CC108 General Fertilizer Recommendations on Irrigated Land in Nebraska

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GENERAL FERTILIZER RECOMMENDATIONS

ON

IRRIGATED LAND IN NEBRASKA

Nebraska

COOPERATIVE EXTENSION WORK
IN AGRICULTURE AND HOME ECONOMICS


W. V. Lambert, Director, Lincoln
General Fertilizer Recommendations on Irrigated Land in Nebraska

Rate of Application

<table>
<thead>
<tr>
<th>Crop</th>
<th>Nitrogen</th>
<th>Phosphate</th>
<th>Potash</th>
<th>Nitrogen</th>
<th>Phosphate</th>
<th>Potash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Following alfalfa, clover or</td>
<td>30-40</td>
<td>None**</td>
<td>None</td>
<td>50-80</td>
<td>None**</td>
<td>None</td>
</tr>
<tr>
<td>Following grass or grain crops</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-10 tons of manure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Following corn or grain sorghum</td>
<td>30-40</td>
<td>None**</td>
<td>None</td>
<td>50-80</td>
<td>None**</td>
<td>None</td>
</tr>
<tr>
<td>Small grains, legume*</td>
<td>None</td>
<td>20-40</td>
<td>None</td>
<td>20-30</td>
<td>40-80</td>
<td>None</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>None</td>
<td>60-80</td>
<td>None</td>
<td>None</td>
<td>60-80</td>
<td>None</td>
</tr>
<tr>
<td>Small grains</td>
<td>None</td>
<td>None***</td>
<td>None</td>
<td>30-40</td>
<td>None***</td>
<td>None</td>
</tr>
<tr>
<td>Potatoes</td>
<td>None</td>
<td>40-50</td>
<td>None</td>
<td>30-40</td>
<td>40-80</td>
<td>None</td>
</tr>
<tr>
<td>Sugar beets</td>
<td>None</td>
<td>40-80</td>
<td>None</td>
<td>40-60****</td>
<td>40-80</td>
<td>None</td>
</tr>
<tr>
<td>New seeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>brome-alfalfa</td>
<td>None</td>
<td>40-60</td>
<td>None</td>
<td>15-30</td>
<td>40-60</td>
<td>None</td>
</tr>
<tr>
<td>Grass seed production***</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>50-60</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Old stands of brome grass for pasture—apply 80-120 pounds of nitrogen per acre.

* Inoculation of the legume seed with reliable cultures is desirable.
** The application of phosphate to corn at planting time may be desirable on land high in free lime.
*** Small grain grown on high lime soils will respond to phosphate.
**** Ten to fifteen pounds of nitrogen at planting time plus 40-50 pounds at blacking and thinning or applied all at planting.
***** Applies especially to cool season grasses such as brome, intermediate wheatgrass, etc.
Time and Method of Application

Farmers trying commercial fertilizers for the first time should place fertilized and unfertilized strips side by side in the field, in order to observe by direct comparison whether it pays to use the fertilizer.

A. Phosphate Fertilizers

1. Small grains--The phosphate fertilizer should be applied at the time of planting with a combination drill or broadcast and disked into the soil prior to planting. If the phosphate is broadcast and disked in before seeding apply 10-15 pounds of additional available phosphate per acre.

2. Corn--The phosphate fertilizer may be applied with an attachment on the lister or planter.

3. Legumes--Broadcast and disk into the soil before planting.

B. Nitrogen Fertilizers

1. Corn or grain sorghums--Best applied with an attachment on the cultivator. The nitrogen fertilizer may be broadcast between the rows prior to the second cultivation.

2. Wheat--Broadcast in the spring before the grain is 6 inches tall. If a mixed fertilizer is used it should be applied in the fall before planting.

3. Oats and barley--Broadcast at planting or within 4 weeks after planting. If a mixed fertilizer is used it should be applied in the fall before planting.

4. Bromegrass pasture--Broadcast in the fall (September or October) or early in the spring (before April 15.)

5. Grass seed production:
Solid stands--Broadcast in the fall (September or October) or early spring (before March 15.)

Rows--Apply in the fall with an attachment on the cultivator or broadcast in the fall as a topdressing.

C. Mixed Fertilizers

Mixed fertilizers should be broadcast and disked in before planting. On land that is low in fertility a mixed fertilizer containing some nitrogen and the recommended amount of phosphate is desirable, especially on legume and small grain seedings.

D. Lime

Some fields in Central Nebraska may need lime for successful growth of legumes. If you have trouble in starting legumes, soil samples should be tested, and lime applied if the test shows a deficiency.

E. Potash

The soils of Nebraska are usually well supplied with potash. In experimental work over the state with commercial fertilizers, potash has usually not given a profitable response on most crops, except in isolated fields where the soil is sandy, acid, and deficient in potash.