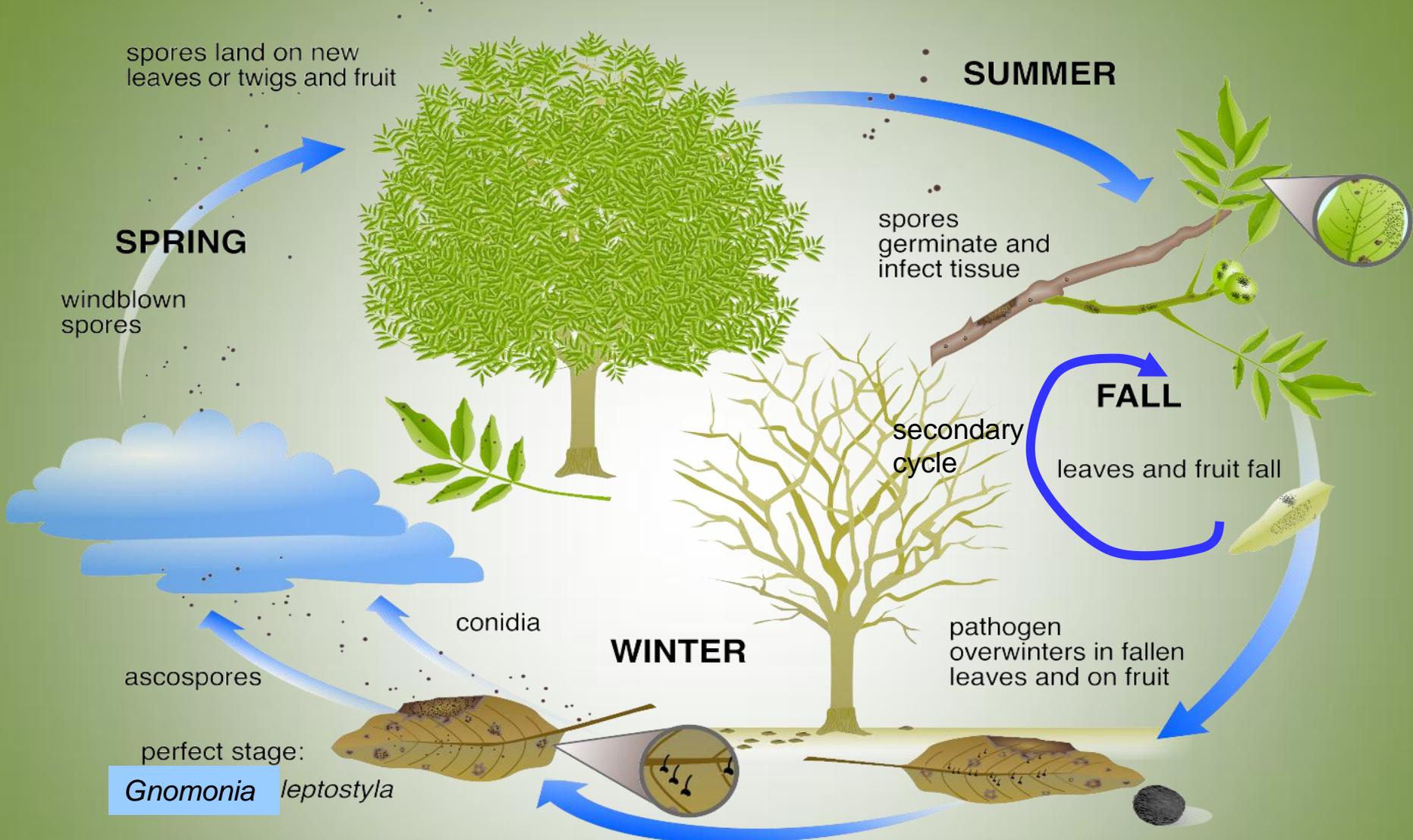
The background of the slide is a photograph of walnut leaves. Many of the leaves are green, but several show significant damage from anthracnose, with large, irregular brown necrotic areas and some leaf curling. The text is overlaid on this image.

