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EC69-1849 Vegetable Diseases, II : An Aid to Identification and Control

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VEGETABLE DISEASES, II

An Aid to Identification and Control

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Agricultural Extension Plant Pathologists

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1. **STEM ANTHRACNOSE:** *Colletotrichum truncatum*. Occurs rarely on bean and lima bean in Nebraska. Infected plants appear chlorotic and stunted. Brick red spots occur on leaves, petioles, and stems. Initial small, red spots on the pods may result in pod drop, or may spread over the entire surface. Captan, maneb, or zineb are suggested fungicides when controls are justified.

2. **MOSAIC:** virus. Commonly occurs on many of the vine crops. Yellow-green and dark-green mottling of the leaves with a general stunting or "bunching" of entire plant. Fruit may be warty or knobby. Control aphids and cucumber beetles which transmit the viruses with malathion and Sevin or methoxychlor.

3. **BACTERIAL SPOT:** *Xanthomonas vesicatoria*. Rarely seen in Nebraska. This disease is characterized by wart-like, raised pimples on the leaves, promptly turning dry and brown. Affected leaves become yellow and drop. Spots on the fruit are blister-like and rough. If the disease is severe, a rotation program of at least three years in both seedbed and transplant field should be followed.

4. **DOWNY MILDEW:** *Peronospora parasitica*. Rarely seen on cabbage or other crucifers in Nebraska. Under cool, moist conditions leaf spots enlarge indefinitely to form yellow areas on upper side and fluffy white mildew on the lower side. Leaves will turn purple to brown, wilt and die. Avoid overcrowding and sprinkling of foliage. During cool, rainy periods, apply chloranil, maneb, or zineb at 5-day intervals.

5. **LETTUCE DROP:** *Sclerotinia spp.* This disease may be troublesome wherever head lettuce is grown. It appears in mid-season or later as a progressive wilting of leaves beginning with the older, lowermost leaves and continuing until the head collapses. May be foul smelling, slimy, or covered with a dense white, gray, or blue-green mold. Polyethylene mulches reduce head drop. Terraclor as a spray or dust applied when plants are 2-3 inches tall aids in disease control. Plow down crop refuse after harvest.

6. **FUSARIUM WILT:** *Fusarium oxysporum f. batatas*. A serious disease in commercial production areas. The soil-inhabiting fungus enters through vascular wounds in freshly cut stems or roots. Leaves become yellow between the veins and drop. When infected stems are split, the vascular bundles appear purple, later becoming blackened. Discoloration may extend into the "potato," appearing as a dark ring beneath the skin. Use of resistant varieties and crop rotation are the control measures suggested by workers in the field.

7. **WHITE LEAF SPOT:** *Cercospora albomaculans*. Usually considered of minor importance, this disease appears as tiny water-soaked spots that bleach into circular, slightly collapsed lesions up to one quarter of an inch in diameter. These may become gray to tan and coalesce. Where practical, apply zineb or maneb several times during rainy periods.

8. **RUST:** *Uromyces phaseoli typica*. Occasionally seen in Nebraska on dry and snap beans. The disease appears on leaves as small, slightly raised spots, appearing to form brown pustules about 1/16 inch in diameter. Infected leaves may yellow, wither, and fall early. Bean varieties resistant or tolerant to many races of rust have been developed. Where necessary, several weekly applications of zineb, thiram, ziram or sulfur have provided effective control.

9. **SCAB:** *Streptomyces scabies*. This disease is commonly found in home gardens as well as in fields for commercial production. The disease is characterized by shallow or deep, rough, russeted, raised or pitted, corky areas on the tuber skin. The lesions vary widely in size and shape and usually are darker colored than the surrounding healthy skin. Control is achieved by treating the uncut potatoes in a hot formaldehyde solution (1 pint in 15 gal. of water at 121°F.) for 3-4 minutes or by treating whole or cut seed-pieces in organic mercury dips such as Semesan Bel.

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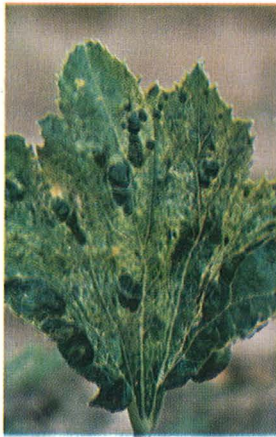
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1. STEM ANTHRACNOSE OF LIMA BEAN



2. SQUASH MOSAIC ON LEAF AND YOUNG FRUIT



3. BACTERIAL SPOT OF PEPPER



4. DOWNY MILDEW OF CABBAGE
Inset shows *Alternaria* following damage



5. LETTUCE DROP



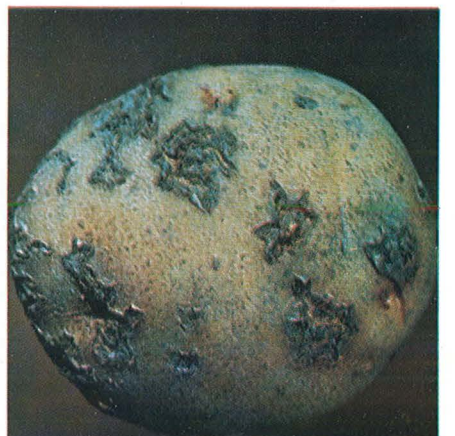
6. FUSARIUM WILT OF SWEET POTATO
Inset shows stem damage



7. WHITE LEAF SPOT OF TURNIP



8. RUST OF SNAPBEAN



9. SCAB OF IRISH POTATO