

PLANTING AND MANAGING ANNUAL CLOVERS ON DRYLAND RANGE

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By planting annual clover pastures on depleted grainlands, many ranchers in California can realize greatly increased profits.

The decision to seed these legumes, however, depends on annual rainfall and soil pH:

- A) In areas with 10 inches or less of annual rainfall, large seedings are not recommended. Experimenting on a small scale with early maturing clover varieties is good advice here.
- B) On rangelands with more than 10 inches of rainfall, have the soil tested for pH, phosphorus and sulfur. Then, have the results interpreted by your seed dealer or farm advisor so that you will apply the correct seed and fertilizer. Soils with a high pH (basic) are not as suitable for most varieties of annual legumes as are slightly acidic soils.

Following is a program recommended by the University of California Agricultural Extension Service for ranges with an annual rainfall of 10 inches or more and with acidic soils:

FIRST YEAR

- 1) Select a field with grain or sudangrass stubble. Irrigation, if available, can be used to start the seeding in case of dry weather,
- 2) If a soil test shows phosphorus and sulfur deficiencies, apply 400 to 500 pounds of single superphosphate per acre before the first fall rains.
- 3) Disk very lightly with an open disk. Make cuts not over three inches deep. If the soil is turned over too much, weed competition will be encouraged.
- 4) Seed in October or early November as close to the first fall rains as possible and before cold weather. Fall seedings in October and early November are much more successful than December seedings. If germinating rains do not come before cold weather, delay seeding until the following year.
- 5. Purchase seed which is freshly pellet-inoculated or pellet-inoculate the seed yourself within a few days before planting. Caution! Rose and sub clovers require separate inoculation materials. Be certain your seed is inoculated with the proper material.
- 6. Broadcast by ground rig or airplane a mixture of 10 to 12 pounds of annual clovers per acre.

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Suggested seed mixtures:

- a) On clay-loam soils where annual rainfall is 15 inches or more:
 - 2 pounds Kondinin, Sirint or Hykon rose clover
 - 1 pound Wilton rose clover
 - 1 pound Dixie crimson clover
 - 2 pounds Howard subclover
 - 2 pounds Geraldton or Dinninup subclover
 - 2 pounds Mt. Barker or Clare subclover (Clare is best on neutral or basic soils)
 - 2 pounds Hardinggrass

Total 12 pounds per acre

On neutral or basic soils, include 1 pound of 173 Barrel Medic.

- b) On lighter soils or where rainfall is 10 to 15 inches:
 - 2 pounds Hykon or Sirint rose clover
 - 1 pound Wilton rose clover
 - 1 pound Kondinin rose clover
 - 2 pounds Geraldton subclover
 - 1 pound Dixie crimson clover
 - 2 pounds Howard subclover
- $\frac{1}{10}$ pound Dinninup subclover (on neutral or basic soils, substitute light pounds per acre light pound of 173 Barrel Medic)

For more specific recommendations for your area, contact your farm advisor.

7. Cover clover seed by running a cultipacker or ring roller over the field.

MANAGEMENT FIRST YEAR AFTER SEEDING

- 1. Graze early in the growing season the first year to control competition from weeds and grasses. Graze whenever the ground is dry enough to prevent livestock from pumching the soil.
- 2. Stop grazing while the clovers are flowering. This will usually be April and May, depending on the clover varieties and the weather. Look closely at the sub clovers to check for the small white flowers which grow near the ground. Rose and crimson clover flowers, however, grow high enough to be observed while walking through the field.
- 3. Wait until the clovers have dried out and the seed is hard before resuming grazing. This will probably be June to August, but inspect the seed heads to be certain the seed is hard and not in the dough stage.

MANAGEMENT IN FOLLOWING YEARS

- 1. After the first year, graze early each growing season to control competition and later as needed (clovers make good dry feed). More stands of clover have been lost by too little grazing than by too much grazing. If a good stand is established the first year and the seed sets well, it will not be necessary to restrict spring and early summer grazing after the first year. Seed production on poor stands can be encouraged, however, by restricting grazing during later years. Crimson clover is very palatable and has a tendency to go out after two or three years where spring grazing removes the upright seed heads.
- 2. Apply 200 to 300 pounds of single superphosphate every second or third year.