MANAWA, MOATA AND TAMA

K.R. Brown and R.R. McIntosh

Grasslands Manawa, Moata and Tama are greenfeed crops. Manawa is a perennial x Italian hybrid, also known as 'short-rotation ryegrass'. Moata is a tetraploid Italian ryegrass and Tama is a tetraploid Westerwolds Italian ryegrass (i.e., it is an extreme annual type). About 1500 ha of these three were entered for certification in the 1987/88 season; twice as much Moata was sown as Manawa and Tama. Yields of 1500 kg ha-' are achieved by specialist growers in these crops; in theory yields of 2000 kg ha^{-1} should be possible.

ESTABLISHMENT

Site: These seed crops can be grown on most Canterbury soils. However, Moata has a certification requirement of 4g thousand seed weight which iq difficult to achieve on light soils, even with irrigation. On fertile, heavy soils, vegetative growth may occur at the expense of seed production.

Paddock history: These cultivars should not follow a ryegrass seed crop in a rotation but fit in well following a cereal or, preferably, a legume. They should not be sown into paddocks with known contamination with hair grass, goosegrass, yellow gromwell, twitch or wild oats.

Time of sowing: Tama is an annual and requires no vernalisation period. It can be sown in autumn, winter or early spring for a seed crop the following summer. Manawa and Moata are autumn sown for a seed crop the following summer.

Seed-bed preparation: The seed bed should be fine, firm, well-compacted and weed-free.

Sowing rate and depth: For seed crops 18-20 kg ha-' seed should be drilled in 15cm rows, If Tama is being drilled in the spring the sowing rate should be increased to 25 kg ha-' (as seedling establishment tends to be lower in spring than autumn). The seed should be drilled 2-3 cm deep.

Pest control: Dasanit (active ingredient fensulfothion) should be applied at sowing in areas where grass grub is a problem.

CROP MANAGEMENT

Grazing: Autumn-sown crops may provide light grazing during the winter, particularly if nitrogen is applied previously. Crops should be closed by the end of August and spring-sown crops should not be grazed.

Fertiliser: Eighty units of nitrogen should be applied pre-stem elongation (i.e., around mid-September).

Irrigation: Water should be applied when necessary to avoid moisture stress.

Fungicide: Ryegrass is prone to attack by ergot and rust, therefore fungicides should be used as a preventative. Spraying at the end of September and again in mid-November should protect the crop from rust for most of the susceptible period.

Growth regulators: Considerable work has been done overseas on the use of growth regulators in ryegrass seed crops, but little research has been carried out under South Island conditions. Consequently the economics of use of growth regulators are not known.

HARVEST

Time of harvest: These crops are ready to harvest when seed has reached 42-4.5% moisture.

Method of harvesting: Sickle-bar mowers are effective and the crop should be allowed to dry in the windrow to 14% moisture. Seed can be headed at a higher moisture of drying facilities are available. Direct heading has been successful in some years.

Post-harvest treatment: As second-year seed crops of Tama and Moata are not possible and of Manawa are not recommended, post-harvest treatment is dependent upon the next crop planned for the area.

STAND LIFE

Manawa can be certified for up to four years, Moata and Tama can be certified for only one year. A Tama grower, however, may harvest a second crop in the same harvest season if the area is re-entered for certification and re-inspected.