PART-I

GENERAL

SOLANUM - TUBEROSUM AND ITS DISEASES
*Solanum-tuberosum* is native of *peru* and *Chile* in South America. Spaniards carried potatoes to Europe in about 1580 soon it spread to Portugal, France, Germany, Switzerland and to rest of Europe including the Great Britain. It became a very important crop of Ireland. The Irish immigrants introduced potato to new England [North America] in 1719. The England Men were however, very much prejudicated against potatoes for about 200 years. They called the tubers evil and unfit for consumption by Christians since they were not mentioned in the Bible. Europe to day accounts for 90 per cent of potatoes. North America 5 per cent, and the rest of the world 5 percent of the total. An annual herb belongs to the family solanaceae of dicot angiosperm. It is weak stemmed, very much branched and spreading plants. It has a height of only 2 to 3 ft. The leaves are pinnately compound. The plant bears small white, yellow, or purple flowers and small berries. The most important structures in a potato plant are the Swollen tips of the under ground branches they are called tubers.

The tubers bear a number of "eyes" which are groups of buds borne in the axils of absent leaves. Each eye has a central bud which is surrounded by smaller lateral buds. Potatoes are propagated repetatively by means of tuber pieces at right angles to the main axis to remove the inhibiting effect of the apical bud.
Potato tuber is one of the natural source of starch. Food-value of potatoes have

<table>
<thead>
<tr>
<th>Content</th>
<th>Weight</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein</td>
<td>55 gms</td>
<td>3.6</td>
</tr>
<tr>
<td>Calcium</td>
<td>500 mg</td>
<td>1.3</td>
</tr>
<tr>
<td>Iron</td>
<td>20 mg</td>
<td>3.8</td>
</tr>
<tr>
<td>Thiamine</td>
<td>1.1 mg</td>
<td>7.3</td>
</tr>
<tr>
<td>Riboflavin</td>
<td>1.2 mg</td>
<td>2.5</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>50 mg</td>
<td>40.0</td>
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</tbody>
</table>

Common diseases of *Potato tuber*

1. Dry Rot of Potato
   caused by *Fusarium roseum* *Fusarium solani* var. *coeruleum*

2. Wet Rot of Potato
   caused by *Botryodiplodia*, *Macrophomina phaseoli*

3. Bacterial soft Rot of Potato
   caused by *Rhizopus arrhizus*

4. Late blight of Potato
   caused by *Phytophthora infestans*
5. Early blight of Potato
   caused by *Alternaria solani*

6. Gane grene disease of Potato
   caused by *Phoma exigua*

7. Skin spot disease of Potato
   caused by *Polycyganum pustulans*

8. Silver scurf of Potato
   caused by *Helminthosporium solani*