Walnut Anthracnose *Marssonina juglandis* in Northern California

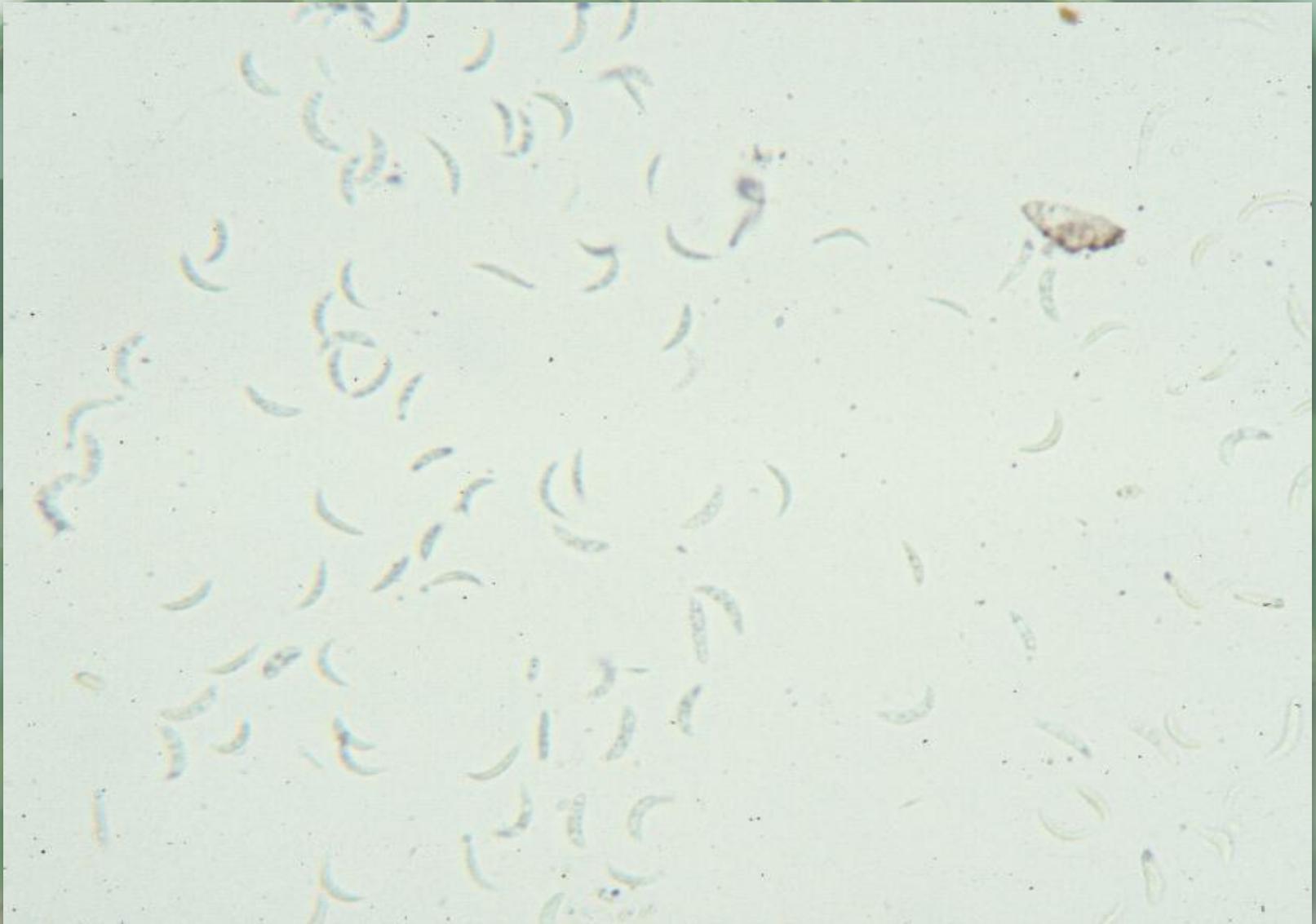
Themis Michailides, Richard Buchner and
Bill Coates

