

# FORAGE CULTIVAR TRIALS

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PREPARED BY

NORTHERN RESEARCH GROUP  
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IN CO-OPERATION WITH



FORAGE CULTIVAR TRIALS  
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1979

FOREWORD

This report is the second for a special series of field trials conducted by the Canada Agriculture Research Station in cooperation with Alberta Agriculture.

The objective is to provide relative information on seed production capability and general adaptability of named foreign cultivars of perennial grasses and legumes to assist the Canadian forage seed industry in the development of production contracts and seed export markets. Emphasis is on crops economically suitable for the region and which currently form part of Canada's forage seed export industry.

The following test sites were selected to represent the major agronomic soils of the region:

1. Beaverlodge A. Research Station (SE1-72-10-W6)  
Soil type Esher-Hythe. Texture is medium fine, medium organic matter. Subsoil has poor permeability.
2. Beaverlodge B. Foster Farm (SE25-71-10-W6)  
Near Beaverlodge, Alta. Soil type Goose-Codner. High organic matter and very fertile. Orthic humic Gleysol. Clay loam to sandy loam.

3. Falher. Beaupre Farm. (NW1-78-21-W5)  
Near Falher, Alta. Soil type Falher-Nampa. Fine textured with medium to low organic matter. Poor moisture penetration and percolation. Subject to crusting. Luvisol eacustrine clay loam to clay.
4. Fort Vermilion. Experimental Farm (NW13-108-13-W5)  
Soil type Leith-Culp. Coarse textured with medium to low organic matter. Subsoil very permeable and calcareous.

Plots comprise two rows, 30.5 cm (1 foot) apart, 6.1 metres (20 feet) long, and replicated 6 times. Weeds are controlled by both mechanical and chemical means. Plots are fertilized annually in the autumn.

Seed and herbage (dry matter) yields are expressed both as actual production per hectare and as a percent of a designated (\*) standard. Statistical differences are indicated by the multiple range test where yields followed by the same letter are not considered significantly different (5%). Winter survival is shown as a Hardiness Scale of 1 (poor) to 9 (best).

This publication will supplement "Forage Introductions - Publication No. 79-16A 1979" which reports on all forages introduced since 1969.

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|-----------------------------|---|
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## Grasses

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|                             |    |
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|                             |    |
|-----------------------------|----|
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| Fort Vermilion 1978 seeding | 16 |

## BROMEGRASS

Test Site: Beaverlodge A. Research Station  
Seeding Year: 1977

| Cultivar   | Origin  | Hardiness | 1978 Harvest (Aug. 8) |                 |                            |                 | Hardiness | 1979 Harvest (Aug. 7) |                 |                            |                 |
|------------|---------|-----------|-----------------------|-----------------|----------------------------|-----------------|-----------|-----------------------|-----------------|----------------------------|-----------------|
|            |         |           | Seed Yield<br>kg/ha   | % of<br>Carlton | Herbage (DM)<br>Yield t/ha | % of<br>Carlton |           | Seed Yield<br>kg/ha   | % of<br>Carlton | Herbage (DM)<br>Yield t/ha | % of<br>Carlton |
| Barton     | U.S.A.  | 9         | 161 cd                | 34              | 1.46 e                     | 48              | 8.8       | 305 f                 | 46              | 3.85 bc                    | 74              |
| Beacon     | U.S.A.  | 9         | 187 cd                | 39              | 2.76 ab                    | 91              | 9         | 573 bc                | 86              | 4.48 ab                    | 86              |
| Carlton *  | Canada  | 9         | 477 b                 | 100             | 3.02 a                     | 100             | 9         | 668 b                 | 100             | 5.20 a                     | 100             |
| Kesto      | Finland | 9         | 286 c                 | 60              | 2.69 a-c                   | 89              | 9         | 516 c-e               | 77              | 4.79 ab                    | 92              |
| Lyon       | U.S.A.  | 9         | 95 d                  | 20              | 2.28 a-d                   | 75              | 8.5       | 380 f                 | 57              | 3.86 bc                    | 74              |
| Mandan 404 | U.S.A.  | 9         | 125 d                 | 26              | 1.75 de                    | 58              | 9         | 418 d-f               | 63              | 5.06 a                     | 97              |
| Orfeu      | Rumania | 9         | 195 cd                | 41              | 2.62 a-c                   | 87              | 9         | 571 bc                | 85              | 4.28 abc                   | 82              |
| S-1733     | Canada  | 9         | 293 c                 | 61              | 2.06 b-e                   | 68              | 9         | 525 cd                | 79              | 3.38 c                     | 65              |
| S-8800     | Canada  | 9         | 731 a                 | 153             | 3.09 a                     | 102             | 9         | 864 a                 | 127             | 4.52 ab                    | 87              |
| Tempo      | Canada  | 9         | 171 cd                | 36              | 1.90 ce                    | 63              | 9         | 391 ef                | 59              | 3.36 c                     | 65              |
| Mean       |         |           | 272                   |                 | 2.34                       |                 |           | 520                   |                 | 4.28                       |                 |

## BROMEGRASS

Seeding Year: 1978

Data Year: 1979

| Cultivar   | Origin | Beaverlodge B. (Foster Farm) |                     |                 | Falher (Beaupre Farm) |                     |                 | Fort Vermilion |                     |                 |
|------------|--------|------------------------------|---------------------|-----------------|-----------------------|---------------------|-----------------|----------------|---------------------|-----------------|
|            |        | Hardiness                    | Seed Yield<br>kg/ha | % of<br>Carlton | Hardiness             | Seed Yield<br>kg/ha | % of<br>Carlton | Hardiness      | Seed Yield<br>kg/ha | % of<br>Carlton |
| Barton     | U.S.A. | 9                            | 87 f                | 38              | 9                     | 437 de              | 64              | 9              | 243 de              | 75              |
| Carlton    | Canada | 9                            | 227 bc              | 100             | 9                     | 676 b-d             | 100             | 9              | 323 de              | 100             |
| Lyon       | U.S.A. | 9                            | 75 f                | 33              | 9                     | 568 b-e             | 83              | 9              | 187 e               | 57              |
| Magna      | Canada | 9                            | 165 c-e             | 72              | 9                     | 726 bc              | 107             | 9              | 361 cd              | 111             |
| Mandan 404 | U.S.A. | 9                            | 146 d-f             | 64              | 9                     | 479 c-e             | 70              | 9              | 165 e               | 51              |
| Regar      | U.S.A. | 9                            | 226 bc              | 99              | 9                     | 354 e               | 52              | 9              | 306 de              | 94              |
| Tempo      | Canada | 9                            | 112 ef              | 49              | 9                     | 503 b-e             | 74              | 9              | 286 de              | 88              |
| S 7695     | Canada | 9                            | 305 a               | 133             | 9                     | 759 b               | 112             | 9              | 544 ab              | 168             |
| S 7855     | Canada | 9                            | 104 ef              | 45              | 9                     | 556 b-e             | 82              | 9              | 214 de              | 66              |
| S 8778     | Canada | 9                            | 276 ab              | 121             | 9                     | 1062 a              | 156             | 9              | 484 bc              | 150             |
| S 8792     | Canada | 9                            | 188 cd              | 82              | 9                     | 672 b-d             | 99              | 9              | 645 a               | 200             |
| Mean       |        |                              | 174                 | 76              |                       | 617                 | 91              |                | 342                 | 105             |

FESCUE - CHEWINGS

Test Site: Beaverlodge A. Research Station  
Seeding Year: 1977

| Cultivar | Origin      | Hardiness | 1978 Harvest (July 24) |               |                            |               | Hardiness | 1979 Harvest (July 27) |               |                            |               |
|----------|-------------|-----------|------------------------|---------------|----------------------------|---------------|-----------|------------------------|---------------|----------------------------|---------------|
|          |             |           | Seed Yield<br>kg/ha    | % of<br>Oasis | Herbage (DM)<br>Yield t/ha | % of<br>Oasis |           | Seed Yield<br>kg/ha    | % of<br>Oasis | Herbage (DM)<br>Yield t/ha | % of<br>Oasis |
| Agram    | Netherlands | 9         | 12 a-c                 | 75            | 0.96 a                     | 63            | 9         | 508 a                  | 202           | 4.46 a                     | 127           |
| Atlanta  | Netherlands | 9         | 20 a-c                 | 125           | 1.05 a                     | 69            | 9         | 436 a                  | 174           | 3.72 a                     | 106           |
| Banner   | U.S.A.      | 9         | 30 a                   | 188           | 1.39 a                     | 91            | 9         | 519 a                  | 207           | 3.85 a                     | 110           |
| Belmonte | Netherlands | 9         | 25 ab                  | 156           | 1.41 a                     | 93            | 9         | 387 a                  | 194           | 3.90 a                     | 111           |
| Diamond  | Netherlands | 9         | 10 bc                  | 63            | 1.05 a                     | 69            | 9         | 365 ab                 | 145           | 5.22 a                     | 148           |
| Faramir  | Denmark     | 9         | 4 c                    | 25            | 1.34 a                     | 88            | 9         | 156 c                  | 62            | 4.59 a                     | 131           |
| Halifax  | Netherlands | 9         | 3 c                    | 19            | 0.78 a                     | 51            | 9         | 230 bc                 | 92            | 3.43 a                     | 97            |
| Oasis *  | Netherlands | 9         | 16 a-c                 | 100           | 1.52 a                     | 100           | 9         | 251 bc                 | 100           | 3.52 a                     | 100           |
| Scarlet  | Netherlands | 9         | 27 ab                  | 169           | 1.19 a                     | 78            | 9         | 486 a                  | 194           | 4.32 a                     | 123           |
| Mean     |             |           | 17                     |               | 1.19                       |               |           | 382                    |               | 4.11                       |               |

