



## Alternaria Leaf Spot of bok choy /pak choi

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Bok choy (*Brassica rapa Chinensis*) is also commonly known as Chinese chard, Chinese white cabbage and Chinese mustard belongs to Brassicaceae family. Bok choy typically does not form true head and has dark green leaves and succulent white midribs and bulbous base. The entire plant is edible and is used in a wide range of dishes and also can be consumed raw as well as cooked. It is essentially a cool season crop which grows at a temperature range of 15 to 20°C.

Alternaria leaf spot also known as black spot is one of the most important diseases of bok choy which is caused by three different species of Alternaria like *A. brassicicola* and *A. brassicae* and *A. raphani*. The disease is referred to as black leaf spot, grey leaf spot and dark leaf spot depending on the type of the fungal species infection. These are the common disease of crucifers in which the leaf spot phase reduces the vigour of infected plants. The fungus enters through the infected seeds and infected plant debris in soil and becomes severe when there is frequent shower accompanied with warm and humid conditions.



*Photo source: Taken by the author from farmers field of Harigaon village, South West Garo Hills District of Meghalaya*



### Symptoms of Alternaria leaf spot

The symptoms on young seedlings are small dark spots on stem which leads to damping off or stunting of the plant. The first symptoms on older plants appear as pin sized black specks on the leaf surface and stem of infected plants. These specks enlarge concentrically creating a distinct lesion with yellow halo, these lesions are visible from both sides of the leaves. The infected leaves turn yellow and falls off.

### Management of Alternaria leaf spot of bok choy

1. Use of disease free and healthy seeds for growing is the most simple and effective method for management of the disease.
2. Seed treatment by soaking the seeds in hot water of 50 °C for 30 minutes before sowing is also effective.
3. Proper field sanitation by removal and destruction of infected plant debris from the field.
4. Following crop rotation with other non-host crops for three years reduce the inoculum level and spread of disease.
5. Management of weeds by eliminating susceptible weeds.
6. Practice mulching with various available farm residue.
7. Avoid dense planting and maintaining proper spacing of crops to reduce the spread of the disease.
8. To avoid excess irrigation and overhead sprinkler irrigation.
9. To provide adequate nutrition to reduce crop stress.

### References

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