

ND 3902

## **ALFALFA VARIETY TRIAL – 1982**

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An Alfalfa Variety Trial was seeded at the Dickinson Experiment Station in May 1979. A similar trial was seeded at the Hettinger Experiment Station and the Central Grasslands Research Station in May 1981. The trial was designed to evaluate the performance of the varieties on the basis of dry weight herbage production and compared to a standard variety (Vernal). Five pasture and sixteen dry land hay type alfalfa varieties were included in the Dickinson Station trial. Six pasture and twenty-one dry land hay type varieties were seeded at the Hettinger Station and the Central Grasslands Research Station.

The dry weight above ground herbage production and the percentage of production of Vernal at the Dickinson Experiment Station, the Hettinger Experiment Station and the Central Grasslands Research Station are shown in Table 1. One cutting was taken at the Dickinson and Hettinger Experiment Stations. Two cuttings were taken at the Central Grasslands Research Station.

The five highest producing varieties at the Dickinson Experiment Station were Kane, Spredor II, Norseman, Travois, and Rangelander with 6139, 5260, 5210, 5077 and 4981 pounds of herbage production per acre respectively. At the Hettinger Experiment Station, the five highest producing varieties were Prowler, Travois, Spredor II, Nuggett and Iroquois with 5244, 5191, 4986, 4790 and 4782 pounds of herbage production per acre respectively. Rangelander, Drylander, Baker, Nuggett, and Polar II were the five highest producing varieties at the Central Grasslands Research Station for the first cutting with 6444, 6277, 5980, 5798 and 5587 pounds of herbage production per acre respectively.

The mean herbage production for the pasture type alfalfa varieties was greater at the Dickinson Experiment Station, the Hettinger Experiment Station and the first cutting and the total of two cuttings at the Central Grasslands Research Station than the mean herbage production for the dry land hay type alfalfas (Table 2). The mean herbage production was greater for the hay type varieties for the second cutting at the Central Grasslands Research Station.

Alfalfa varieties are often separated into categories based on their adaptability to survive the winter. The alfalfa varieties in these trials have been separated into three winter hardy categories. These categories are: very winter hardy, winter hardy, and moderately winter hardy. The mean herbage production for the very winter hardy varieties was greatest at the Dickinson Experiment Station, the Hettinger Experiment Station and for the first cutting at the Central Grasslands Experiment Station (Table 3). The moderately winter hardy alfalfa varieties had the greatest mean herbage production for the second cutting and for the total of the two cuttings at the Central Grasslands Research Station.

