

CUMULATIVE PROGRESS REPORT SUMMARY
BURGESS SPRING EXPERIMENTAL RANGE
June 19 to July 30 inclusive

Aug 13

| | 6/19 to 7/2 | 7/3 to 7/16 | 7/17 to 7/30 | 7/31 to 8/13 | | | |
|--|-------------------|-------------------|--------------------|--------------------|------|----------------------------|----------------------------------|
| 1. Precipitation (inches) | 0 | 7 | 0 | .03 | | | |
| 2. Air temperature (°F) | | | | | | | |
| Max. | 89 | 84 | 98 | 86 | | | |
| Av. max. | 80 | 76 | 88 | 82 | | | |
| Av. min. | 47 | 45 | 54.53 | 54 | | | |
| Min. | 36 | 40 | 47.46 | 48 | | | |
| 3. Soil temperature (°F) (1/4" below ground surface) | | | | | | | |
| Max. | 157 | 168 | 167 | 162 | | | |
| Av. max. | 151 | 144 | 160 | 148 | | | |
| Av. min. | 42 | 41 | 46 | 47 | | | |
| Min. | 30 | 35 | 36 | 40 | | | |
| 4. Relative humidity (%) | | | | | | | |
| Av. max. | 62 | 72 | 64 | — | | | |
| Av. min. | 16 | 20 | 22.22 | — | | | |
| 5. Wind movement (miles/day) | | | | | | | |
| Max. | 33 | 35 | 42 | 55 | | | |
| Av. | 20 | 25 | 29.29 | 36 | | | |
| Min. | 5 | 7 | 18 | 14 | | | |
| 6. Evaporation | | | | | | | |
| Porous cup atmometer (cc's/day) | | | | | | | |
| Max. | 90 | 99 | 102 | 105 | | | |
| Av. | 72 | 84 | 88 | 76 | | | |
| Min. | 60 | 15 | 77 | 31 | | | |
| Water trough (gallons/day) | | | | | | | |
| Max. | 10 | 11 | 12 | 12 | | | |
| Av. | 8 | 8 | 10 | 8 | | | |
| Min. | 6 | 3 | 8 | 3 | | | |
| 7. Water consumption (gallons/day/steer) | 6 | 7 | 9 | 9 | | | |
| 8. Water yield, Cone Troughs well (estimated % of capacity) | 100 | 100 | 100 | 100 | | | |
| 9. Salt consumption (lbs/day/steer) | 0.11 | 0.09 | 0.06 | 0.06 | | | |
| 10. Animal weights, lbs. (Av./steer) | | | | | | | |
| Breed | No. | 6/19 | 7/2 | 7/16 | 7/30 | Total gain to 7/30 8/13 | Total gain to 8/13 per animal |
| Angus | 5 | 711 | 772 | 821 | 851 | 824 | 153 |
| Hereford | 5 | 775 | 835 | 872 | 911 | 904 | 128 |
| Shorthorn | 5 | 781 | 847 | 903 | 940 | 949 | 165 |
| All breeds | 15 | 756 | 818 | 866 | 900 | 898 | 149 |
| Gain per day for period | | 4.4 | 3.4 | 2.8 | 2.3 | 0.5 | |
| Cumulative total gain from June 19 to end of period | | 62 | 110 | 146 | 142 | 149 | |

1/ The weight of one Hereford steer for this period had to be thrown out because an unsatisfactory record of his weight was obtained. Therefore totals and averages for this period are based on four steers for the Hereford group, and fourteen steers for the total of all animals.

CUMULATIVE PROGRESS REPORT SUMMARY (Continued)

11. Plant utilization by cattle

The 12 key species utilized during each period are listed approximately in order of preference and volume consumed. Number 1 denotes top rank and number 12 bottom rank.

| | 6/19 to 7/2 | 7/3 to 7/16 | 7/17 to 7/30 | 7/31 to 8/13 |
|-------------------------------|-----------------------------|-------------------|--------------------|--------------------|
| | Order of preference or rank | | | |
| <i>Carex</i> sp. | 1 | 3 | 7 | 6 |
| <i>Festuca idahoensis</i> | 4 | 1 | 8 | 4 |
| <i>Bromus marginatus</i> | 3 | 6 | 8 | 7 |
| <i>Sitanion hystrix</i> | 5 | 8 | 6 | 5 |
| <i>Crepis acuminata</i> | 6 | | gone | |
| " <i>monticola</i> | 2 | | gone | |
| <i>Eriogonum nudum</i> ? | 7 | | 10 | |
| <i>Balsamorhiza sagittata</i> | 8 | 5 | | |
| <i>Stipa elmeri</i> | 9 | 11 | | |
| <i>Phacelia heterophylla</i> | 10 | | | |
| <i>Senecio aronicoides</i> | 11 | | gone | |
| <i>Parashia tridentata</i> | 12 | 2 | 2 | 3 |
| <i>Aster</i> sp. | | 4 | | |
| <i>Achillea millefolium</i> | | 7 | | |
| <i>Gum triflorum</i> | | 9 | | |
| <i>Gilia leptalea</i> | | 10 | | |
| <i>Eriophyllum</i> sp. | | 12 | 11 | |
| <i>Arctostaphylos patula</i> | | 1 | 4 | 12 |
| <i>Lupinus</i> sp. | | | 1 | 1 |
| <i>Cirsium</i> sp. | | | 9 | |
| <i>Stipa occidentalis</i> | | | 12 | |
| <i>Bromus tectorum</i> | | | 3 | 2 |
| <i>Astragalus purshii</i> | | | | 8 |
| <i>Gayophytum</i> sp. | | | | 9 |
| Approximate average | | | | 10 |
| moisture content of | | | | 11 |
| forage for period | 90 | 68 | 48 | |
| | 66 | 61 | 48 | |

