## Diagnostic Chart for Plant Problems

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<table>
<thead>
<tr>
<th>Plant Part</th>
<th>Symptom</th>
<th>Possible Causes</th>
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</table>
| **I. Whole plant** | A. Recently transplanted plant fails to grow | 1. Drought  
2. Excess water  
3. Injured prior to planting  
4. Insufficient root system  
5. Improper planting technique |
|                  | B. Sudden death of growing plant or plant parts | 1. Excess fertilizer  
2. Gas  
3. Girdling  
4. Lightning  
5. Weed killers  
6. Winter injury |
|                  | C. Gradual decline of previously healthy plant, poor growth, yellowing and dropping of foliage, death of individual shoots | 1. Air pollution  
2. Construction  
3. Disease injury  
4. Drought  
5. Excess moisture  
6. Excess fertilizer  
7. Gas  
8. Girdling  
9. Grade change  
10. Insect injury  
11. Nutrition  
12. pH of soil  
13. Compaction due to foot traffic  
14. Change exposure (to full sun)  
15. Damage to the stem  
16. Nematodes |
| **II. Main stem or branches** | A. Malformation of growth | 1. Insect injury  
2. Weed killers  
3. Pollutants  
4. Winter injury  
5. Diseases |
|                  | B. Die-back of shoots | 1. Borers or other insects  
2. Construction injury  
3. Disease injury  
4. Excess water  
5. Girdling  
6. Hail damage  
7. Lack of light  
8. Nutrition  
9. Winter injury  
10. Drought |
III. Foliage

A. Scorched or dry appearance to foliage
   1. Cold temperature
   2. Drought
   3. Excess fertilizer
   4. Excess salt on foliage
   5. High temperature
   6. Nutrition
   7. Physical injury
   8. Spray injury
   9. Nearby fire

B. Foliage is yellow or mottled, may be less than average in size, distorted, drop prematurely
   1. Air pollution
   2. Disease injury
   3. Excess water
   4. Graft incompatibility
   5. Improper pH of soil
   6. Insect injury
   7. Nutrition

C. Iron chlorosis
   1. Poorly drained soil
   2. Overfertilization
   3. Improper ph (mortar in soil, etc.)
   4. Nematode damage to root system
   5. Poor soil preparation
   6. Actual deficiency of iron in the soil

D. Browning of margin or tips of leaves
   1. Root loss due to recent transplanting
   2. Poor soil drainage
   3. Poor soil preparation
   4. Excessive fertilization
   5. Root rot disease
   6. Mechanical damage to stem
   7. Inadequate moisture
   8. In winter, cold damage
   9. Insect (borers)
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| Foliage continued | E. Curled and distorted foliage | 1. Insect (aphids)  
2. Weed killer injury |

F. Wilted foliage  
1. Disease (anthracnose)  
2. Drought  
3. Excess fertilizer  
4. Excess moisture  
5. Gas leak

G. Skeletonized  
1. Insect (skeletonizer)

H. Tunnels or mines between surfaces  
1. Insect (leaf miner)

I. Chewed margins of foliage  
1. Chewing insects

J. Gray color (sometimes bronze tint) to foliage, especially evergreens, webbing may be present  
1. Mites

K. Black or brown spotting of foliage  
1. Disease  
2. Spray injury

L. White leaves or powdery appearance to leaves  
1. Air pollution  
2. Disease (mildew)  
3. Weed killer injury

M. Rolled leaves  
1. Cold temperature  
2. Drought  
3. Leaf roller insects

N. Needles dropping  
1. Natural needle drop  
2. Nutrition (lack of potassium)  
3. Disease (needle cast)

O. Rusty areas on leavers  
1. Disease (rust)

P. Black sooty appearance to leaves and stems  
1. Insects (aphids, white flies)

IV. Flowers  
A. Plant fails to produce flowers  
1. Improper daylength  
2. Improper pruning  
3. Juvenility  
4. Nutrient imbalance  
5. Shade  
6. Winter injury  
7. Excessive growth
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| Flowers continued              | B. Fail to open properly         | 1. Bacterial blight  
                                |                                                | 2. Drought  
                                |                                                | 3. Insect (weevil)  
                                |                                                | 4. Spray injury  
                                |                                                | 5. Winter injury  
                                |                                                | 6. Lack of chilling  
                                |                                                | 7. Artificial lights  
                                |                                                |
| C. Petals chewed               |                                  | 1. Insect (grasshopper, Japanese beetles, Rose chafer)  
                                |                                                | 2. Drought  
                                |                                                | 3. Temperatures unusually high and low humidity  
                                |                                                |
| D. Short flowering period      |                                  | 1. Herbicides  
                                |                                                | 2. Moisture  
                                |                                                | 3. Temperature  
                                |                                                |
| E. Flower buds split           |                                  | 1. Drought  
                                |                                                | 2. Improper pruning  
                                |                                                | 3. Juvenility  
                                |                                                | 4. Lack of pollination  
                                |                                                | 5. Male plant  
                                |                                                | 6. Cold or frost damage during the flowering period  
                                |                                                |
| V. Fruit                       | A. Plant fails to produce fruit  | 1. Drought  
                                |                                                | 2. Improper pruning  
                                |                                                | 3. Juvenility  
                                |                                                | 4. Lack of pollination  
                                |                                                | 5. Male plant  
                                |                                                | 6. Cold or frost damage during the flowering period  
                                |                                                |
|                                | B. Drop at early stage of        | 1. Drought  
                                |                                                | 2. Insect injury  
                                |                                                | 3. Lack of fertilization  
                                |                                                | 4. Frost  
                                |                                                | 5. Disease  
                                |                                                | development