**Table 1. ALFALFA VARIETY ADAPTATION TRIAL – 1982**

| Variety     | Dickinson<br>Clip-2 July |             | Hettinger<br>Clip-7 July |             | Central Grasslands Station |             |                |             |                   |             |
|-------------|--------------------------|-------------|--------------------------|-------------|----------------------------|-------------|----------------|-------------|-------------------|-------------|
|             | Total<br>Lbs/Acre        | %<br>Vernal | Total<br>Lbs/Acre        | %<br>Vernal | Clip-30 June               |             | Clip-30 August |             | Total<br>Lbs/Acre | %<br>Vernal |
|             |                          |             |                          |             | Lbs/<br>Acre               | %<br>Vernal | Lbs/<br>Acre   | %<br>Vernal |                   |             |
| Agate       | 3832                     | 86          | 3908                     | 104         | 5302                       | 105         | 3644           | 114         | 8946              | 108         |
| Anik        | 4563                     | 103         |                          |             |                            |             |                |             |                   |             |
| A S – 67    |                          |             | 3923                     | 104         | 4329                       | 86          | 4041           | 126         | 8370              | 101         |
| Baker       | 4011                     | 91          | 4550                     | 121         | 5980                       | 118         | 3207           | 100         | 9187              | 111         |
| D – 111     | 3944                     | 89          | 3999                     | 106         | 4541                       | 90          | 3613           | 113         | 8154              | 99          |
| Drylander   |                          |             | 4604                     | 122         | 6277                       | 124         | 3105           | 97          | 9382              | 114         |
| Futura      |                          |             | 4752                     | 126         | 5207                       | 103         | 3427           | 107         | 8634              | 105         |
| Iroquois    | 4794                     | 108         | 4782                     | 127         | 4676                       | 93          | 2873           | 90          | 7549              | 91          |
| Kane        | 6139                     | 139         | 3644                     | 97          | 5132                       | 102         | 3023           | 95          | 8155              | 99          |
| Ladak       | 4796                     | 108         |                          |             |                            |             |                |             |                   |             |
| Ladak-65    | 4785                     | 108         | 4469                     | 119         | 4995                       | 99          | 3290           | 103         | 8285              | 100         |
| Magnum      |                          |             | 4507                     | 120         | 5349                       | 106         | 3567           | 112         | 8916              | 108         |
| Norseman    | 5210                     | 118         | 4406                     | 117         | 3840                       | 76          | 3528           | 110         | 7386              | 90          |
| Nuggett     | 4558                     | 103         | 4790                     | 127         | 5798                       | 115         | 3118           | 98          | 8916              | 108         |
| Perry       |                          |             | 4478                     | 119         | 5053                       | 100         | 3479           | 109         | 8532              | 103         |
| Polar I     | 4695                     | 106         | 4603                     | 122         | 4793                       | 95          | 3423           | 107         | 8216              | 100         |
| Polar II    |                          |             | 4016                     | 107         | 5587                       | 111         | 3764           | 118         | 9351              | 113         |
| Prowler     |                          |             | 5244                     | 139         | 5231                       | 104         | 2955           | 92          | 8186              | 99          |
| Ramsey      | 4804                     | 108         | 4027                     | 107         | 4427                       | 88          | 3000           | 94          | 7427              | 90          |
| Rangelander | 4981                     | 112         | 4184                     | 111         | 6444                       | 128         | 4034           | 126         | 10478             | 127         |
| Ranger      | 4455                     | 101         | 4298                     | 114         | 4322                       | 86          | 3542           | 111         | 7864              | 95          |
| Spredor II  | 5260                     | 119         | 4986                     | 132         | 5304                       | 104         | 3071           | 96          | 8375              | 102         |
| Thor        | 4158                     | 94          | 4015                     | 107         | 4867                       | 96          | 3202           | 100         | 8069              | 98          |
| Travois     | 5077                     | 115         | 5191                     | 138         | 4482                       | 89          | 3237           | 102         | 7719              | 94          |
| Trek        | 4282                     | 97          | 4162                     | 110         | 3899                       | 77          | 2781           | 87          | 6680              | 81          |
| Vernal      | 4425                     | 100         | 3768                     | 100         | 5054                       | 100         | 3197           | 100         | 8251              | 100         |
| 520         | 4274                     | 96          | 4512                     | 120         | 5559                       | 110         | 3761           | 118         | 9320              | 113         |
| 524         | 4121                     | 93          | 4440                     | 118         | 4612                       | 91          | 3611           | 113         | 8223              | 100         |
| 532         |                          |             | 3832                     | 102         | 4650                       | 92          | 3563           | 111         | 8213              | 100         |

**Table 2. Mean Herbage Production (Lbs. /Acre) for the Pasture and Dry Land Hay Type Alfalfa Varieties – 1982**

| <b>Location</b>                     |                              | <b>Pasture Type</b> | <b>Hay Type</b> |
|-------------------------------------|------------------------------|---------------------|-----------------|
| Dickinson Experiment Station        |                              | 5364                | 4453            |
| Hettinger Experiment Station        |                              | 4642                | 4297            |
| Central Grasslands Research Station | 1st cutting                  | 5478                | 4897            |
|                                     | 2 <sup>nd</sup> cutting      | 3238                | 3411            |
|                                     | <b>Total of two cuttings</b> | 8716                | 8309            |

**Table 3. Mean Herbage Production (Lbs. /Acre) for the Alfalfa Varieties in Three Winter Hardy Categories – 1982**

| <b>Location</b>                     |                              | <b>Very Winter Hardy</b> | <b>Winter Hardy</b> | <b>Moderately Winter Hardy</b> |
|-------------------------------------|------------------------------|--------------------------|---------------------|--------------------------------|
| Dickinson Experiment Station        |                              | 5104                     | 4348                | 4158                           |
| Hettinger Experiment Station        |                              | 4536                     | 4366                | 4174                           |
| Central Grasslands Research Station | 1 <sup>st</sup> cutting      | 5142                     | 4968                | 4998                           |
|                                     | 2 <sup>nd</sup> cutting      | 3247                     | 3349                | 3594                           |
|                                     | <b>Total of two cuttings</b> | 8389                     | 8317                | 8592                           |