

It is generally advisable to begin rehabilitating severely depleted soil first by growing cowpeas as a green manure crop. Cowpeas have the ability to grow on poorer soils and give better results in cases of extreme soil depletion. Cowpeas can also be used for livestock forage ("A Simple Way to Increase Crop Yields," 1932).

According to KSU research in 1909, cowpeas at that time were more sure of making a stand, achieving a larger yield of forage with ranker growth, and were better suited for planting with corn for ensilage and for green manuring than soybeans ("Cowpeas," 1909).

The cowpeas were fed as a high quality hay in the 1930's and 1940's. The soybean began to replace the cowpea because the soybean was easier to manage as a hay crop since it lacked the vining nature of the cowpea.

Cowpeas require little or no fertilizer and do not cause bloat in lambs. The growth rate of lambs grazing cowpeas is equal to a concentrate-hay diet. Initial growth and regrowth of cowpeas will provide a grazing period from June until frost to fatten lambs for market when a rotation grazing system is used. Regrowth after grazing was more abundant in quantity than the original growth. Rate of gains on the lambs ranged from 0.58 to 0.69 pounds per day (Hagler et al. 1988).

Soil Requirements

Cowpeas can thrive on highly acid to neutral soils but they are less well adapted to alkaline soils. They can withstand considerable drought and a moderate amount of shade, but they are less tolerant of waterlogging than soybeans. Cowpeas are short-day, warm-weather plants, sensitive to cold and killed by frost (Duke and James, 1990).

Establishment

If sown for hay, cowpeas should be sown early once any danger of frost is over. If planting for a green manure crop or pasture, they can be planted much later (Duke and James, 1990). Suggested seeding rates are

12-25 pounds per acre at a depth of 1-2" between May and June. The plants take three months to reach maturity (Shroyer, 1987). Planting cowpeas in corn at last cultivation provides pasturing for sheep, provided there is sufficient moisture. The cowpeas increased yields of corn by 3-4 bushels. Cowpeas planted with corn provide a higher protein forage value ("Cowpeas," 1909).

Nitrogen Credits

Cow peas have produced 65-315 pounds of nitrogen per acre (Munoz and Graves, 1989).

Rotation

A wheat/cowpeas/wheat rotation was investigated early this century by Kansas State University. After wheat harvest, the ground was double disced with cowpeas sown at a rate of one bushel per acre. The peas were plowed down as a green manure crop in the middle of September and reseeded back to wheat. Without the use of fertilizer, the wheat yield increased an average of four bushels per acre. However, the practice was not recommended in the central and western parts of Kansas due to moisture limitations.

A recommended rotation by KSU at the turn of the century was wheat double cropped into cowpeas with a green manure plowdown before a heavy frost. Corn would follow in the next spring. The cowpeas in this rotation increased corn yields by nine bushels per acre ("Cowpeas," 1909). Forage cane planted with cowpeas yielded slightly more than cane alone ("Crop Experiments in 1903," 1904). Cowpeas harvested as a crop and then rotated to oats significantly boosted oats yields ("Small Grain Crops," 1906).

REFERENCES

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CREDITS

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