Wyethia mollis
Trifolium ayathiferum

Cumulative Progress Report Summary (Continued)

12. Pine Seedling record

| | 11/19 6/19 to <u>7/2</u> | 11/19 7/3 to <u>7/16</u> | 11/19 7/17 to <u>7/30</u> | 11/19 7/31 to <u>8/13</u> |
|---|--|--|---|---|
| No. alive at end of period - - | 2302 | 1404 | 975 | 747 |
| No. died during period - - | 1097 | 932 | 433 | 228 |
| Cumulative mortality from June 19 to end of period - - | 1097 | 2,029 | 2,462 | 2,690 |
| Estimated mortality for period by causes (%) | | | | |
| Climatic factors - - | 85 | 81 | 82 | — |
| Rodents, insects, etc. - - | 10 | 17 | 17 | — |
| Livestock - - - | T | 2 | 1 | — |
| Unknown - - - | 5 | — | — | — |

Compiled by Wm. G. & J. W.
 Checked by Wm. G. & J. W.
 Date 8/3/36

Summary of Climatic Conditions
 Burgess Springs Experimental Range

July 18-31 (inclusive)

| Date | Air Temperatures | | Wind Movement (Miles) | Evaporation (cc. from anemometer) | Rainfall | | |
|---------|------------------|---------|--------------------------|---|----------|--|--|
| | Maximum | Minimum | | | | | |
| July 18 | 90.0 | 49.9 | 23.6 | 102.0 | 0.0 | | |
| " 19 | 95.0 | 55.3 | 18.0 | 100.0 | 0.0 | | |
| " 20 | 94.7 | 59.4 | 20.2 | 87.0 | 0.0 | | |
| " 21 | 92.0 | 59.3 | 22.8 | 85.0 | 0.0 | | |
| " 22 | 87.9 | 58.8 | 23.5 | 78.0 | 0.0 | | |
| " 23 | 89.8 | 59.1 | 29.5 | 80.0 | 0.0 | | |
| " 24 | 87.8 | 56.5 | 32.7 | 100.0 | 0.0 | | |
| " 25 | 86.1 | 52.2 | 36.0 | 94.0 | 0.0 | | |
| " 26 | 85.5 | 49.3 | 24.4 | 79.0 | 0.0 | | |
| " 27 | 81.1 | 46.6 | 33.0 | 77.0 | 0.0 | | |
| " 28 | 82.2 | 49.2 | 42.0 | 77.0 | 0.0 | | |
| " 29 | 84.1 | 52.2 | 36.8 | 89.0 | 0.0 | | |
| " 30 | 86.1 | 53.5 | 35.7 | 90.0 | 0.0 | | |
| " 31 | 85.9 | 52.0 | 39.8 | 93.0 | 0.0 | | |
| Total | 1228.2 | 753.3 | 418.0 | 1231.0 | 0.0 | | |
| Average | 87.5 | 53.5 | 29.8 | 88.0 | 0.0 | | |

Compiled by-
Date-

Summary of soil temperatures
July 18-31 inclusive - B.S.F.R.

| Date | 1/4" under Soil | | 3" under Soil | | 7" under Soil | |
|----------------|-----------------|-------|---------------|-------|---------------|--------|
| | Max. | Min. | Max. | Min. | Max. | Min. |
| July 18 | 162.8 | 36.2 | 94.2 | 61.5 | 76.0 | 68.7 |
| " 19 | 165.1 | 44.6 | 97.0 | 65.1 | 77.6 | 69.3 |
| " 20 | 167.3 | 51.5 | 97.8 | 68.3 | 78.7 | 70.9 |
| " 21 | 163.6 | 53.9 | 96.7 | 69.9 | 78.5 | 72.7 |
| " 22 | 156.2 | 54.2 | 92.7 | 70.7 | 77.6 | 73.5 |
| " 23 | 161.2 | 52.8 | 98.7 | 69.2 | 79.1 | 73.8 |
| " 24 | 157.6 | 50.5 | 97.9 | 69.2 | 79.2 | 73.3 |
| " 25 | 157.8 | 46.0 | 97.8 | 68.3 | 78.6 | 73.8 |
| " 26 | 159.0 | 41.1 | 97.0 | 65.0 | 77.8 | 72.0 |
| " 27 | 154.9 | 40.0 | 95.9 | 64.5 | 76.8 | 71.3 |
| " 28 | 157.0 | 42.6 | 96.5 | 64.1 | 76.8 | 71.1 |
| " 29 | 158.1 | 45.6 | 97.6 | 65.7 | 77.7 | 71.0 |
| " 30 | 159.0 | 46.2 | 99.0 | 66.9 | 78.0 | 72.4 |
| " 31 | 157.4 | 44.1 | 97.9 | 66.3 | 77.9 | 72.6 |
| Total | 2236.7 | 649.3 | 1356.7 | 934.3 | 1090.4 | 1005.5 |
| Average | 159.5 | 46.4 | 96.8 | 66.6 | 78.0 | 71.8 |