FESCUE: CHEWINGS

Seeding Year: 1978

Data Year: 1979

| Cultivar  | Origin      | Beaverlodge B: (Foster Farm) |                     |               |     | Folher: (Beaupre Farm) |                     |               |  | Fort Vermilion |                     |               |     |
|-----------|-------------|------------------------------|---------------------|---------------|-----|------------------------|---------------------|---------------|--|----------------|---------------------|---------------|-----|
|           |             | Hardiness                    | Seed Yield<br>kg/ha | % of<br>Oasis |     | Hardiness              | Seed Yield<br>kg/ha | % of<br>Oasis |  | Hardiness      | Seed Yield<br>kg/ha | % of<br>Oasis |     |
| Adonis    | Netherlands | 9                            | 225                 | b-e           | 100 |                        | (1)                 | (1)           |  | 9              | 292                 | a             | 195 |
| Agram     | Netherlands | 9                            | 196                 | c-e           | 87  | 9                      | 93                  | d             |  | 9              | 208                 | a             | 139 |
| Belmonte  | Netherlands | 9                            | 349                 | a-b           | 155 | 9                      | 188                 | a-d           |  | 9              | 263                 | a             | 175 |
| Cascade   | U.S.A.      | 9                            | 187                 | d-e           | 83  | 9                      | 149                 | b-d           |  | 9              | 208                 | a             | 139 |
| Dawson    | Netherlands | 9                            | 251                 | b-e           | 112 |                        | (1)                 |               |  | 9              | 253                 | a             | 169 |
| Diamond   | Netherlands | 9                            | 141                 | e             | 63  | 9                      | 118                 | cd            |  | 9              | 200                 | a             | 133 |
| Encota    | Netherlands | 9                            | 155                 | de            | 69  | 9                      | 181                 | a-d           |  | 9              | 223                 | a             | 149 |
| Famosa    | Belgium     | 9                            | 149                 | de            | 66  | 9                      | 211                 | a-d           |  | 9              | 325                 | a             | 217 |
| Flevo     | Netherlands | 9                            | 262                 | b-e           | 116 | 9                      | 129                 | cd            |  | 9              | 240                 | a             | 160 |
| Frida     | Netherlands | 9                            | 228                 | b-e           | 101 |                        | (1)                 |               |  | 9              | 289                 | a             | 193 |
| Highlight | Netherlands | 9                            | 256                 | b-e           | 114 | 9                      | 158                 | b-d           |  | 9              | 269                 | a             | 179 |
| Ivalo     | Denmark     | 9                            | 194                 | c-e           | 86  | 9                      | 141                 | b-d           |  | 9              | 228                 | a             | 152 |
| Koket     | Netherlands | 9                            | 353                 | ab            | 157 | 9                      | 136                 | b-d           |  | 9              | 309                 | a             | 206 |
| Lifalla   | Germany     | 9                            | 245                 | b-e           | 109 | 9                      | 180                 | a-d           |  | 9              | 195                 | a             | 130 |
| Lirouge   | Germany     | 9                            | 132                 | e             | 59  | 9                      | 169                 | b-d           |  | 9              | 264                 | a             | 176 |
| Menuet    | Netherlands | 9                            | 249                 | b-e           | 111 | 9                      | 223                 | a-d           |  | 9              | 250                 | a             | 167 |
| Oasis *   | Netherlands | 9                            | 225                 | b-e           | 100 |                        | (1)                 |               |  | 9              | 150                 | a             | 100 |
| Odra      | Germany     | 9                            | 345                 | ab            | 153 | 9                      | 317                 | a             |  | 9              | 454                 | a             | 303 |
| Rosengold | Germany     | 9                            | 391                 | a             | 174 | 9                      | 245                 | a-c           |  | 9              | 318                 | a             | 212 |
| Rolax     | Belgium     | 9                            | 276                 | a-d           | 123 | 9                      | 270                 | ab            |  | 9              | 343                 | a             | 229 |
| Scarlet   | Netherlands | 9                            | 226                 | b-e           | 100 | 9                      | 171                 | b-d           |  | 9              | 377                 | a             | 251 |
| Tamara    | Denmark     | 9                            | 279                 | a-d           | 124 | 9                      | 270                 | ab            |  | 9              | 405                 | a             | 270 |
| Tatjana   | Denmark     | 9                            | 324                 | a-c           | 144 |                        | (1)                 |               |  | 9              | 314                 | a             | 209 |
| Waldorf   | Netherlands | 9                            | 220                 | b-e           | 98  | 9                      | 102                 | d             |  | 9              | 278                 | a             | 185 |
| Mean      |             |                              | 244                 |               | 109 |                        | 163                 |               |  |                | 277                 |               | 185 |

(1) Not established.

