

# Phomopsis



**Bleached spur with tiny raised black pimple-like pustules**



**Early Spring shoot infections first occur at the base of the shoot as individual spots.**



**The lesions coalesce to give the base of the shoot a scabby appearance.**



**Longitudinal cracks intermixed with bleached areas on a severely infected spur.**



**Cracks develop on the epidermis of the shoot as the lesions elongate**



**Basal leaves have chlorotic spots with a tiny black center.**

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DATE	WHAT TO LOOK FOR
December - February	When pruning look for whitish or bleached areas on the canes. These will have tiny raised black pimple-like pustules (fruiting bodies) that contain overwintering spores. In severe infections, growth was stunted the previous year and the basal 1"-6" of a cane will be covered with a black scab that has longitudinal cracks. The bleached areas will be intermixed with scabby areas. The base of these canes may be dead at the time of pruning – killed outright by the fungus or by normal winter temperatures.
February - March	The buds on severely infected spurs may not push. If rain occurs after bud break, all green tissue is susceptible to infection; however it will be several days before any signs of infection occur. About 3 weeks after rain occurs, small black dots with yellow margins begin to appear on the leaf blades as they expand. Infected spots on the shoot or cluster may be difficult to see at this time.

DATE	WHAT TO LOOK FOR
March-April	Heavy frequent rainfall will cause more infections and these will proceed to continue to damage the basal leaves, base of the shoot and all parts of the cluster.  Basal leaves may become distorted because infected areas prevent normal expansion of the leaf tissue. If the petioles are infected, the leaves may abscise. Small oblong spots with black centers will appear on the base of the shoot. As the shoot elongates, lesions do as well causing the outer layer of green tissue to crack at the infection sites. Continued rainfall will cause large numbers of spots to eventually coalesce, resulting in a black scabby appearance. Internode length may be reduced in these areas thus the shoot will be stunted. Infections will only occur on the basal portion of the shoot. Similar spots may be present on any part of the cluster rachis or peduncle.

DATE	WHAT TO LOOK FOR
May-June	Dry weather will stop the growth of the fungus. New infections will only occur with rainfall. In windy areas, shoots that were stunted early in the season may break off near the base where most of the disease symptoms are present.
June-July	After leaf removal occurs, shoots with black, scabby basal internodes will be easier to see. The impact on clusters, if any, will also be more apparent.

