Epsom salt is made up of magnesium sulfate. Magnesium is critical in the formation of chlorophyll and in aiding the absorption of phosphorus. Epsom salt as a plant food provides a greener appearance in acid loving plants such as tomatoes, outdoor lawns, rhododendrons, camellias, roses, and azaleas. The following is a guide to using Epsom salt:

<table>
<thead>
<tr>
<th>Plants</th>
<th>Application Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomatoes</td>
<td>Apply 1 Tablespoon per foot of height for each plant every two weeks</td>
</tr>
<tr>
<td>Roses</td>
<td>Apply 1 teaspoon per foot of height for each plant every two weeks</td>
</tr>
<tr>
<td>Azaleas &amp; Rhododendrons</td>
<td>Apply 1 Tablespoon per 9 sq ft (3’ X 3’) over the root zone every two to four weeks</td>
</tr>
<tr>
<td>Lawns</td>
<td>Apply 3 lbs per 1250 sq ft (25’X 25’)</td>
</tr>
<tr>
<td>Houseplants</td>
<td>Mix 1 teaspoon per gallon of water and feed to the plants every two to four weeks</td>
</tr>
<tr>
<td>Trees</td>
<td>Apply 2 Tablespoons per 9 sq ft (3’ X 3’) over root zone once every four months</td>
</tr>
<tr>
<td>Garden Startup</td>
<td>Sprinkle approximately 1 cup per 100 sq ft (10’ X 10’) and mix into soil prior to planting</td>
</tr>
</tbody>
</table>

Warm Soil for Spring Plants

Warming up soil for spring plants can be hastened by covering planting beds with sheets of black plastic, to trap the heat of the sun and hold it through the night. The plastic blocks sunlight and discourages weeds. Clear plastic heats soil faster, but encourages weed seed germination. Poke holes in the plastic to allow rain to reach soil. In a week or 10 days, cut four inch wide “X’s” into the film, then set plants in soil underneath.

By mid to late May, young plants will begin active growth, often at fast rate. Rather than removing plastic, pile organic mulch such as dried leaves, pine straw, or compost on top of the plastic. The organic mulch will prevent weed growth and conserve moisture.

Farmers Market Planning Meeting

With spring just around the corner it’s time to think about opening day at the Farmers Market. Planning efforts will begin at 6 PM March 23 at the Stanly County Agri-Civic Center. This is a cooperative effort between NC Cooperative Extension Service, Albemarle Downtown Development, and area farmers and merchants to plan for the upcoming year. Anyone interested in selling their product through the Stanly County Farmers Market (Market Station) is encouraged to attend. The meeting will begin with a short presentation on “How to Better Market Your Product” followed by a discussion and planning for opening day!
Here in the Piedmont March and April is the time to set out dormant stored plants. Strawberries typically do best when planted in the matted row system. For a matted row bed, set the plants 1 ½ to 2 feet apart in the row. Space the rows 3 ½ to 4 feet apart. A matted row is encouraged to develop from the runner plants that grow from the mother plant. Set plants with the root straight down (never bent) and with the crown even with the top of the ground. Soon after planting blossoms will emerge that should be pinched to encourage early runnering from the mother plant.

**First season’s fertilization:** If no soil test has been made, broadcast about 4 pounds of 10-10-10 fertilizer for each 100 feet of row 2-3 weeks before planting. One month after planting strawberries sidedress with nitrogen. I would recommend using about 1-½ pounds of ammonium nitrate (34-0-0) per 100 feet of row. Another sidedress application should also be made in August to promote good flower bud development in the fall.

**Using Irrigation for Frost Protection**

All crops that cannot survive 32°F can be protected against freeze or frost damage for short durations with sprinkler irrigation. It is most practical on those crops that have a high profit potential. The primary limitation is that overhead irrigation cannot be used when high winds accompany the low temperatures. Overhead irrigation can protect the plant down to 22°F.

**How It is Done?** You need an accurate thermometer and irrigation equipment with low volume nozzles (0.11 to 0.15 inch per hour) on 60 by 60 foot spacing. Set up the irrigation equipment well in advance of an anticipated frost. Hang the thermometer in the open, near or in the field at plant level. Observe the temperature frequently. When the temperature falls to 34º or 35°F turn on the irrigation system. Do not turn it off until morning sun is directly on the plants. You do not need to melt the ice off the plant. The sun will do this for you.