## CREEPING RED FESCUE

Test Site: Beaverlodge A. Research Station  
Seeding Year: 1977

| Cultivar  | Origin         | Hardiness | 1978 Harvest (July 24) |                |                            |                | Hardiness | 1979 Harvest (July 31) |                |                            |                |
|-----------|----------------|-----------|------------------------|----------------|----------------------------|----------------|-----------|------------------------|----------------|----------------------------|----------------|
|           |                |           | Seed Yield<br>kg/ha    | % of<br>Boreal | Herbage (DM)<br>Yield t/ha | % of<br>Boreal |           | Seed Yield<br>kg/ha    | % of<br>Boreal | Herbage (DM)<br>Yield t/ha | % of<br>Boreal |
| #60       | Netherlands    | 9         | 40 k-o                 | 9              | 0.78 kl                    | 30             | 9         | 195 e-h                | 69             | 1.90 c-g                   | 80             |
| Barbara   | Netherlands    | 9         | 3.36 o                 | 1              | 0.82 j-l                   | 32             | 8.8       | 206 e-h                | 73             | 1.64 e-g                   | 69             |
| Bastide   | France         | 9         | 6.72 o                 | 1              | 0.74 l                     | 29             | 8.3       | 68 i-l                 | 24             | 1.61 e-g                   | 68             |
| Barante   | Netherlands    | 9         | 4.48 o                 | 1              | 1.16 g-m                   | 45             | 7.7       | 121 h-l                | 43             | 1.50 fg                    | 63             |
| Bergond   | Denmark        | 9         | 112 h-o                | 24             | 1.75 c-j                   | 68             | 9         | 174 e-j                | 61             | 1.99 b-g                   | 84             |
| Boreal*   | Canada         | 9         | 461 a                  | 100            | 2.58 a-c                   | 100            | 8.8       | 283 a-e                | 100            | 2.37 a-f                   | 100            |
| Brasov    | Rumania        | 9         | 76 j-o                 | 16             | 1.86 b-i                   | 72             | 9         | 212 d-h                | 75             | 2.78 a-d                   | 117            |
| Carlawn   | Canada         | 9         | 338 bc                 | 73             | 2.28 a-e                   | 88             | 9         | 198 e-h                | 70             | 1.93 c-g                   | 81             |
| Checker   | U.S.A.         | 9         | 45 k-o                 | 10             | 0.94 j-l                   | 36             | 9         | 326 a-d                | 115            | 2.80 a-d                   | 118            |
| Engina    | Netherlands    | 9         | 195 e-i                | 42             | 1.50 d-l                   | 58             | 9         | 347 a-c                | 123            | 2.78 a-d                   | 117            |
| Ensylva   | Netherlands    | 9         | 148 f-m                | 32             | 1.01 h-l                   | 39             | 9         | 156 f-k                | 55             | 2.20 a-g                   | 92             |
| Envira    | Netherlands    | 9         | 311 b-e                | 67             | 2.42 a-d                   | 94             | 9         | 269 b-f                | 95             | 2.73 a-d                   | 115            |
| Enzet     | Netherlands    | 9         | 368 ab                 | 80             | 2.84 a                     | 110            | 9         | 394 a                  | 139            | 3.18 a                     | 134            |
| Fortress  | U.S.A.         | 9         | 125 g-n                | 27             | 1.86 b-i                   | 72             | 9         | 248 c-g                | 88             | 2.44 a-f                   | 103            |
| Frida     | Netherlands    | 9         | 45 k-o                 | 10             | 0.74 l                     | 29             | 8.3       | 77 i-l                 | 27             | 1.23 g                     | 52             |
| Grampian  | United Kingdom | 9         | 49 k-o                 | 11             | 1.41 e-l                   | 55             | 9         | 39 l                   | 14             | 1.30 g                     | 55             |
| Grelo     | Denmark        | 9         | 63 k-o                 | 14             | 1.41 e-l                   | 55             | 9         | 73 i-l                 | 26             | 1.75 d-g                   | 74             |
| Jade      | Netherlands    | 9         | 38 l-o                 | 8              | 0.96 j-l                   | 37             | 9         | 217 d-h                | 77             | 2.22 a-g                   | 93             |
| Laverdure | France         | 9         | 58 k-o                 | 13             | 1.68 c-l                   | 65             | 9         | 160 f-k                | 57             | 2.11 b-g                   | 89             |
| Manior    | France         | 9         | 17 n-o                 | 4              | 0.94 i-l                   | 36             | 8.3       | 44 l                   | 16             | 1.50 fg                    | 63             |
| Mariet    | Netherlands    | 9         | 34 l-o                 | 7              | 0.72 l                     | 28             | 8.6       | 241 c-g                | 85             | 2.64 a-e                   | 111            |
| Marga     | Netherlands    | 9         | 20 no                  | 4              | 1.12 g-l                   | 43             | 8.6       | 207 d-h                | 73             | 1.97 c-g                   | 83             |
| Merlin    | United Kingdom | 9         | 25 no                  | 5              | 1.52 d-l                   | 59             | 8.6       | 75 i-l                 | 27             | 2.31 a-f                   | 97             |
| Moncorde  | Netherlands    | 9         | 248 c-f                | 54             | 1.97 a-h                   | 76             | 8.3       | 129 g-l                | 46             | 1.99 b-g                   | 84             |
| Monica    | Netherlands    | 9         | 83 i-o                 | 18             | 2.24 a-f                   | 87             | 9         | 65 j-l                 | 23             | 1.95 c-g                   | 82             |
| Noro      | Germany        | 9         | 40 k-o                 | 9              | 1.28 f-l                   | 50             | 9         | 326 a-d                | 115            | 2.44 a-f                   | 103            |
| Patio     | Netherlands    | 9         | 184 f-j                | 40             | 2.20 a-f                   | 85             | 8.8       | 273 b-f                | 96             | 2.42 a-f                   | 102            |
| Puma      | Denmark        | 9         | 28 no                  | 6              | 1.05 g-l                   | 41             | 9         | 282 a-e                | 100            | 2.46 a-f                   | 104            |
| Pp 15E    | U.S.A.         | 9         | 52 k-o                 | 11             | 1.30 f-l                   | 50             | 9         | 388 ab                 | 137            | 2.46 a-f                   | 104            |

## CREEPING RED FESCUE - cont'd.

Test Site: Beaverlodge A. Research Station  
Seeding Year: 1977

| Cultivar        | Origin      | Hardiness | 1978 Harvest (July 24) |                |                            |                | Hardiness | 1979 Harvest (July 31) |                |                            |                |
|-----------------|-------------|-----------|------------------------|----------------|----------------------------|----------------|-----------|------------------------|----------------|----------------------------|----------------|
|                 |             |           | Seed Yield<br>kg/ha    | % of<br>Boreal | Herbage (DM)<br>Yield t/ha | % of<br>Boreal |           | Seed Yield<br>kg/ha    | % of<br>Boreal | Herbage (DM)<br>Yield t/ha | % of<br>Boreal |
| Reptans         | Sweden      | 9         | 320 b-d                | 69             | 2.58 a-c                   | 100            | 9         | 252 c-f                | 89             | 2.87 a-c                   | 121            |
| Roland 21       | Germany     | 9         | 188 f-j                | 41             | 2.73 ab                    | 106            | 9         | 217 d-h                | 77             | 3.05 ab                    | 128            |
| Rubina Roskilde | Denmark     | 9         | 220 d-h                | 48             | 1.90 a-i                   | 74             | 9         | 208 d-h                | 73             | 2.53 a-f                   | 107            |
| RS 512          | Sweden      | 9         | 150 f-l                | 33             | 2.02 c-g                   | 78             | 8.8       | 216 d-h                | 76             | 2.37 a-f                   | 100            |
| Skot            | Denmark     | 9         | 34 l-o                 | 7              | 1.97 a-h                   | 76             | 8.6       | 62 kl                  | 22             | 2.60 a-e                   | 109            |
| Sonnet          | Netherlands | 9         | 30 m-o                 | 7              | 1.64 c-l                   | 64             | 8.8       | 65 j-l                 | 23             | 1.79 d-g                   | 75             |
| Svalbard        | Norway      | 9         | 87 i-o                 | 19             | 1.52 d-l                   | 59             | 9         | 178 e-i                | 63             | 2.55 a-f                   | 108            |
| Taca            | Denmark     | 9         | 234 c-g                | 51             | 2.58 a-c                   | 100            | 9         | 209 d-h                | 74             | 2.31 a-f                   | 97             |
| Turf            | Sweden      | 9         | 157 f-k                | 34             | 2.02 a-g                   | 78             | 9         | 241 c-g                | 85             | 2.46 a-f                   | 104            |
| Veni            | Denmark     | 9         | 54 k-o                 | 12             | 1.72 c-k                   | 67             | 8.6       | 232 c-h                | 82             | 2.33 a-f                   | 98             |
| Mean            |             |           | 120                    |                | 1.64                       |                |           | 197                    |                | 2.24                       |                |

