



PASTURE MIXTURES FOR ATLANTIC CANADA

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Pastures are an important forage component of many livestock farms in Atlantic Canada. Forage produced on pasture is relatively low in cost and high in feed value. Often the best and most economical approach for improving pasture productivity and quality is through better grazing management. However, there are occasions when a total renovation of the pasture including re-seeding to adapted pasture species and cultivars is warranted.

Choosing the right grasses and legumes for a pasture mixture requires some thoughtful planning. The reward for getting it right is a more productive and efficient pasture – one that is more drought tolerant, has a higher legume content, has a longer seasonal growth pattern and has less associated supplemental feed costs.

When choosing a pasture mixture, consider the agronomic characteristics of each species and the

Table 1. Rankings of Common Atlantic Pasture Species [highest (3) to lowest (1)]

| Species | Persistence | Poor Drainage | Grazing Tolerance | Low Fertility | Species Compatibility |
|---------------------------|-------------|---------------|-------------------|---------------|-----------------------|
| <i>Meadow Bromegrass</i> | 3 | 2 | 3 | 2 | 3 |
| <i>Smooth Bromegrass</i> | 3 | 1 | 2 | 1 | 3 |
| <i>Meadow Fescue</i> | 3 | 3 | 3 | 1 | 2 |
| <i>Red Fescue</i> | 3 | 3 | 3 | 3 | 3 |
| <i>Tall Fescue</i> | 3 | 3 | 3 | 2 | 2 |
| <i>Kentucky Bluegrass</i> | 3 | 1 | 3 | 2 | 3 |
| <i>Orchardgrass</i> | 2 | 3 | 3 | 1 | 1 |
| <i>Reed Canarygrass</i> | 3 | 3 | 2 | 2 | 2 |
| <i>Perennial Ryegrass</i> | 1 | 1 | 3 | 1 | 2 |
| <i>Timothy</i> | 3 | 3 | 2 | 2 | 3 |
| <i>Alfalfa</i> | 2 | 1 | 2 | 1 | 2 |
| <i>Alsike Clover</i> | 2 | 3 | 2 | 3 | 1 |
| <i>Birdsfoot Trefoil</i> | 2 | 3 | 3 | 2 | 3 |
| <i>Red Clover</i> | 2 | 2 | 2 | 2 | 2 |
| <i>White Clover</i> | 2 | 1 | 3 | 1 | 3 |

environment in which it will be grown. Soil drainage, tolerance to grazing intensity, persistence under grazing, soil fertility, and the compatibility of each species to other species are important factors. Table 1 gives an idea of the advantages and disadvantages of common Atlantic pasture species under different soil and grazing conditions.

Consider the seasonal growth pattern of each pasture species to ensure adequate growth throughout the pasture season. Meadow Bromegrass, Creeping Red Fescue and Kentucky Bluegrass are aggressive early in the spring and are good for early spring grazing. Perennial Ryegrass and White Clover are often winter injured and do not produce well until early summer. Meadow Fescue, Tall Fescue, and Bluegrass are frost tolerant and grow well into late fall, making them excellent for extended season grazing.

Table 2 lists several recommended pasture mixtures based on soil drainage and grazing intensity. The best mixture will be well adapted to the climate, soil type, drainage, soil fertility and grazing system .

Table 2. Recommended mixtures for Atlantic pastures of varying soil drainage and grazing intensity

| <i>Seeding rate: 15-20 kg/ha</i> | Continuous Grazing <6 paddocks | Rotational Grazing 6-12 paddocks | Intensive Rotational (>12 paddocks) |
|--------------------------------------|--|---|--|
| Good Drainage | Timothy (30%) Kentucky Bluegrass (25%) Meadow Fescue (25%) White Clover (20%) | Timothy (30%) Kentucky Bluegrass (25%) Meadow Fescue (25%) White Clover (20%) | Timothy (25%) Meadow Fescue (25%) Kentucky Bluegrass (25%) Reed Canarygrass (15%) White Clover (10%) |
| | Kentucky Bluegrass (35%) Meadow Bromegrass (25%) Perennial Rye (25%) White Clover (15%) | Orchardgrass (20%) Perennial Ryegrass (20%) Tall Fescue (15%) Meadow Bromegrass (15%) Alfalfa (20%) White Clover (10%) | Orchardgrass (25%) Meadow Fescue (25%) Perennial Ryegrass (20%) Meadow Bromegrass (15%) White Clover (15%) |
| Imperfect drainage | Timothy (30%) Kentucky Bluegrass (30%) Trefoil (30%) White Clover (10%) | Tall fescue (25%) Kentucky Bluegrass (20%) Timothy (20%) Trefoil (25%) White Clover (10%) | Timothy (20%) Kentucky Bluegrass (20%) Meadow Fescue (25%) Trefoil (25%) White Clover (10%) |
| | Tall Fescue (35%) Kentucky Bluegrass (30%) Trefoil (25%) White Clover (10%) | Timothy (25%) Reed Canarygrass (20%) Kentucky Bluegrass (20%) Trefoil (25%) White Clover (10%) | Timothy (20%) Kentucky Bluegrass (20%) Meadow Fescue (25%) Trefoil (25%) White Clover (10%) |
| Poor Drainage | Tall Fescue (25%) Timothy (25%) Kentucky Bluegrass (20%) Trefoil (30%) | Tall Fescue (25%) Timothy (25%) Kentucky Bluegrass (20%) Trefoil (30%) | Tall Fescue (25%) Timothy (25%) Kentucky Bluegrass (20%) Trefoil (30%) |
| | Timothy (20%) Reed Canarygrass (20%) Kentucky Bluegrass (30%) Trefoil (30%) | Timothy (20%) Reed Canarygrass (20%) Kentucky Bluegrass (30%) Trefoil (30%) | Timothy (20%) Reed Canarygrass (20%) Kentucky Bluegrass (30%) Trefoil (30%) |

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