**Ground Nesting Bees Active**

Nature has played her normal part and ground-nesting bees should be appearing soon. We have had one report already. Ground nesting bees are solitary and not as social as honeybees and bumble bees. They nest in single tubes in the ground near each other. They are unlikely to sting if you don’t provoke them. Ground-nesting bees generally prefer nesting in areas with morning sun exposure and well-drained soils containing organic matter. Burrows are excavated in areas of bare ground or sparse vegetation.

**Pest Management**

Cultural Control methods include heavy watering or irrigation with a lawn sprinkler during the nest-building period to discourage nesting. Also where practical tilling of the soil to destroy tunnels may discourage further nesting.
Winter Cold Damage to Boxwoods

This year I have had several calls to identify problems with boxwoods. In several cases the problem has been winter cold damage. Boxwoods are susceptible to winter cold damage and may show the following symptoms:

1. **The foliage is reddish brown, yellowish, grayish green, or completely loses color.**
2. Entire branches may die, especially in the middle of plant.
3. Sunken areas in the bark of the trunk just above the soil line, in the crotches, or along the sides of main branches occur. Examination of the sunken bark may show that it is brown throughout or contains brown streaks and that in many places; it has separated from the wood so that patches of considerable size can be stripped off.

   Boxwoods that are low in vitality are more susceptible to winter damage. Plants that experience a growth check during the summer and are stimulated into untimely growth by rainy periods in the fall do not harden off their growth before freezing weather; therefore, they are susceptible to winter damage. In mild winters, plants that were dormant in the fall may be coaxed into cambial activity on warm days, especially if they are exposed to direct sunlight. The recurrence of freezing weather injures or kills the new tissue and sometimes causes the bark to freeze and separate from the wood.

   Water loss may cause severe damage to boxwood. This loss occurs in winter when high winds or temporary warm weather causes a plant to give off an unusually high amount of moisture. This coupled with frozen ground, which prevents roots from taking up moisture, causes browning or burning of the foliage.

   Spraying boxwood plants that have a tendency to winter burn with an anti-desiccant spray in late November may help to lessen winter burn or browning. A second application in late January is often recommended.

All greenhouse growers should consider running a solution analysis test for their greenhouse crops. This test can help growers avoid major problems such as excess salts or high alkalinity. It is a useful precaution, especially if source water has not been tested for two years, or a new greenhouse has just been constructed. By running a solution analysis you can help make your fertilizer applications more efficient and maximize growth and yield potential of your greenhouse crops.

Collecting a source water sample is easy. Let the water run for 15 minutes before filling a clean, 16 ounce plastic bottle. Samples from a nutrient solution should be taken after the fertilizer is thoroughly mixed in.

Solution analysis provides important information on total alkalinity, electrical conductivity, pH, boron, calcium, chloride, iron, magnesium, manganese, nitrogen, phosphorus, potassium, sodium, sulfur, and zinc. The test cost $4 per sample. Samples are submitted to NCDA for testing. Here sound recommendations are given for crop management.

For more information on nutrient sampling for your greenhouse crops contact NC Cooperative Extension Service in Stanly County (704.983.3987).

Test Greenhouse Source Water & Nutrient Solutions

Shannon L. Braswell
Extension Agent
Agriculture - Horticulture
Tips for Mowing Spring Lawns

- Cleanest cuts when mowing are obtained when blades are sharp. Dull blades reduce lawn quality by tearing instead of cleanly cutting the grass, creating many ragged leaf ends that quickly wither and bleach and are easy ports of entry for disease.
- To maintain a high-quality lawn, turf grass should be cut often enough that less than 50% of the leaf surface is removed with each mowing.
- If lawn gets too high during wet seasons, raise the mower and cut-off one fourth to one half of the present growth. Then, lower the mower to its proper height and mow again in a day or two.

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Plants to Prune in March

- Arboritae
- Bayberry
- Boxwood
- Butterfly Bush
- Camellia, Sasanqua
- Cherry Laurel
- Crape Myrtle
- Eleagnus
- Euonymus
- Juniper
- Privet