## CREEPING RED FESCUE:

Seeding Year: 1978

Data Year: 1979

| Cultivar   | Origin        | Beaverlodge B: Foster Farm |                     |                | Falher (Beaupre Farm |                     |                | Fort Vermilion |                     |                |      |     |     |
|------------|---------------|----------------------------|---------------------|----------------|----------------------|---------------------|----------------|----------------|---------------------|----------------|------|-----|-----|
|            |               | Hardiness                  | Seed Yield<br>kg/ha | % of<br>Boreal | Hardiness            | Seed Yield<br>kg/ha | % of<br>Boreal | Hardiness      | Seed Yield<br>kg/ha | % of<br>Boreal |      |     |     |
| Banner     | U.S.A.        | 9                          | 282                 | f-h            | 37                   | 9                   | 281            | e-i            | 27                  | 9              | 249  | h-m | 20  |
| Barante    | Netherlands   | 9                          | 102                 | hi             | 13                   | 9                   | 2              | l              | 0.19                | 9              | 26   | m   | 2.1 |
| Barbara    | Netherlands   | 9                          | 67                  | i              | 9                    | 9                   | 13             | kl             | 1.2                 | 9              | 39   | m   | 3   |
| Bastide    | France        | 9                          | 91                  | hi             | 12                   | 9                   | 16             | kl             | 1.5                 | 9              | 27   | m   | 2.2 |
| Boreal *   | Canada        | 9                          | 760                 | a              | 100                  | 9                   | 1043           | a              | 100                 | 9              | 1224 | a   | 100 |
| Brasov     | Rumania       | 9                          | 376                 | e-g            | 49                   | 9                   | 411            | c-f            | 39                  | 9              | 423  | f-k | 35  |
| Carlaw     | Canada        | 9                          | 616                 | a-d            | 81                   | 9                   | 510            | cd             | 49                  | 9              | 1052 | ab  | 86  |
| Checker    | U.S.A.        | 9                          | 131                 | hi             | 17                   | 9                   | 174            | g-l            | 17                  | 9              | 413  | a-l | 34  |
| Chomade    | France        | 9                          | 128                 | hi             | 17                   | 9                   | 71             | i-l            | 7                   | 9              | 170  | i-m | 14  |
| Corona     | Netherlands   | 9                          | 170                 | g-i            | 22                   | 9                   | 44             | j-l            | 4                   | 9              | 160  | i-m | 13  |
| Engina     | Netherlands   | 9                          | 636                 | a-d            | 84                   | 9                   | 340            | d-h            | 33                  | 9              | 874  | bc  | 71  |
| Ensylva    | Netherlands   | 9                          | 600                 | a-d            | 79                   | 9                   | 261            | e-j            | 25                  | 9              | 474  | d-h | 38  |
| Envina     | Netherlands   | 9                          | 749                 | ab             | 99                   | 9                   | 758            | b              | 73                  | 9              | 720  | c-e | 59  |
| Enzet      | Netherlands   | 9                          | 627                 | a-d            | 83                   | 9                   | 335            | d-h            | 32                  | 9              | 710  | c-f | 58  |
| Fortress   | U.S.A.        | 9                          | 755                 | ab             | 99                   | 9                   | 445            | c-e            | 43                  | 9              | 671  | c-g | 55  |
| Grelo      | Denmark       | 9                          | 206                 | g-i            | 27                   | 9                   | 17             | kl             | 1.6                 | 9              | 140  | k-m | 11  |
| Keszthelyi | Hungary       | 9                          | 520                 | c-e            | 68                   | 9                   | 510            | cd             | 49                  | 9              | 445  | e-i | 36  |
| Manior     | France        | 9                          | 109                 | hi             | 14                   | 9                   | 21             | kl             | 2                   | 9              | 136  | lm  | 11  |
| Marga      | Netherlands   | 9                          | 106                 | hi             | 14                   | 9                   | 54             | j-l            | 5                   | 9              | 94   | m   | 8   |
| Mariet     | Netherlands   | 9                          | 189                 | g-i            | 25                   | 9                   | 220            | f-k            | 21                  | 9              | 146  | j-m | 12  |
| Merlin     | Great Britain | 9                          | 123                 | hi             | 16                   | 9                   | 17             | kl             | 1.6                 | 9              | 92   | m   | 8   |
| Moncorde   | Netherlands   | 9                          | 533                 | b-e            | 70                   | 9                   | 617            | bc             | 59                  | 9              | 756  | c-d | 62  |
| Monica     | Netherlands   | 9                          | 438                 | d-f            | 58                   | 9                   | 455            | c-e            | 44                  | 9              | 428  | e-j | 35  |
| Patio      | Netherlands   | 9                          | 560                 | a-e            | 74                   | 9                   | 521            | cd             | 50                  | 9              | 404  | g-l | 33  |
| Pernille   | Denmark       | 9                          | 437                 | d-f            | 58                   | 9                   | 334            | d-h            | 32                  | 9              | 401  | g-l | 33  |
| Pollux     | Denmark       | 9                          | 679                 | a-c            | 89                   | 9                   | 629            | bc             | 60                  | 9              | 615  | c-g | 50  |
| Puma       | Denmark       | 9                          | 132                 | hi             | 17                   | 9                   | 156            | h-l            | 15                  | 9              | 230  | h-m | 19  |
| Rapid      | Netherlands   | 9                          | 659                 | a-d            | 87                   | 9                   | 619            | bc             | 59                  | 9              | 623  | c-g | 51  |
| Skot       | Denmark       | 9                          | 128                 | hi             | 17                   | 9                   | 78             | i-l            | 7                   | 9              | 44   | m   | 4   |
| Sonnet     | Netherlands   | 9                          | 175                 | ghi            | 23                   | 9                   | 50             | j-l            | 5                   | 9              | 138  | l-n | 11  |
| Veni       | Denmark       | 9                          | 231                 | f-i            | 30                   | 9                   | 385            | d-g            | 37                  | 9              | 300  | h-m | 25  |
| Mean       |               |                            | 370                 |                | 49                   |                     | 302            |                | 28                  |                | 394  |     | 33  |

Note: All creeping red fescue harvested on July 27 at Fosters.

## TIMOTHY - TURF

Test Site: Beaverlodge A. Research Station  
Seeding Year: 1977

| Cultivar      | Origin         | 1978 Harvest        |           |                     |              |                            |              | 1979 Harvest        |           |                     |              |                           |              |
|---------------|----------------|---------------------|-----------|---------------------|--------------|----------------------------|--------------|---------------------|-----------|---------------------|--------------|---------------------------|--------------|
|               |                | Date Ripe<br>August | Hardiness | Seed Yield<br>kg/ha | % of<br>S.50 | Herbage (DM)<br>Yield t/ha | % of<br>S.50 | Date Ripe<br>August | Hardiness | Seed Yield<br>kg/ha | % of<br>S.50 | Herbage(DM)<br>Yield t/ha | % of<br>S.50 |
| Barbino       | Netherlands    | 15                  | 9         | 190 d               | 108          | 0.94 ef                    | 79           | 22                  | 8.8       | 312 b               | 149          | 4.14 b-e                  | 109          |
| Barret        | Netherlands    | 16                  | 9         | 325 a-c             | 185          | 1.19 c-e                   | 100          | 21                  | 8.8       | 276 bc              | 132          | 4.44 a-e                  | 117          |
| Barosa        | Netherlands    | 17                  | 9         | 233 cd              | 132          | 1.0 d-f                    | 84           | 21                  | 8.6       | 308 b               | 147          | 4.01 b-e                  | 106          |
| Evergreen     | Sweden         | 15                  | 9         | 365 ab              | 207          | 2.1 ab                     | 176          | 21                  | 9         | 283 bc              | 135          | 4.95 abc                  | 131          |
| Holea         | Germany        | 17                  | 9         | 150 de              | 85           | 1.3 c-e                    | 109          | 25                  | 8.6       | 216 b-d             | 103          | 3.76 de                   | 99           |
| Maris Paviour | United Kingdom | 22                  | 9         | 87 e                | 49           | 0.45 f                     | 38           | 29                  | 9         | 130 d               | 62           | 2.44 f                    | 64           |
| Mortel        | Netherlands    | 10                  | 9         | 414 a               | 235          | 1.95 a-c                   | 164          | 21                  | 9         | 404 a               | 193          | 5.42 a                    | 143          |
| Nobis         | Denmark        | 17                  | 9         | 192 d               | 109          | 1.64 a-e                   | 138          | 22                  | 8.6       | 189 cd              | 90           | 3.85 c-e                  | 102          |
| Nodora        | Germany        | 17                  | 9         | 304 bc              | 173          | 2.2 a                      | 185          | 22                  | 9         | 274 bc              | 131          | 4.77 a-d                  | 126          |
| Piccolo       | Netherlands    | 14                  | 9         | 231 cd              | 131          | 1.39 b-e                   | 117          | 21                  | 8.8       | 223 b-d             | 107          | 3.85 c-e                  | 102          |
| Rali          | Germany        | 14                  | 9         | 325 a-c             | 185          | 1.72 a-d                   | 145          | 22                  | 9         | 231 b-d             | 111          | 5.00 ab                   | 132          |
| S-50*         | United Kingdom | 17                  | 9         | 176 de              | 100          | 1.19 c-e                   | 100          | 24                  | 8.8       | 209 b-d             | 100          | 3.79 de                   | 100          |
| Teno          | Denmark        | 17                  | 9         | 244 cd              | 139          | 1.64 a-e                   | 138          | 24                  | 8.6       | 248 bc              | 119          | 3.36 ef                   | 89           |
| Mean          |                |                     |           | 249                 |              | 1.43                       |              |                     |           | 254                 |              | 4.14                      |              |

## TIMOTHY - TURF

Seeding Year: 1978

Data Year: 1979

| Cultivar      | Origin         | Beaverlodge B. (Foster Farm) |                     |              | Falher (Beaupre Farm) |                     |              | Fort Vermilion |                     |              |
|---------------|----------------|------------------------------|---------------------|--------------|-----------------------|---------------------|--------------|----------------|---------------------|--------------|
|               |                | Hardiness                    | Seed Yield<br>kg/ha | % of<br>S.50 | Hardiness             | Seed Yield<br>kg/ha | % of<br>S.50 | Hardiness      | Seed Yield<br>kg/ha | % of<br>S.50 |
| Barbino       | Netherlands    | 9                            | 420 a               | 109          | 9                     | (1)                 |              | 9              | (1)                 |              |
| Baret         | Netherlands    | 9                            | 385 ab              | 100          | 9                     |                     |              | 9              |                     |              |
| Barosa        | Netherlands    | 9                            | 324 a-c             | 84           | 9                     |                     |              | 9              |                     |              |
| Evergreen     | Sweden         | 9                            | 330 a-c             | 86           | 9                     |                     |              | 9              |                     |              |
| Holea         | Germany        | 9                            | 360 a-c             | 94           | 9                     |                     |              | 9              |                     |              |
| Mavis Paviour | Great Britain  | 9                            | 205 d               | 53           | 9                     |                     |              | 9              |                     |              |
| Nobis         | Denmark        | 9                            | 259 cd              | 67           | 9                     |                     |              | 9              |                     |              |
| Piccolo       | Netherlands    | 9                            | 361 a-c             | 94           | 9                     |                     |              | 9              |                     |              |
| Rali          | Germany        | 9                            | 267 cd              | 69           | 9                     |                     |              | 9              |                     |              |
| S 50*         | United Kingdom | 9                            | 385 a-c             | 100          | 9                     |                     |              | 9              |                     |              |
| Sport         | France         | 9                            | 250 cd              | 65           | 9                     |                     |              | 9              |                     |              |
| Teno          | Denmark        | 9                            | 293 bd              | 76           | 9                     |                     |              | 9              |                     |              |
| Mean          |                |                              | 320                 | 83           |                       |                     |              |                |                     |              |

Note: (1) Harvested seed destroyed by fire.

