FERTILE SOIL

Fertile soil doesn't necessarily mean more nutritious animal products, Dr. L. L. Turk of Michigan State told co-workers at the December fertilizer conference. But it does mean more dollars' worth per acre, he conceded.

WINTER RYE VARIETY TRIALS DATA

The following data was obtained at the Northwest Washington Experiment Station, Mount Vernon, Washington, by Herman Austenson this past season. The winter rye variety trials test for green manure was harvested April 25. The variety yields are in the following table:

<table>
<thead>
<tr>
<th>Variety</th>
<th>Tons D.M. Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosen</td>
<td>1.61</td>
</tr>
<tr>
<td>Dominant</td>
<td>2.24</td>
</tr>
<tr>
<td>Abruzzi</td>
<td>2.86</td>
</tr>
<tr>
<td>Balbo</td>
<td>2.72</td>
</tr>
<tr>
<td>Storm</td>
<td>2.15</td>
</tr>
<tr>
<td>Petkus</td>
<td>2.48</td>
</tr>
</tbody>
</table>

"For every thirty parts of cellulose consumed by fungi and bacteria one part of nitrogen is changed from an inorganic form into microbial protoplasm" — Waksman

ALFALFA VARIETIES

This is a brief sketch of the history and adaptation of alfalfa varieties that may be of interest to Washington growers.

Ladak

Ladak is an introduction from northern India. It is probably a hybrid between the yellow and purple flowered types. Very high yielding all over the United States. As an example, a quote from a recent Iowa bulletin: "Under Iowa conditions, Ladak has been consistently the highest yielding variety for more than 20 years. Only in recent years has it been surpassed by Buffalo and Ranger in 4- and 5-year stands, where wilt has been severe." Ladak is noted for its high production in the first cutting, thus it has been the leading producer in the eastern dryland area of Washington.
Cossack

This variety came from the dry steppes of Russia. Similar to Grimm alfalfa. Inadequate seed supplies forced this variety to occupy a place of minor importance in the United States. It is not wilt resistant.

Grimm

This variety came from Germany. It was grown and developed by a farmer in Minnesota. A natural hybrid between the yellow and purple flowered types, it has excellent winterhardiness but is quite susceptible to wilt. It has been a good yielder in Washington in non-irrigated areas but is not the top variety.

Baltic

Baltic was first grown in South Dakota. It is similar to Grimm. A strain, Meeker Baltic, has been grown rather extensively in Colorado. Michigan reselected Baltic to produce Hardigan which behaves similar to Baltic here. It is not recommended in Washington.

Turkistan Group

These alfalfas were introduced into the United States because of cold and bacterial wilt resistance. They are slow in recovery, after clipping, have early fall dormancy, and are susceptible to many leaf and stem diseases. Two strains have been developed: Hardistan and Orestan, neither are of special importance in Washington or the United States as a whole.

Ranger

Ranger is a synthetic variety, developed at Nebraska from strains of Turkistan, Cossack and Ladak. Ranger is resistant to wilt and medium winterhardy. It is the most extensively grown variety in the United States. It is recommended in Washington for all areas in which bacterial wilt is a problem i.e., the irrigated section of Central Washington.

Buffalo

Buffalo was selected in Kansas, from a Kansas common alfalfa. It is quite resistant to bacterial wilt. It is not as winterhardy as Ranger and is thus recommended for the areas below mid-Iowa, Illinois, Indiana, Ohio, generally. It has demonstrated no advantage over Ranger in Washington.

Atlantic

Atlantic was developed in New Jersey. It is high yielding over much of the United States, but has no resistance to wilt. It was not as high yielding as Ladak in the variety trials last year at Pullman. This is its first test here.

Narragansett

Narragansett was developed in Rhode Island. It is similar to Atlantic in being high yielding but not resistant to bacterial wilt. In its first trial at Pullman last year, it was the highest yielding variety. It has produced high yields over much of the northern United States in recent tests. Narragansett is the most winterhardy of the present varieties. It is the recommended variety in Alaska.
Williamsburg

This is another eastern variety, developed in Virginia. It has not yet been tested in Washington. It was developed for yielding ability only and may be somewhat similar to Atlantic and Narragansett.

Talent

Released by Oregon from a French strain. It was developed for nematode resistance in the Medford, Oregon, area. It is not high yielding even in Oregon outside of the nematode area. In last year's yield trials at Pullman it was one of the lowest producing varieties.

Nomad

A recent release by Oregon, developed by a commercial seed company. It is supposed to be a pasture type with a prostrate spreading habit of growth under dryland conditions. In a recent pasture test in North Dakota, after five years of pasturing Ladak was outstanding in vigor and yield, but Nomad proved no more persistent and much less vigorous than some of the other alfalfas.

Rhizoma

Rhizoma was developed in British Columbia from a hybrid between the yellow and variegated alfalfas. It is supposed to produce creeping rhizomes. In a recent 3-year variety test at Pullman, it was second in yield to Ladak but did not creep out of the drill rows in that time.

Vernal

A recent release by Wisconsin not yet on the market. It was developed to resist ice sheet damage. It has wilt resistance as well. It has not been as high yielding nor any more winterhardy than Narragansett in Wisconsin or some of the adjacent states where it has been tested. The first variety trials in Washington were planted in the spring of 1953.

Sevelra

A strain not yet released by Idaho as a variety. It was developed for dryland conditions. It is now under test at Pullman and Hooper, but no results have been secured as yet.