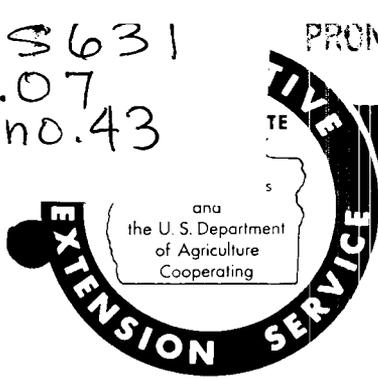


Oregon State University Fertilizer Recommendation for

Alfalfa for Hay and Seed
(Josephine and Jackson Counties)

Alfalfa will out-yield other hay crops on deep, well-drained soils in southern Oregon. Irrigation is necessary for top yields, though good yields of either hay or seed can be expected without irrigation on deep soils with good moisture-holding capacity. In addition to an adequate fertilizer program, these points are important for successful alfalfa production: (1) Seed a recommended variety; (2) Prepare a good seed bed; (3) Be assured of adequate nodulation; (4) Control weeds, insects, and diseases; (5) Provide adequate irrigation, but do not overirrigate.

Lime

Lime application should be made according to recommendations based on soil test results. Apply before seeding, preferably the summer or fall before spring seeding. Lime may be needed on some soils with high magnesium levels even though the soil reaction is satisfactory. Top dressings of lime are seldom fully effective in improving an established stand.

Nitrogen

Twenty pounds of nitrogen (N)/A applied in advance of seeding may assist in establishing a stand. On established stands, nitrogen often encourages weeds and grasses to the detriment of the alfalfa.

Phosphorus

On established stands -- Broadcast phosphate fertilizers in the fall or early spring.

1. With soil test values below 12 pounds of phosphorus (P)/A--
Apply 80 to 120 pounds of phosphate (P_2O_5)/A.
2. With soil test values between 12 and 25 pounds of phosphorus (P)/A--
Apply 60 to 80 pounds of phosphate (P_2O_5)/A.
3. With soil test values between 25 and 40 pounds of phosphorus (P)/A--
Apply 40 to 60 pounds of phosphate (P_2O_5)/A.
4. With soil test values above 40 pounds of phosphorus (P)/A--
Phosphate response is not expected.

On new seeding -- Broadcast the heaviest of the rates recommended above and work into the soil ahead of seeding.

If the phosphate fertilizer can be banded $\frac{1}{2}$ inch or 1 inch to the side or below the seed, minimum rates are adequate. Banding 30 pounds of phosphate (P_2O_5)/A should pay with soil test values above 40 pounds of phosphorus (P)/A.



Potassium

1. With soil test values below 150 pounds of potassium (K)/A--
Without irrigation, apply 80 to 100 pounds of potash (K_2O)/A annually in the fall or early spring.
With irrigation, apply 120 to 150 pounds of potash (K_2O)/A, one half in the fall or early spring and the other half after either the first or second cutting.
2. With soil test values between 150 and 250 pounds of potassium (K)/A--
Apply 60 to 80 pounds of potash (K_2O)/A annually in the fall or early spring.
3. With soil test values between 250 and 350 pounds of potassium (K)/A--
Apply 40 to 60 pounds of potash (K_2O)/A in the fall or early spring.
4. With soil test values above 350 pounds of potassium (K)/A--
Potash response is not expected.

Sulfur

Apply 30 to 40 pounds of sulfur (S)/A annually. Sulfur may be included in other fertilizer material or through the application of gypsum. Apply in the fall or early spring.

Boron

Boron may be applied as borated gypsum or borated super-phosphate or as agriculture grade borax.

1. With soil test values below 0.75 ppm of boron (B)/A--
On established stands, apply 3 to 4 pounds of boron (B)/A and follow with $1\frac{1}{2}$ pounds of boron (B)/A annually.
2. With soil test values between 0.75 and 1.00 ppm of boron (B)/A--
Apply $1\frac{1}{2}$ to 2 pounds of boron (B)/A.
3. With soil test values above 1.00 ppm of boron (B)/A--
Boron applications are not recommended.

Other Minor Elements

To date, field observations and experiments have not established the need for other minor elements such as iron, copper, zinc, manganese, or molybdenum.