## TIMOTHY - HAY

Test Site: Beaverlodge A. Research Station  
Seeding Year: 1977

## 1978 Harvest

## 1979 Harvest

| Cultivar     | Origin         | Date Ripe<br>August | Hardiness | Seed Yield<br>kg/ha | % of<br>Climax | Herbage (DM)<br>Yield t/ha | % of<br>Climax | Date Ripe<br>August | Hardiness | Seed Yield<br>kg/ha | % of<br>Climax | Herbage (DM)<br>Yield t/ha | % of<br>Climax |
|--------------|----------------|---------------------|-----------|---------------------|----------------|----------------------------|----------------|---------------------|-----------|---------------------|----------------|----------------------------|----------------|
| Barmidi      | Netherlands    | 9                   | 9         | 290 e-o             | 87             | 2.28 f-m                   | 88             | 14                  | 9         | 264 k-r             | 67             | 4.88 d-k                   | 92             |
| Barvanti     | Netherlands    | 20                  | 9         | 280 e-o             | 84             | 2.58 c-k                   | 100            | 29                  | 9         | 339 f-n             | 104            | 5.02 b-k                   | 95             |
| Basho        | Canada         | 6                   | 9         | 140 no              | 42             | 0.90 i-m                   | 35             | 9                   | 8.6       | 389 c-i             | 119            | 4.21 i-k                   | 79             |
| Bilbo        | Denmark        | 7                   | 9         | 539 b               | 162            | 3.14 a-f                   | 122            | 10                  | 9         | 398 ch              | 122            | 5.29 a-k                   | 100            |
| Bottnia II   | Sweden         | 8                   | 9         | 520 bc              | 157            | 2.69 b-i                   | 104            | 10                  | 9         | 473 a-e             | 145            | 5.35 a-j                   | 101            |
| Castella     | Netherlands    | 15                  | 9         | 368 b-k             | 111            | 1.57 l-n                   | 61             | 18                  | 9         | 254 m-r             | 78             | 4.17 j-k                   | 78             |
| Champlain    | Netherlands    | 12                  | 9         | 291 e-n             | 88             | 2.42 e-l                   | 94             | 20                  | 9         | 230 n-r             | 71             | 4.97 d-k                   | 94             |
| Clair        | U.S.A.         | 6                   | 9         | 227 h-o             | 68             | 1.68 k-m                   | 65             | 11                  | 9         | 370 d-l             | 113            | 5.24 a-k                   | 99             |
| Climax *     | Canada         | 9                   | 9         | 332 d-l             | 100            | 2.58 c-k                   | 100            | 12                  | 8.8       | 326 g-o             | 100            | 5.31 a-k                   | 100            |
| Deploy       | United Kingdom | 16                  | 9         | 149 m-o             | 45             | 0.83 no                    | 32             | 21                  | 8         | 180 qr              | 55             | 2.73 l                     | 51             |
| Dolema       | Germany        | 21                  | 9         | 175 l-o             | 53             | 3.20 a-e                   | 124            | 29                  | 9         | 268 j-q             | 82             | 5.47 a-j                   | 103            |
| Engmo        | Norway         | 6                   | 9         | 736 a               | 222            | 3.70 a                     | 143            | 10                  | 9         | 538 ab              | 168            | 5.44 a-j                   | 103            |
| Flemar       | Netherlands    | 6                   | 9         | 384 b-i             | 116            | 2.24 f-m                   | 87             | 10                  | 9         | 380 c-i             | 117            | 4.75 d-k                   | 89             |
| Goliath      | Netherlands    | 8                   | 9         | 449 b-e             | 135            | 3.36 a-d                   | 130            | 11                  | 8.8       | 361 f-m             | 111            | 6.32 ab                    | 119            |
| Gusto        | Netherlands    | 24                  | 9         | 178 l-o             | 54             | 3.14 a-f                   | 122            | 29                  | 9         | 260 t-r             | 80             | 4.73 d-k                   | 89             |
| Herma        | Netherlands    | 10                  | 9         | 353 c-k             | 106            | 1.97 h-m                   | 76             | 18                  | 8.5       | 375 c-j             | 115            | 4.84 d-k                   | 91             |
| Hokwa        | Japan          | 4                   | 9         | 289 e-o             | 87             | 2.51 d-k                   | 97             | 10                  | 9         | 379 c-i             | 116            | 5.22 a-k                   | 98             |
| Marcia       | Netherlands    | 15                  | 9         | 291 e-n             | 88             | 1.50 mn                    | 58             | 18                  | 8.6       | 284 t-q             | 87             | 4.39 h-k                   | 83             |
| Polka        | United Kingdom | 8                   | 9         | 376 b-j             | 113            | 2.76 b-h                   | 107            | 12                  | 9         | 374 c-k             | 115            | 5.40 a-j                   | 102            |
| Purlieu      | United Kingdom | 11                  | 9         | 383 b-i             | 115            | 2.91 a-g                   | 113            | 16                  | 9         | 131 g-p             | 96             | 5.33 a-j                   | 100            |
| Megas        | Netherlands    | 9                   | 9         | 263 f-o             | 79             | 2.91 a-g                   | 113            | 17                  | 9         | 293 h-p             | 90             | 5.73 a-g                   | 108            |
| Meson        | Netherlands    | 18                  | 9         | 205 j-o             | 62             | 1.72 j-m                   | 67             | 21                  | 9         | 227 o-r             | 70             | 4.01 k                     | 76             |
| Mino         | Denmark        | 10                  | 9         | 330 d-l             | 99             | 2.91 a-g                   | 113            | 18                  | 9         | 321 g-o             | 98             | 5.42 a-j                   | 102            |
| Motim        | Netherlands    | 10                  | 9         | 308 e-n             | 93             | 2.06 g-m                   | 80             | 18                  | 9         | 363 e-m             | 111            | 5.20 a-k                   | 98             |
| Motterwitzer | East Germany   | 6                   | 9         | 402 b-g             | 121            | 2.17 g-m                   | 84             | 9                   | 9         | 477 a-d             | 146            | 4.79 d-k                   | 90             |
| Pajbjerg 75  | Denmark        | 8                   | 9         | 306 e-n             | 95             | 2.96 a-g                   | 115            | 13                  | 9         | 319 g-o             | 98             | 5.02 b-k                   | 95             |
| Palermo      | Netherlands    | 18                  | 9         | 115 o               | 35             | 0.67 o                     | 26             | 24                  | 8.6       | 205 pqr             | 63             | 2.93 l                     | 55             |
| Pedion       | Netherlands    | 19                  | 9         | 309 e-n             | 93             | 2.31 e-m                   | 90             | 25                  | 9         | 231 n-r             | 71             | 4.82 d-k                   | 91             |
| Pet          | Germany        | 5                   | 9         | 354 c-k             | 107            | 2.31 e-m                   | 90             | 9                   | 9         | 441 b-f             | 135            | 5.29 a-k                   | 100            |
| Pota         | Denmark        | 7                   | 9         | 316 e-m             | 95             | 2.51 d-k                   | 97             | 12                  | 9         | 405 c-g             | 124            | 5.98 a-e                   | 113            |
| Pronto       | U.S.A.         | 8                   | 9         | 329 d-l             | 99             | 2.96 a-g                   | 115            | 11                  | 9         | 311 g-p             | 95             | 5.38 a-j                   | 101            |
| Rasant       | Germany        | 3                   | 9         | 491 b-d             | 148            | 2.84 a-h                   | 110            | 10                  | 9         | 553 a               | 170            | 6.00 a-d                   | 113            |

TIMOTHY - HAY - cont'd.

