Growing Turnips for Forage

Area of Adaptation

Turnips (Brassica rapa) are best adapted to cool, moist climates of western Europe, New Zealand, and other temperate areas. Root crops thrive where the average summer temperature is 60 to 65° F. They do not grow as well as summer crops in areas where the average temperature is much above 70° F. Turnips will, however, stand a light freeze. A moist climate, together with a deep loam soil or a soil high in organic matter, provides optimal conditions for turnip growth.

Turnips may be grown in all parts of western Oregon and in irrigated, lower elevation regions of eastern Oregon.

Primary Use

Turnips are used primarily as supplemental pasture feed for sheep during the winter in western Oregon or as a double-crop pasture for beef cattle in eastern Oregon. Shortage of pasture during the winter months in western Oregon often creates a critical need for forage that can be grown in late summer or fall and seeded for this period. Turnips are ideally suited for this use because they grow well in the autumn when adequate precipitation is available.

In eastern Oregon, turnips usually are planted following wheat, potatoes, or peas to provide an inexpensive forage crop for beef cattle. The seed is broadcast by air on sandy soils and the area is irrigated to stimulate germination.

Production of 6,000 pounds dry matter per acre is possible in western Oregon with fall planting and no irrigation. In eastern Oregon, with irrigation following another crop, production of 8,000 pounds dry matter per acre is common.

Varieties

Two types of turnips are used for forage purposes—white- and yellow-fleshed ones. The white-fleshed type is quick maturing, grows well up out of the ground (making it easy for sheep to eat), and is adaptable to a wide range of soil types. It also can withstand hot, dry weather better than yellow-fleshed types. The early maturing, white-fleshed turnips mature in 60 to 90 days. Turnips sown early in the season are not suitable for late fall or winter feeding because of deterioration. Typically, the white-fleshed turnips are sown from early to late summer to provide an abundant, nutritious forage crop throughout the fall and winter.

York Globe is a very early maturing variety and has good
disease resistance. Green Globe is a later maturing vari-
ety with better keeping quality.

Yellow-fleshed varieties mature later than white-
fleshed varieties and have firmer flesh and better keeping
quality. Examples of yellow varieties include Purple Top
Yellow, Yellow Globe, Green Top Yellow, Purple Re-
sistant, Green Resistant, and Waites Eclipse.

Establishment

Plant turnips on fertile, well-drained soil. Accessibil-
ity of the planted area to the lots upon which the sheep
will be wintered makes controlled grazing easier. Fields
should be plowed in the fall and late winter and tilled
during the spring months to prepare a deep, fine, firm
seedbed capable of holding soil moisture. The seedbed
should be similar to that prepared for seeding alfalfa or a
new pasture. Drill the seed ¼ to ½ inch deep or broad-
cast and lightly harrow to cover the seed. Following
seeding, firm the soil by rolling. Plant turnips during the
May-to-July season for grazing from August to October.
Feed the white-fleshed turnips as they mature, as they
cannot be readily saved.

Early August plantings of turnips, either alone or
with annual ryegrass, will produce excellent winter feed
if moisture is available for germination. Supplemental
irrigation may be necessary to assure early establish-
ment during late summer, as natural rainfall at this time of
year usually is not dependable. Later plantings are
possible, but September plantings will have greatly re-
duced production compared to August plantings.

Fertility and pH Requirements

Work a fertilizer application of 60 to 100 pounds of
nitrogen and 80 pounds of P2O5 into the seedbed prior to
planting. If the crop follows a sod crop, such as a
plowed-down grass pasture, double the nitrogen rate.

If crop residue such as wheat or grass seed straw is
incorporated prior to planting turnips, extra nitrogen
will be required to break down the residue. Apply
180 pounds of N for August 1 plantings of turnips and
140 pounds of N for September 1 plantings. If turnips are
seeded with a grain drill with banding equipment, apply-
ing 30 pounds of P2O5 in the bands will be of considerable
benefit in western Oregon.

Most root crops have a fairly high potassium require-
ment. If the soil test shows less than 200 ppm K, broadcast
60 to 100 pounds of K2O prior to seedbed preparation.

Include 20 to 30 pounds of sulfur per acre in the
fertilizer program in areas where there is no carryover of
S from the previous crop. Best production is obtained
when the pH is between 6.0 and 7.0.

Management

Animals that have not grazed turnips before may
take a few days to become accustomed to turnips, but
once they do, gains of 1½ to 2 pounds per day for
500-pound calves and ¼ to ½ pound per day for lambs
are possible.

When large fields are to be grazed, it is essential to
cross-fence and graze limited areas before opening up
new areas. To minimize waste caused by trampling, limit
the grazing of turnips to 2 hours per day and hold sheep
or cattle in a pasture or lot with access to hay at the instance
of the time.

Weed Control

Weeds are often a more serious problem in turnips
than in other Brassica species. Harrow fields after seed
emergence or till recently laminated weeds. This prac-
tice is frequently used where the crop is too thick and will
benefit from thinning.

Consult the Oregon Weed Control Handbook for
currently approved recommendations.

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