegrass	July 25
Meadow fescue	July 25
Timothy	Sept. 9

The preceding study was favored by good moisture distribution. For this reason many of the successful dates are later than would normally be expected. In general, it is safe to recommend that grasses intended for seed production should be seeded in the early spring, seldom later than early June.

Cereal Companion Crops

Eight grass species and seven companion crops were studied. Based on first year seed yields certain observations can be made. Russian wildrye, meadow fescue and creeping red fescue do best if seeded alone and relatively early in the spring to provide a full season of development in the year of seeding. Crested and intermediate wheatgrass and bromegrass all tolerated companion crops in the year of seeding and still produced satisfactory seed yeilds the following year.

Rapeseed proved to be the companion crop most generally tolerated by perennial seed grasses except Russian wildrye, which was suppressed by all companion crops. Flax proved equally acceptable to crested and intermediate wheatgrass, bromegrass and meadow fescue. Wheat and early maturing varieties of barley were satisfactory companions for crested and intermediate wheatgrass and bromegrass. Oats can be considered a companion only for intermediate wheatgrass. The late maturing variety of barley proved unsatisfactory as a companion seeding for any grass.

March, 1972