Test Site: Beaverlodge A. Research Station  
Seeding Year: 1977

| 1978 Harvest  |                |                     |           |                     |                |                            |                | 1979 Harvest        |           |                     |                |                            |                |  |  |
|---------------|----------------|---------------------|-----------|---------------------|----------------|----------------------------|----------------|---------------------|-----------|---------------------|----------------|----------------------------|----------------|--|--|
| Cultivar      | Origin         | Date Ripe<br>August | Hardiness | Seed Yield<br>kg/ha | % of<br>Climax | Herbage (DM)<br>Yield t/ha | % of<br>Climax | Date Ripe<br>August | Hardiness | Seed Yield<br>kg/ha | % of<br>Climax | Herbage (DM)<br>Yield t/ha | % of<br>Climax |  |  |
| Ref. Bd. 3062 |                | 20                  | 9         | 395 b-h             | 119            | 2.73 b-h                   | 106            | 29                  | 9         | 370 d-l             | 113            | 4.52 g-k                   | 85             |  |  |
| RVPF 735.1    | Belgium        | 9                   | 9         | 216 i-o             | 65             | 2.42 e-l                   | 94             | 12                  | 8.8       | 244 n-s             | 75             | 5.35 a-j                   | 101            |  |  |
| RVPF 735.2    | Belgium        | 10                  | 9         | 365 b-k             | 110            | 2.69 b-i                   | 104            | 18                  | 8.8       | 445 a-p             | 137            | 5.00 c-k                   | 94             |  |  |
| RVPF 735.3    | Belgium        | 8                   | 9         | 261 f-o             | 79             | 3.47 a-c                   | 134            | 14                  | 9         | 283 i-q             | 87             | 5.62 a-h                   | 106            |  |  |
| RVPF 735.4    | Belgium        | 9                   | 9         | 265 f-o             | 80             | 2.62 c-j                   | 102            | 14                  | 9         | 300 g-p             | 92             | 5.98 a-e                   | 113            |  |  |
| RVPF 735.5    | Belgium        | 9                   | 9         | 258 f-o             | 78             | 2.35 e-m                   | 91             | 14                  | 9         | 241 n-s             | 74             | 5.47 a-j                   | 103            |  |  |
| Sabre         | United Kingdom | 15                  | 9         | 360 c-k             | 108            | 2.24 f-m                   | 87             | 23                  | 9         | 297 g-p             | 91             | 4.68 e-k                   | 88             |  |  |
| Suceava       | Rumania        | 3                   | 9         | 365 b-k             | 110            | 2.96 a-g                   | 115            | 10                  | 9         | 531 ab              | 163            | 5.49 a-i                   | 103            |  |  |
| Surprise      | Netherlands    | 8                   | 9         | 304 e-n             | 92             | 3.20 a-e                   | 124            | 13                  | 9         | 291 h-p             | 89             | 5.69 a-h                   | 107            |  |  |
| Syn 1A        | United Kingdom | 6                   | 9         | 196 k-o             | 59             | 1.97 h-m                   | 76             | 9                   | 9         | 405 c-g             | 124            | 5.06 a-k                   | 95             |  |  |
| Syn 1B        | United Kingdom | 6                   | 9         | 228 g-o             | 69             | 2.46 d-l                   | 95             | 10                  | 9         | 439 b-f             | 135            | 5.53 a-h                   | 104            |  |  |
| Syn 1C        | United Kingdom | 7                   | 9         | 224 h-o             | 67             | 2.17 g-m                   | 84             | 9                   | 9         | 398 c-h             | 122            | 5.53 a-h                   | 104            |  |  |
| Syn 11        | United Kingdom | 8                   | 9         | 282 e-o             | 85             | 2.73 b-h                   | 106            | 13                  | 8.8       | 336 f-o             | 103            | 5.89 a-f                   | 111            |  |  |
| Syn 111A      | United Kingdom | 8                   | 9         | 314 e-n             | 95             | 2.76 b-h                   | 107            | 13                  | 9         | 227 o-r             | 70             | 4.59 f-k                   | 86             |  |  |
| Timfor        | U.S.A.         | 7                   | 9         | 269 f-o             | 81             | 2.08 g-m                   | 81             | 10                  | 9         | 381 c-i             | 117            | 4.64 f-k                   | 87             |  |  |
| Topas         | Denmark        | 6                   | 9         | 422 b-j             | 127            | 2.69 b-i                   | 104            | 11                  | 9         | 484 abc             | 148            | 6.29 a-c                   | 119            |  |  |
| Tt 3 - 70     | Netherlands    | 17                  | 9         | 231 f-o             | 70             | 1.97 h-m                   | 76             | 24                  | 9         | 237 n-r             | 73             | 4.77 d-k                   | 90             |  |  |
| Tw 4 - 70     | Netherlands    | 16                  | 9         | 404 b-f             | 122            | 2.24 f-m                   | 87             | 23                  | 9         | 307 g-p             | 94             | 5.08 a-k                   | 96             |  |  |
| Verdant       | U.S.A.         | 11                  | 9         | 328 d-l             | 99             | 3.58 ab                    | 139            | 15                  | 8.8       | 316 g-o             | 97             | 6.63 a                     | 125            |  |  |
| Winda         | Netherlands    | 22                  | 9         | 149 m-o             | 45             | 2.84 a-h                   | 110            | 28                  | 9         | 162 r               | 50             | 4.46 g-k                   | 84             |  |  |
| Mean          |                |                     |           | 312                 |                | 2.49                       |                | 339                 |           |                     |                |                            | 5.11           |  |  |

## TIMOTHY - HAY

Seeding Year: 1978

Data Year: 1979

| Cultivar   | Origin         | Beaverlodge B. (Foster Farm) |              |                  |             | Faiher (Beaupre Farm) |                  |      | Fort Vermilion |                  |      |
|------------|----------------|------------------------------|--------------|------------------|-------------|-----------------------|------------------|------|----------------|------------------|------|
|            |                | Hardiness                    | Harvest Date | Seed Yield kg/ha | % of Climax | Hardiness             | Seed Yield Kg/ha | % of | Hardiness      | Seed Yield kg/ha | % of |
| Asterix    | Netherlands    | 9                            | Sept. 4      | 318 l-q          | 77          | 9                     | (1)              |      | 9              | (1)              |      |
| Barmidi    | Netherlands    | 9                            | Aug. 15      | 335 i-p          | 81          | 9                     |                  |      | 9              |                  |      |
| Barmoti    | Netherlands    | 9                            | Aug. 9       | 456 b-i          | 110         | 9                     |                  |      | 9              |                  |      |
| Bartimi    | Netherlands    | 9                            | Aug. 15      | 431 c-l          | 104         | 9                     |                  |      | 9              |                  |      |
| Barvanti   | Netherlands    | 9                            | Aug. 22      | 326 k-q          | 79          | 9                     |                  |      | 9              |                  |      |
| Basho      | Canada         | 9                            | Aug. 9       | 284 p-r          | 69          | 9                     |                  |      | 9              |                  |      |
| Bodin      | Norway         | 9                            | Aug. 9       | 590 a            | 143         | 9                     |                  |      | 9              |                  |      |
| Bottnia II | Sweden         | 9                            | Aug. 9       | 461 b-g          | 112         | 9                     |                  |      | 9              |                  |      |
| Champlain  | Netherlands    | 9                            | Aug. 19      | 336 i-p          | 81          | 9                     |                  |      | 9              |                  |      |
| Climax *   | Canada         | 9                            | Aug. 12      | 413 e-m          | 100         | 9                     |                  |      | 9              |                  |      |
| Deploy     | United Kingdom | 9                            | Aug. 22      | 168 s            | 41          | 9                     |                  |      | 9              |                  |      |
| Engmo      | Norway         | 9                            | Aug. 9       | 552 ab           | 134         | 9                     |                  |      | 9              |                  |      |
| Erecta     | Belgium        | 9                            | Aug. 11      | 349 g-p          | 85          | 9                     |                  |      | 9              |                  |      |
| Farol      | Netherlands    | 9                            | Aug. 22      | 343 g-p          | 83          | 9                     |                  |      | 9              |                  |      |
| Fleamar    | Netherlands    | 9                            | Aug. 11      | 446 b-k          | 108         | 9                     |                  |      | 9              |                  |      |
| Forus      | Norway         | 9                            | Aug. 9       | 441 b-k          | 107         | 9                     |                  |      | 9              |                  |      |
| Georgikon  | Hungary        | 9                            | Aug. 9       | 450 b-i          | 109         | 9                     |                  |      | 9              |                  |      |
| Goliath    | Netherlands    | 9                            | Aug. 17      | 504 a-e          | 122         | 9                     |                  |      | 9              |                  |      |
| Grindstad  | Norway         | 9                            | Aug. 12      | 549 a-c          | 133         | 9                     |                  |      | 9              |                  |      |
| Gusto      | Netherlands    | 9                            | Sept. 4      | 401 e-p          | 97          | 9                     |                  |      | 9              |                  |      |
| Hokva      | Japan          | 9                            | Aug. 9       | 353 g-p          | 85          | 9                     |                  |      | 9              |                  |      |
| Korpa      | Iceland        | 9                            | Aug. 9       | 598 a            | 145         | 9                     |                  |      | 9              |                  |      |
| Mahndorfer | Germany        | 9                            | Aug. 11      | 501 a-f          | 121         | 9                     |                  |      | 9              |                  |      |
| Megas      | Netherlands    | 9                            | Aug. 14      | 287 o-r          | 69          | 9                     |                  |      | 9              |                  |      |
| Meson      | Netherlands    | 9                            | Aug. 22      | 302 m-q          | 73          | 9                     |                  |      | 9              |                  |      |
| Mino       | Denmark        | 9                            | Aug. 20      | 409 e-n          | 99          | 9                     |                  |      | 9              |                  |      |
| Motim      | Netherlands    | 9                            | Aug. 20      | 367 g-p          | 89          | 9                     |                  |      | 9              |                  |      |
| N.F.G.     | Germany        | 9                            | Aug. 9       | 493 a-f          | 119         | 9                     |                  |      | 9              |                  |      |
| Otto       | Finland        | 9                            | Aug. 11      | 551 a-c          | 133         | 9                     |                  |      | 9              |                  |      |
| Palermo    | Netherlands    | 9                            | Aug. 22      | 221 q-s          | 54          | 9                     |                  |      | 9              |                  |      |
| Para       | Poland         | 9                            | Aug. 9       | 339 h-p          | 82          | 9                     |                  |      | 9              |                  |      |

