

TECHNICAL NOTES

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The following was issued as a technical note in Wyoming, January 1976.

EFFECTS OF GRAZING ON IDAHO FESCUE AND BLUEBUNCH WHEATGRASS

When determining proper grazing use on native rangelands, the Soil Conservation Service uses the "key species" concept. A key species usually will have a high grazing preference by the kind of animal that is grazing the pasture for the season of use concerned.

This high grazing preference for a specific plant can place some unusual stress upon the plant, especially if it is competing for growing space with other species.

A five-year study by W. F. Muegler on Idaho fescue and bluebunch wheatgrass shows some interesting results. Two categories of competition along with two clippings were used in the study. Full competition was achieved by permitting the natural vegetation surrounding the plants selected for treatment to remain undisturbed. Partial competition was affected by clipping all vegetation within a 60-cm radius of Idaho fescue plants and within 90-cm radius of the selected bluebunch wheatgrass plants to ground level.

Heavy clipping treatment represents approximately 50 percent of the total herbage weight removed before full emergence of flower stalks. Extreme clipping level removes about 10 percent of the herbage volume at flowering, followed by 75 percent removal of the regrowth when control plants neared seed-ripe stage.

Conclusions from this study were:

1. Idaho fescue of moderately low vigor requires approximately three years of protection to regain full vigor. Even then, a residual instability in plant health may remain for several years.
2. Idaho fescue of low vigor produced only two-thirds as much herbage and number of flower stalks as normal plants after five years of protection. Complete vigor recovery can take more than six years.
3. Bluebunch wheatgrass of moderately low vigor may require at least six years of protection to recover.
4. Bluebunch wheatgrass of low vigor produced only two-thirds as much herbage and number of flower stalks as normal plants after five years of protection. Complete recovery can take more than eight years.