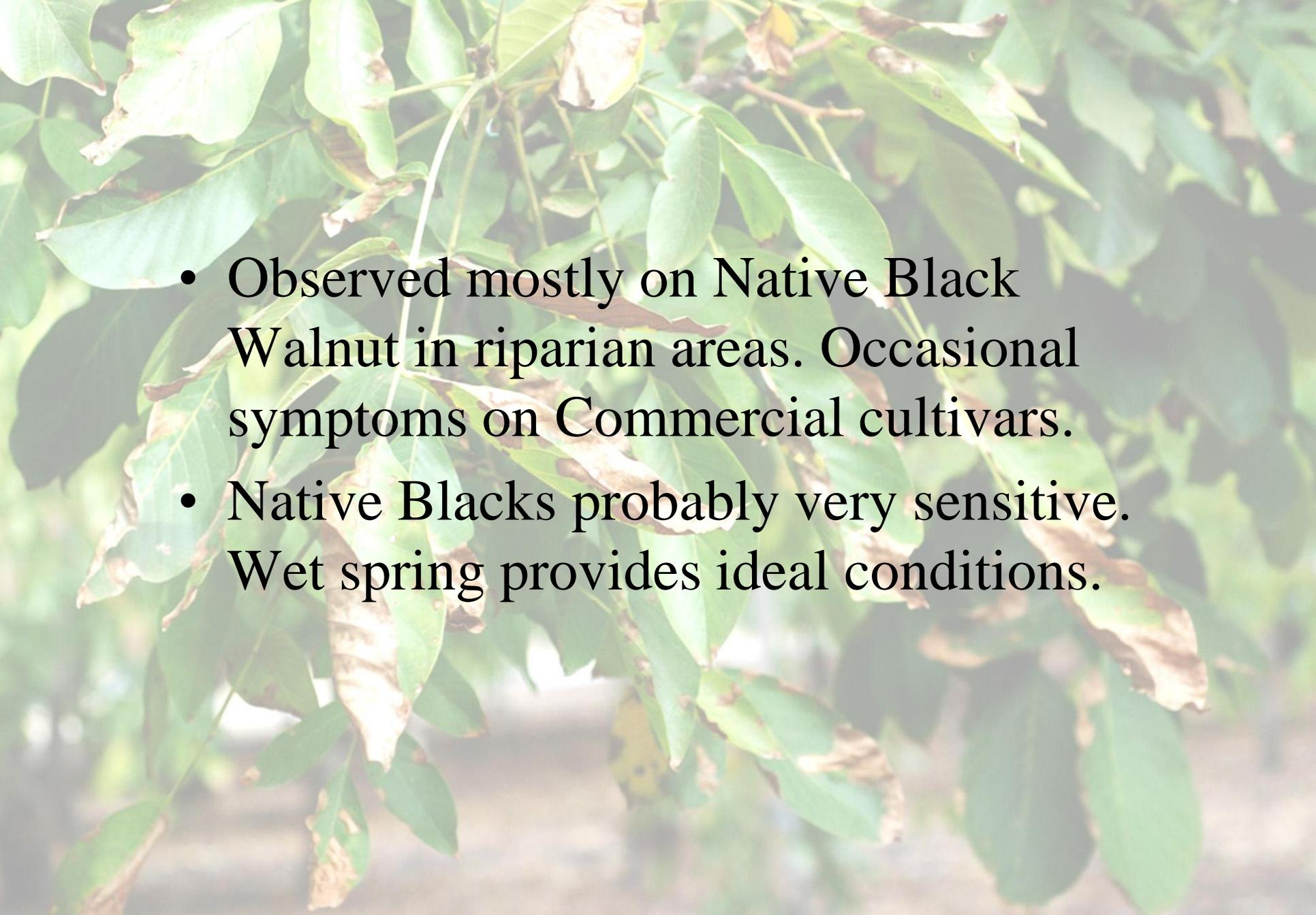


Disease cycle of anthracnose

Marssonina juglandis

Looking at the spores Themis has identified the lesions as walnut anthracnose (*Marssonina juglandis*)



- 
- The background of the slide is a photograph of black walnut leaves. Many of the leaves show significant damage, with large areas of brown, necrotic tissue, particularly along the margins and veins. Some leaves are mostly green, while others are almost entirely brown. The damage appears to be a result of a fungal or bacterial infection, likely blight.
- Observed mostly on Native Black Walnut in riparian areas. Occasional symptoms on Commercial cultivars.
 - Native Blacks probably very sensitive. Wet spring provides ideal conditions.