(1)Harvested seed destroyed by fire.

TIMOTHY - HAY (cont'd.)

Seeding Year: 1978

Data Year: 1979

| Cultivar     | Origin         | Beaverlodge B (Foster Farm) |              |                  |             | Falher (Beaupre Farm) |                  |      | Fort Vermilion |                  |      |
|--------------|----------------|-----------------------------|--------------|------------------|-------------|-----------------------|------------------|------|----------------|------------------|------|
|              |                | Hardiness                   | Harvest Date | Seed Yield kg/ha | % of Climax | Hardiness             | Seed Yield kg/ha | % of | Hardiness      | Seed Yield kg/ha | % of |
| Pedion       | Netherlands    | 9                           | Aug. 22      | 292 n-q          | 71          | 9                     | (1)              |      | 9              | (1)              |      |
| Pet          | Germany        | 9                           | Aug. 9       | 448 b-j          | 108         | 9                     |                  |      | 9              |                  |      |
| Phlewiola    | Germany        | 9                           | Aug. 9       | 335 i-p          | 81          | 9                     |                  |      | 9              |                  |      |
| Pota         | Denmark        | 9                           | Aug. 12      | 458 b-h          | 111         | 9                     |                  |      | 9              |                  |      |
| Pronto       | U.S.A.         | 9                           | Aug. 15      | 371 g-p          | 90          | 9                     |                  |      | 9              |                  |      |
| Ramona       | Netherlands    | 9                           | Aug. 22      | 185 rs           | 45          | 9                     |                  |      | 9              |                  |      |
| Rasant       | Germany        | 9                           | Aug. 9       | 414 d-m          | 100         | 9                     |                  |      | 9              |                  |      |
| Richmond     | Canada         | 9                           | Aug. 9       | 398 e-p          | 96          | 9                     |                  |      | 9              |                  |      |
| Rotenberg    | Sweden         | 9                           | Aug. 9       | 442 b-k          | 107         | 9                     |                  |      | 9              |                  |      |
| RVP 251.F.   | Belgium        | 9                           | Aug. 17      | 309 m-q          | 75          | 9                     |                  |      | 9              |                  |      |
| Sabre        | United Kingdom | 9                           | Aug. 22      | 356 g-p          | 86          | 9                     |                  |      | 9              |                  |      |
| Sigma        | Netherlands    | 9                           | Aug. 22      | 304 m-q          | 74          | 9                     |                  |      | 9              |                  |      |
| Suceava      | Rumania        | 9                           | Aug. 9       | 407 e-o          | 99          | 9                     |                  |      | 9              |                  |      |
| Surprise     | Netherlands    | 9                           | Aug. 17      | 449 b-i          | 109         | 9                     |                  |      | 9              |                  |      |
| Tammisto     | Finland        | 9                           | Aug. 9       | 457 b-h          | 111         | 9                     |                  |      | 9              |                  |      |
| Tapio 800    | Hungary        | 9                           | Aug. 9       | 390 e-p          | 94          | 9                     |                  |      | 9              |                  |      |
| Tarmo        | Finland        | 9                           | Aug. 9       | 561 ab           | 136         | 9                     |                  |      | 9              |                  |      |
| Tilda        | Denmark        | 9                           | Aug. 11      | 365 g-p          | 88          | 9                     |                  |      | 9              |                  |      |
| Timfor       | U.S.A.         | 9                           | Aug. 9       | 328 j-q          | 79          | 9                     |                  |      | 9              |                  |      |
| Topas Otofte | Denmark        | 9                           | Aug. 12      | 357 g-p          | 86          | 9                     |                  |      | 9              |                  |      |
| Vallo        | Sweden         | 9                           | Aug. 11      | 534 a-d          | 129         | 9                     |                  |      | 9              |                  |      |
| Verdant      | U.S.A.         | 9                           | Aug. 15      | 382 f-p          | 92          | 9                     |                  |      | 9              |                  |      |
| Mean         |                |                             |              | 399              | 96          |                       |                  |      |                |                  |      |

(1) Harvested seed destroyed by fire.

## ALSIKE CLOVER

Test Site: Beaverlodge A. Research Station  
Seeding Year: 1977

| Cultivar             | Origin  | Hardiness | 1978 Harvest (August 22) |                |                            |                | Hardiness | 1979 Harvest (September 19) |                |                            |                |
|----------------------|---------|-----------|--------------------------|----------------|----------------------------|----------------|-----------|-----------------------------|----------------|----------------------------|----------------|
|                      |         |           | Seed Yield<br>kg/ha      | % of<br>Aurora | Herbage (DM)<br>Yield t/ha | % of<br>Aurora |           | Seed Yield<br>kg/ha         | % of<br>Aurora | Herbage (DM)<br>Yield t/ha | % of<br>Aurora |
| Aldan Tri-<br>folium | Denmark | 9         | 659 a                    | 88             | 2.24 bc                    | 100            | 9         | 133 a                       | 67             | 1.99 a                     | 94             |
| Aurora *             | Canada  | 9         | 753 a                    | 100            | 2.24 bc                    | 100            | 9         | 197 a                       | 100            | 2.13 a                     | 100            |
| Dawn                 | Canada  | 9         | 635 a                    | 84             | 2.24 bc                    | 100            | 9         | 118 a                       | 60             | 2.13 a                     | 100            |
| Hogsta               | Sweden  | 9         | 377 b                    | 50             | 2.02 c                     | 90             | 9         | 150 a                       | 76             | 2.06 a                     | 97             |
| Alpo                 | Norway  | 9         | 659 a                    | 88             | 2.69 a-c                   | 120            | 9         | 156 a                       | 79             | 1.93 a                     | 91             |
| Iso Tetra            | Finland | 9         | 796 a                    | 106            | 2.91 ab                    | 130            | 9         | 158 a                       | 80             | 1.70 a                     | 80             |
| Meta Otofte          | Denmark | 9         | 761 a                    | 101            | 2.91 ab                    | 130            | 9         | 132 a                       | 67             | 1.72 a                     | 81             |
| Stena 4N             | Sweden  | 9         | 603 a                    | 80             | 2.91 ab                    | 130            | 9         | 105 a                       | 53             | 1.99 a                     | 94             |
| Tetra                | Sweden  | 9         | 753 a                    | 100            | 3.36 a                     | 150            | 9         | 181 a                       | 92             | 1.64 a                     | 77             |
| Mean                 |         |           | 664                      |                | 2.69                       |                |           | 148                         |                | 1.92                       |                |

