

Detection and identification of *Candidatus Liberibacter solanacearum* in potato and tomato

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I. Symptoms associated with *Candidatus Liberibacter solanacearum* in potato

1. Yellowing or purpling of leaves and shoots (Fig. 1 & 2)
2. Curling or rolling of leaves (Fig. 1 & 2)
3. Stunted shoots with shortened and swollen internodes (Fig. 2)
4. Aerial tuber formation (Fig. 3)
5. Scorched potato tops that collapse prematurely (Fig. 2b)
6. Early senescence
7. Tubers may have enlarged lenticels, necrotic flecking of the vascular tissue and streaks along the medullary rays that are enhanced when slices of the potatoes are fried, and brown purplish stolons (Fig. 5)

Figure. 2



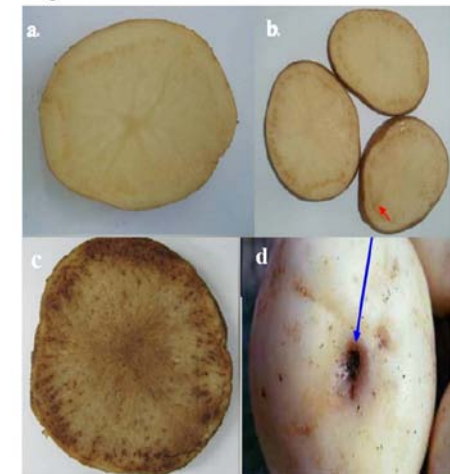
Figure. 1



Figure. 3



Figure. 4



II. Symptoms associated with *Candidatus Liberibacter solanacearum* in tomato

1. Stunting (Fig. 5)
2. Apical growth can be spiky and chlorotic (Fig.5 & 6)
3. Leaflets may be distorted and curled (Fig. 5, 6 & 8)
4. Leaves may be mottled or chlorotic (Fig. 8)
5. Some varieties have interveinal chlorosis and vein greening of the leaves (Fig. 5)
6. Purpling of the mid vein and leaves in some cultivars (Fig. 9)
7. Some tomato varieties may have fruit deformation (Fig. 7)

Figure. 6



Figure. 7



Figure. 9



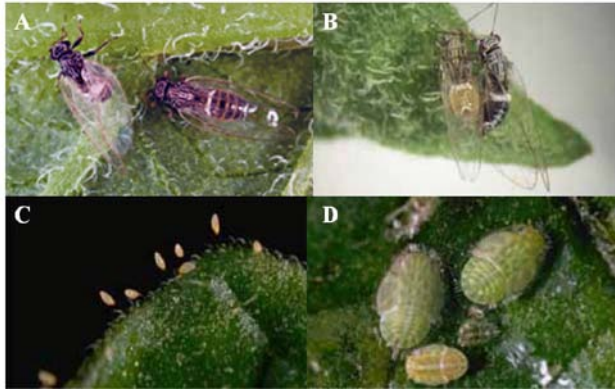
Figure. 5



Figure. 8



III. Potato/Tomato Psyllids vector



Sample selection:

Potato: Yellowing or purpling leaves and the shoots of the infected symptomatic plants as well as aerial tubers.

Tomato: Yellowing leaves, stems, leaf petioles, the peduncles attached to fruit and the portion of affected fruit to which the peduncle is attached.

Collection and Shipping plant materials to the UF Plant Diagnostic Center:

- Samples (1-2 g) should be collected from the above mentioned symptomatic tissues, should be covered with a moist paper towel and placed in a ziptop bag. The tubers should be kept as such without the moist paper towel in the ziptop bag.
- The bags should be legibly labelled with following details; type of tissue, symptoms noticed on the plant, location (county/city), date of collection and the name of the grower/extension agent.
- The samples needs to shipped overnight through FEDEX to the Southern Plant Diagnostic Clinic, with the address mentioned below. If funding for shipping is problematic, please call the lab to discuss options. All the shipments/deliveries should be prior notified by email to:

clharmon@ufl.edu

Address for shipment:

Dr. Carrie Harmon, UF Plant Diagnostic Center

2570 Hull Road, Building 1291, University of Florida,

Gainesville, FL 32611-0830. Telephone No: 352-273-4645