A study on efficacy of Calcarea phosphorica 200 in controlling the botrytis blight disease in Rosa plant

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Abstract
Agrohomeopathy is the specialized area of Homeopathy. Homeopathic medicines are used in agriculture for various purposes (like seed germination, for soil health improvement, seedling growth, flowering, fruiting, disease protection and also to overcome environmental stress). Various scientific studies showed that Homeopathic medicines which are potentised can alter physiological activities of plants in different ways. Now a day’s Agricultural homeopathy is being increasingly used all around world to reduce bad effects caused by the indiscriminate use of chemical products in agricultural practices. The science of Homeopathy has great potentials and could give a new direction that requires attention of the researchers in alternative agriculture. Botrytis blight is a fungal disease in which entire flowers are affected and produce a gray fuzzy mold. This disease is also called as gray mold. Buds and flowers develop abnormally and turn in to brown.

Materials and Methods: Rose plants effected with Botrytis blight. Homeopathic medicine-Calcarea phos 200 dilution for every seven days. A regular, well-rotted animal manure is added every 15 days in a month

Results: Calcarea phos 200 has increased number of buds, and flowers.

Keywords: Botrytis blight, buds, flowers, calcarea phos

Introduction
Agro-homeopathy is alternative for chemical fertilizers and pesticides in agriculture. There are many benefits of agro homeopathy.it include improvement in quality of soil , reduces fossil fuels consumption and pollution, economy savings and preservation of natural ecology, hence saves the environment. The environment will be green with homeopathy. The use of homeopathic remedies for plants was first introduced and practiced by Baron von Boenninghausen. When he the excess or leftover remedies into his plant pots, he observed effect on the plants. Charles Darwin who was biologist also experimented with homeopathic remedies on plants. Rose is oramental plant. Different variety of plant pathogens could attack outdoor roses from time to time. Botrytis blight is a fungal disease which attacks dying tissue. It may also attack healthy tissue. Entire flowers are affected and produce a gray fuzzy mold. Botrytis blight is also called as gray mold. In this disease buds and flowers will develop abnormally and will turn in to brown color. Flowers will show irregular flecks and brown spots on it. In cool damp weather soft, brown spots appear on leaves, stem, and flowers. Sometimes the disease is observed as small flecks on infected petals. Because of wounds to plants when flowers have been cut or the plants have been pruned we can see more spread of disease. Pathogen B. cinerea grows at optimum temperature 60°F and is favored by high humidity .once the pathogen enters the plant through wounds it will form oval or one-celled conidia (spores) which in turn form in to a cluster. The pathogen sometimes also forms sclerotia (infectious propagules) which appear as black, flattened or slightly raised structures on the plant surface in early stage there are brown spots on leaves and buds, and spots of dark color on flower petals. As the disease progresses spots start showing grayish mold Calcarea phosphorica, is used for plants which are not responding to fertilization, shows slow growth and necrosis on the border of leaves.

Materials and methods

Materials used for study
Rose plants effected with Botrytis blight.
Homeopathic medicine - Calcarea phos 200 dilution.
A regular, well-rotted animal manure.
Methodology

Inclusion criteria
Rose plants effected with Botrytis blight disease

Exclusion criteria
- Rose plants with other infectious diseases are excluded
- Normal tap water is not used

Mode of administration
- 10 ml of Calcarea phos 200 dilution is diluted in 10 litres of Distilled water and sprayed over rose plant for every seven days.
- Manure is added every 15 days in a month
- Duration of study 2 months

Process
- Rose plants effected with Botrytis blight disease are identified and were divided into two groups A and B
- One group of rose plants were given both Calcarea phos 200 dilution and manure while the other group was administered with manure only.

Results

<table>
<thead>
<tr>
<th>Group</th>
<th>Date on which medicine or manure administered</th>
<th>No of flower buds developed</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUP A (Calcarea phos 200 and manure)</td>
<td>23 – 1 - 2021</td>
<td>0</td>
</tr>
<tr>
<td>GROUP B (Manure)</td>
<td>30 – 1 - 2021</td>
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<tr>
<td>GROUP A (Calcarea phos 200 and manure)</td>
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<td>0</td>
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<tr>
<td>GROUP B (Manure)</td>
<td>6 – 2 - 2021</td>
<td>4</td>
</tr>
<tr>
<td>GROUP A (Calcarea phos 200 and manure)</td>
<td>9 – 2 - 2021</td>
<td>2</td>
</tr>
<tr>
<td>GROUP B (Manure)</td>
<td>13 – 2 - 2021</td>
<td>9</td>
</tr>
<tr>
<td>GROUP A (Calcarea phos 200 and manure)</td>
<td>Not given</td>
<td>6</td>
</tr>
<tr>
<td>GROUP B (Manure)</td>
<td>20 – 2 - 2021</td>
<td>9</td>
</tr>
<tr>
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<td>23 – 2 - 2021</td>
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<td>6</td>
</tr>
<tr>
<td>GROUP B (Manure)</td>
<td>23 – 2 - 2021</td>
<td>6</td>
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</tbody>
</table>

Before treatment
After treatment

Conclusion
Calcarea phos has increased number of buds, and flowers. All flowers were healthy. Present study helps many people to overcome the disease effects on plants. The use of this drug helps farmers to increase plant growth.

References
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