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BROWNTOP

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Sefton browntop is a new Grasslands cultivar. At present there are three growers entering Sefton for certification, with a total of 22 ha sown. Yields average around 150 kg ha-'. Egmont browntop is more established in the New Zealand herbage seed industry. Thirty-five growers entered crops for certification in 1988, amounting to 200 ha.- Yields average around 150 kg ha^{-1} but yields of 450 kg ha" have been recorded.

ESTABLISHMENT

Site: Browntop seed crops can be grown successfully on most medium fertility soils in the mid to south Canterbury region. If light soils are chosen, irrigation may be required. Soil pH should be between 5 and 6.5.

Isolation: Browntop seed crops must be isolated from other browntop cultivars by 200 m if the area is less than 2 ha and 100 m if the area is larger than 2 ha.

Paddock history: The selected area must be free from redtop, creeping- bent, dryland browntop and any other grasses. Browntop fits in well in a iotation where it is preceded by legumes as good weed control is possible.

Time of sowing:. Browntop is generally sown in February or early to mid March. However, yields are higher from crops sown in the previous spring (i.e., 15 months earlier) as plants are better established before winter, and weeds can be controlled by grazing plus herbicides during winter.

Seed-bed preparation: A fine, firm, well-compacted (heavy-rolled), weed-free seed bed is required for browntop.

Sowing rate and depth: Browntop should be drilled 2 mm deep (i.e., very shallow) in 15 cm rows at 1½-3 kg ha^{-1}. It can be broadcast at the higher seeding rate, but establishment is less successful. Spring-sown browntop can be sown under a cereal where the latter is sown at a slightly lighter rate than usual.

Fertiliser: Spring-sown crops do not generally require fertiliser unless soil fertility is very low. Nitrogen can be applied to autumn-sown crops to enhance growth before winter.

Insecticide: Dasanit 5G should be sown with the seed if there is a history of grass grub.

CROP MANAGEMENT

Rolling: Heavy rolling once the crop is well established promotes tillering, buries rocks, levels the soil and squashes grass grubs.

Grazing: Spring-sown crops can be grazed lightly during the summer and autumn. Grazing promotes tillering and reduces weeds. There-is rarely sufficient material on an autumn sown crop to warrant grazing.- Cropsshould be closed by the end of September; specialist growers close in autumn.

Fertiliser: Eighty units of nitrogen should be applied at the end of October (just prior to stem elongation). On soils with low natural fertility, crops may respond to addition of superphosphate.

Weed control: Broad-leaf weeds and clovers can be controlled with 2,4-D, Basagran, Axall, Versatil or Nortron. For an autumn sowing-Nortron can be used 2-3 months later; Axall (3 litres) plus Versatil (300 ml) can be used in October..

Irrigation: Moisture stress should be avoided as it reduces seed yield.

Fungicide: No research has been carried out on the use of fungicides in browntop seed crops. However, specialist seed growers do use fungicides as a preventer.

HARVEST

Time of harvest: Browntop is ready to harvest when 'the purple look has gone' and the top two-thirds of the seed head can be stripped out easily by running fingers up the stem. This is generally mid to late February.

Method of harvesting: The bulk in vegetative material associated with browntop seed crops means that rotary mowers are generally more successful (particularly if the crop has lodged) than sickle-bar mowers or direct heading. However, although the rotary mower is less likely to block up and is much faster, it is less gentle than the sickle-bar mower, and seed loss is likely to be higher. Thus the rotary mower should be used early in the morning or late in the evening when humidity is higher or dew has fallen.

After 5-7 days (or longer) in the windrow, when the seed has reached 16-20% moisture, the crop can be headed. It is important to use some air in the header plus a fine bottom riddle, and a tight drum. This, if the header travels slowly, will result in minimal blockage and an acceptable sample.

Post-harvest management: Stubble must be removed by one or more of the following methods; grazing, baling or burning. If burning, the straw must be spread over the whole paddock to be effective against disease, pest and weeds. 'Once the litter is gone, thatch must be removed by harrowing across the rows, or band-spraying (1.5 litres of Roundup). By reducing plant numbers and allowing light into the bottom of the sward

new tiller growth is stimulated. This should be carried out as soon as possible after harvest, i.e., late summer, to allow new tillers to establish before winter.

STAND LIFE

Browntop can be entered for certification for up to six years. If weed control is good during establishment and effective post-harvest management is carried out, longevity in stands is assured.

LIST OF SPEAKERS

N. Blakemore	Farmer, Pleasant Point
K.G. Broadfoot	Supervising Field Officer, MAFQual, Rangiora
K.R. Brown	Seed Scientist, DSIR Grasslands, Christchurch
R.E. Falloon	Scientist, DSIR Plant Protection, Christchurch
J.G. Hampton	Senior Lecturer, Seed Technology Centre, Massey University Palmerston North
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E. Kevern	Seed Production Specialist, DSIR Grasslands, Christchurch
J.A. Lancashire	Director, DSIR Grasslands, Palmerston North
R.H. Langer	ex Professor of Plant Science, Lincoln University, Canterbury
C. Lill	Farmer, Methven
G. Lill	Farmer, Methven
G. Marf	Farmer, Methven
J. McCartin	Farm Manager, Lincoln University, Canterbury
R.R. McIntosh	Farmer, Methven
P.O. O'Neill	Seed Processing Manager, Challenge Seeds, Ashburton
D. Ritchie	Farmer, Otane
M.P. Rolston	Seed Scientist, DSIR Grasslands, Palmerston North
A.V.' Stewart	Plant Breeder, Ceres Farm, Pyne Gould Guinness, Christchurch
J. White	Professor of Plant Science, Lincoln University, Canterbury
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