## ALSIKE CLOVER

Seeding Year: 1978

Data Year: 1979

| Cultivar        | Origin  | Beaverlodge B. (Foster Farm) |                     |                | Falher (Beaupre Farm) |                     |                | Fort Vermilion |                     |                |
|-----------------|---------|------------------------------|---------------------|----------------|-----------------------|---------------------|----------------|----------------|---------------------|----------------|
|                 |         | Hardiness                    | Seed Yield<br>kg/ha | % of<br>Aurora | Hardiness             | Seed Yield<br>kg/ha | % of<br>Aurora | Hardiness      | Seed Yield<br>kg/ha | % of<br>Aurora |
| Aldan Trifolium | Denmark | 6.5                          | 460 abc             | 83             | 9                     | 603 a               | 119            | wk (1)         |                     |                |
| Alpo            | Norway  | 7.3                          | 556 ab              | 100            | 9                     | -                   | -              | 8              |                     |                |
| Aurora *        | Canada  | 8                            | 556 ab              | 100            | 9                     | 506 ab              | 100            |                |                     |                |
| Dawn            | Canada  | 8                            | 624 a               | 112            | 9                     | 571 ab              | 113            |                |                     |                |
| Ermo Otofte     | Denmark | 5.5                          | 450 abc             | 81             | 9                     | 566 ab              | 112            |                |                     |                |
| Hogsta          | Sweden  | 8.8                          | 484 abc             | 87             | 9                     | 496 ab              | 98             | 8.8            | 674 a               |                |
| Iso Tetra       | Finland | 9                            | 524 abc             | 94             | 9                     |                     |                | 8.3            | 679 a               |                |
| Jeno Dachnfeldt | Denmark | 6.3                          | 353 c               | 63             | 9                     | 515 ab              | 102            |                |                     |                |
| Odenwalder      | Germany | 7.8                          | 487 abc             | 88             | 9                     | 618 a               | 122            |                |                     |                |
| Otofte          | Denmark | 3.5                          | 506 abc             | 91             | 9                     | 370 b               | 73             |                |                     |                |
| Otofte 4N       | Denmark | 8                            | 516 abc             | 93             | 9                     | 603 a               | 119            | 8.3            |                     |                |
| Stena 4N        | Sweden  | 8.8                          | 413 bc              | 74             | 9                     | 494 ab              | 98             | 8.8            | 634 a               |                |
| Strain II       | Canada  | 6.5                          | 492 abc             | 88             | 9                     | 612 a               | 121            |                |                     |                |
| Tetra           | Sweden  | 9                            | 569 ab              | 102            | 9                     | 432 ab              | 85             | 8.8            | 632 a               |                |
| Mean            |         |                              | 499                 | 90             |                       | 532                 | 105            |                | 660                 |                |

(1) Winter killed.

## RED CLOVER

Seeding Year: 1978

Data Year: 1979

| Cultivar                | Origin         | Beaverlodge B. Foster Farm |                     |                   | Folher (Beaupre Farm) |                     |                   | Fort Vermilion |                     |                   |
|-------------------------|----------------|----------------------------|---------------------|-------------------|-----------------------|---------------------|-------------------|----------------|---------------------|-------------------|
|                         |                | Hardiness                  | Seed Yield<br>kg/ha | % of<br>Altaswede | Hardiness             | Seed Yield<br>kg/ha | % of<br>Altaswede | Hardiness      | Seed Yield<br>kg/ha | % of<br>Altaswede |
| Altaswede*              | Canada         | 9                          | 713 a-d             | 100               | 9                     | 377 a-d             | 100               | 8.5            | 878 ab              | 100               |
| Arlington               | U.S.A.         | 2.3                        | 371 i-m             | 52                | 9                     | 371 a-d             | 98                | 5.5            | 310 cd              | 35                |
| Astra                   | United Kingdom | 1.5                        | 260 h-l             | 36                | 9                     | 202 c-e             | 54                | 7.5            | 615 bc              | 70                |
| Bjorn                   | Sweden         | 9                          | 540 c-g             | 76                | 9                     | 398 a-c             | 106               | 9              | 553 bc              | 63                |
| Duro                    | Denmark        | 2.5                        | 616 b-e             | 86                | 9                     | -                   | -                 | 4              | -                   | -                 |
| Elbo                    | Denmark        | 7                          | 618 b-e             | 87                | 9                     | 474 a-b             | 126               | 7.8            | 812 ab              | 92                |
| Granta                  | United Kingdom | 0.8                        | 233 i-m             | 33                | 9                     | -                   | -                 | 1.3            | 0 n                 | 0                 |
| Gumpensteiner           | Austria        | 0.3                        | 92 l-m              | 13                | wk (1)                | -                   | -                 | 0.3            | 0 n                 | 0                 |
| Hamidori 4N             | Japan          | 1.8                        | 66 l-n              | 9                 | 9                     | -                   | -                 | 2.3            | 0 n                 | 0                 |
| Heges                   |                |                            |                     |                   |                       |                     |                   |                |                     |                   |
| Hohenheimer             | Germany        | 0.3                        | 0 d                 | 0                 | 9                     | -                   | -                 | 1.3            | 0 n                 | 0                 |
| Krano                   | Denmark        | 6.8                        | 784 ab              | 110               | 9                     | 362 a-d             | 96                | 7.8            | -                   | -                 |
| Kuhn                    | Netherlands    | 2.8                        | 287 h-l             | 40                | 9                     | 487 ab              | 129               | 2.5            | 186 cd              | 21                |
| Marcom                  | France         | 0.3                        | 39 mn               | 5                 | 9                     | -                   | -                 | 0.3            | 0 n                 | 0                 |
| Maris Gemini            | United Kingdom | 0.5                        | 211 j-n             | 30                | 9                     | -                   | -                 | 2              | 0 n                 | 0                 |
| Merkur                  | Sweden         | 8.5                        | 612 b-e             | 86                | 9                     | 329 a-e             | 87                | 8.3            | 1071 ab             | 122               |
| Mont-Calme              | Switzerland    | 0.5                        | 148 k-n             | 21                | -                     | -                   | -                 | 4              | -                   | -                 |
| Nava Trifolium          | Denmark        | 6.8                        | 877 a               | 123               | 9                     | 526 a               | 140               | 7.8            | 1133 a              | 129               |
| Norlac                  | Canada         | 9                          | 566 b-f             | 79                | 9                     | 318 be              | 84                | 8.5            | 1043 ab             | 119               |
| Norseman                | United Kingdom | 0                          | 0 d                 | 0                 | -                     | -                   | -                 | 0.3            | 0 n                 | 0                 |
| Olvi Otofte             | Denmark        | 2.5                        | 475 d-h             | 67                | 9                     | 337 a-e             | 89                | 5.8            | 837 ab              | 95                |
| Pacific                 | Canada         | 0.3                        | 0 n                 | 0                 | -                     | -                   | -                 | 0.8            | 0 n                 | 0                 |
| Perena                  | Rumania        | 3                          | 150 k-n             | 21                | 9                     | -                   | -                 | 6.3            | -                   | -                 |
| Rea                     | Sweden         | 3.3                        | 396 e-j             | 56                | 9                     | 324 a-e             | 86                | 3.3            | -                   | 0                 |
| Redhead                 | Germany        | 0.3                        | 0 d                 | 0                 | 9                     | -                   | -                 | 4.5            | -                   | -                 |
| Sally                   | Sweden         | 6.3                        | 342 g-k             | 48                | 9                     | 202 c-e             | 54                | 6              | -                   | -                 |
| S 123                   | United Kingdom | 1.8                        | 333 g-k             | 47                | 9                     | 374 a-d             | 99                | 4              | -                   | -                 |
| Taplanszent-<br>kereszt | Hungary        | 0.3                        | 83 mn               | 12                | 9                     | -                   | -                 | 1.5            | 0 n                 | 0                 |
| Temara 4N               | Switzerland    | 0.5                        | 0 n                 | 0                 | 9                     | -                   | -                 | 3              | -                   | -                 |
| Tripo                   | Norway         | 7                          | 450 e-i             | 63                | 9                     | 183 de              | 49                | 7.3            | -                   | -                 |
| Ulva                    | Sweden         | 5.3                        | 374 f-j             | 52                | 9                     | 147 e               | 39                | 7              | -                   | -                 |
| Venla                   | Finland        | 6.5                        | 675 a-d             | 95                | 9                     | 365 a-d             | 97                | 8              | -                   | -                 |
| Redland                 | U.S.A.         | 1.3                        | 273 h-l             | 38                | 9                     | -                   | -                 | 3.5            | -                   | -                 |
| Mean                    |                |                            | 331                 | 46                |                       | 340                 | 90                |                | 391                 | 45                |

(1) Winter killed