

Low maintenance and shade tolerant grass mixtures for bush cider orchards

Summary

All grass mixtures established quickly after sowing in 1993. Low maintenance BSH A22 and Barenbrug rye/fescue mixtures quickly formed fine compact swards with a good thatch. Interseeds PRO 120 more vigorous ryegrass required more regular mowing. Shade tolerant BSH A6 formed an excellent sward of fine grasses, but BSH A7 and Barenbrug shade mix, although containing more vigorous competitive ryegrass, were also good in the non-shade conditions of this trial.

Introduction

The purpose of this trial was to assess the performance of the best available grass mixtures for two distinct purposes in bush cider orchards. The clearly defined specifications are: for orchard alleyways, hard wearing, regenerative, mat forming but low maintenance grasses able to tolerate heavy machinery, and: for grassing down under established tree rows, fairly hard wearing, slow growing, non-competitive shade tolerant grasses.

Heavy duty mixtures

1] Interseeds PRO 120	Lisabelle dwarf ryegrass Liprosa slender red fescue Highland browntop	60% 35% 5%
2] British Seed Houses BSH A22	Lorina dwarf ryegrass Logro slender red fescue Highland browntop	60% 35% 5%
3] Barenbrug Rye/fescue	Barcredo dwarf ryegrass Barcrown slender red fescue Bargreen chewings fescue	50% 30% 20%

Shade tolerant mixtures

4] British Seed Houses BSH A6 Shade	Boreal red fescue Wilma chewings fescue Julia smooth meadowgrass Highland browntop	40% 30% 20% 10%
5] BSH A7 Sports	Hermes dwarf ryegrass Julia smooth meadowgrass Frida chewings fescue Wilma " " Highland browntop	50% 20% 10% 10% 10%
6] Barenbrug Shade	Barlow dwarf ryegrass Barcredo " " Barcrown slender red fescue	20% 20% 30%

Method

The field trial site chosen was Field Farm, Hampton Bishop, Hereford.

Seed mixtures were sown at a rate of 16g per square metre [160kg/ha, 64kg/acre] 30/4/93 onto prepared soil alleyways of a young cider orchard [first year], in two replicate blocks each 2.5 x 5m [12.5m²], and rolled in warm conditions with rain expected. Base fertilizer was incorporated at 50g/m² of 5:12:10

The grass was topped twice in the first year and mowed approximately every 3 weeks in the second season.

Results

Grass was assessed in August 1993, when all the mixtures had established well but still had from 20 - 40% bare soil in patches. Two assessments were made in the second season. Swards were scored [1 - 10] for rapid establishment, lack of bare patches, reasonable vigour and the formation of a `thatch` capable of supporting heavy machinery traffic. Results are summarised in the table below.

Table 1. Grass cultivar performance rating [1 = poor – 10 = excellent]

Grass mixture	21/7/94	11/10/94	Cost £/Kg 1994
BSH Shade mix A6	9.0	7.5	£3.00
BSH Lorina/Logro A22	7.5	7.5	£4.75
Interseeds Pro 120	6.5	6.0	£3.00
Barenbrug Low maintenance	5.5	7.5	£2.50
Barenbrug Shade mix	6.0	6.0	£2.20
BSH Sports mix A7	5.0	6.5	£4.00

Overall assessments

BSH A22 and Barenbrug Rye/fescue mixes both formed excellent low maintenance swards with steady regrowth after mowing, and meet the orchard specifications well. PRO120 regrew more quickly and contained a more vigorous ryegrass which formed little thatch. This mix may be too vigorous and require more frequent mowing on some sites.

BSH A6 formed an outstanding sward in this trial which was unfortunately not shaded because the trees were too young. BSH A7 and Barenbrug Shade Mix also formed good swards but had a high proportion of rather strong growing ryegrass which is potentially competitive with the trees. However, under normal shade conditions, ryegrass gradually dies out to be superseded by the more shade tolerant cultivars in the mix, thus forming a predominantly fescue/browntop/smooth stalked meadowgrass sward under mature trees. The presence of ryegrass is beneficial in the short term, acting as a `nurse` to get the weaker grasses established. BSH A6 is recommended for grassing down in younger orchards where grass competition must be minimised, and BSH A7 or Barenbrug Shade Mix for grassing down or reseeding in the more difficult, shaded and drier conditions in mature orchards.

Costs

Costs are estimated from the 1993 prices for the cost of seed at 64 kg/acre [160kg/ha]. They are unlikely to remain correct and are intended only as a guideline.

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