Walnut samples collected from various locations and diagnosed with anthracnose

Sample ID	Date	Symptoms / Plant part	County	Cultivar with <i>Marssonina juglandis</i>
---	8/02/2011	Leaves	Lake	Livermore
12036	4/27/2012	Leaves	Sutter	Ashley
12037	5/02/2012	Leaves	Sutter	Chandler
---	5/03/2012	Leaves and shoots	San Benito	Serr, Payne
12050	5/11/2012	Leaves	Sutter	Hartley
12051	5/11/2012	Leaves	Sutter	Chandler
12057	5/16/2012	Leaves and shoots	Sutter	Serr
12058	5/16/2012	Leaves and shoots	Sutter	Mountner
12059	5/16/2012	Leaves and shoots	Sutter	Chandler
12110	7/31/2012	Leaves	Tehama	Black walnut
12114	8/09/2012	Leaves and fruit	Sutter	Serr
12118	8/14/2012	Leaves, shoots, and fruit	San Benito	Payne, Serr,
---	10/24/2012	Leaves and fruit	San Benito	Payne, Serr

Anthracnose Foliar Disease Ratings (by Bill Coates, FA, San Benito Co.)

1 = NO DISEASE, 5 = SEVERE DISEASE

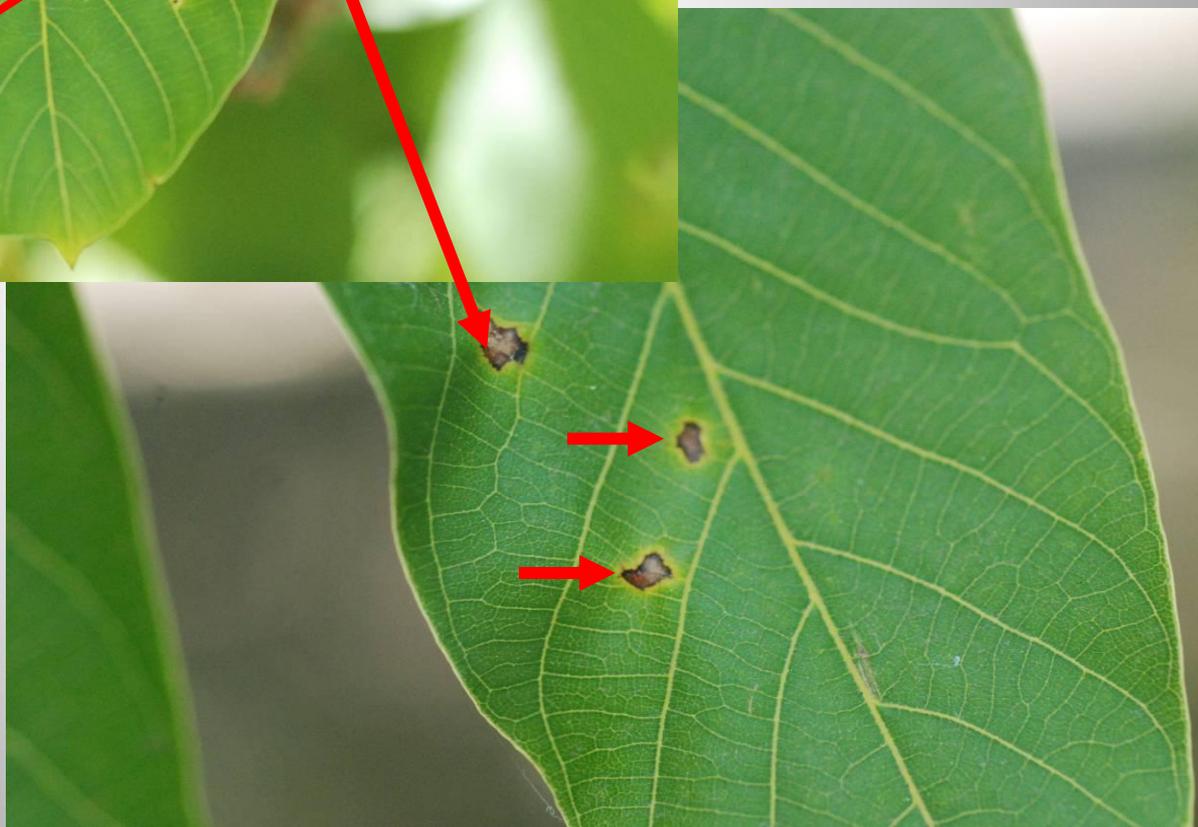
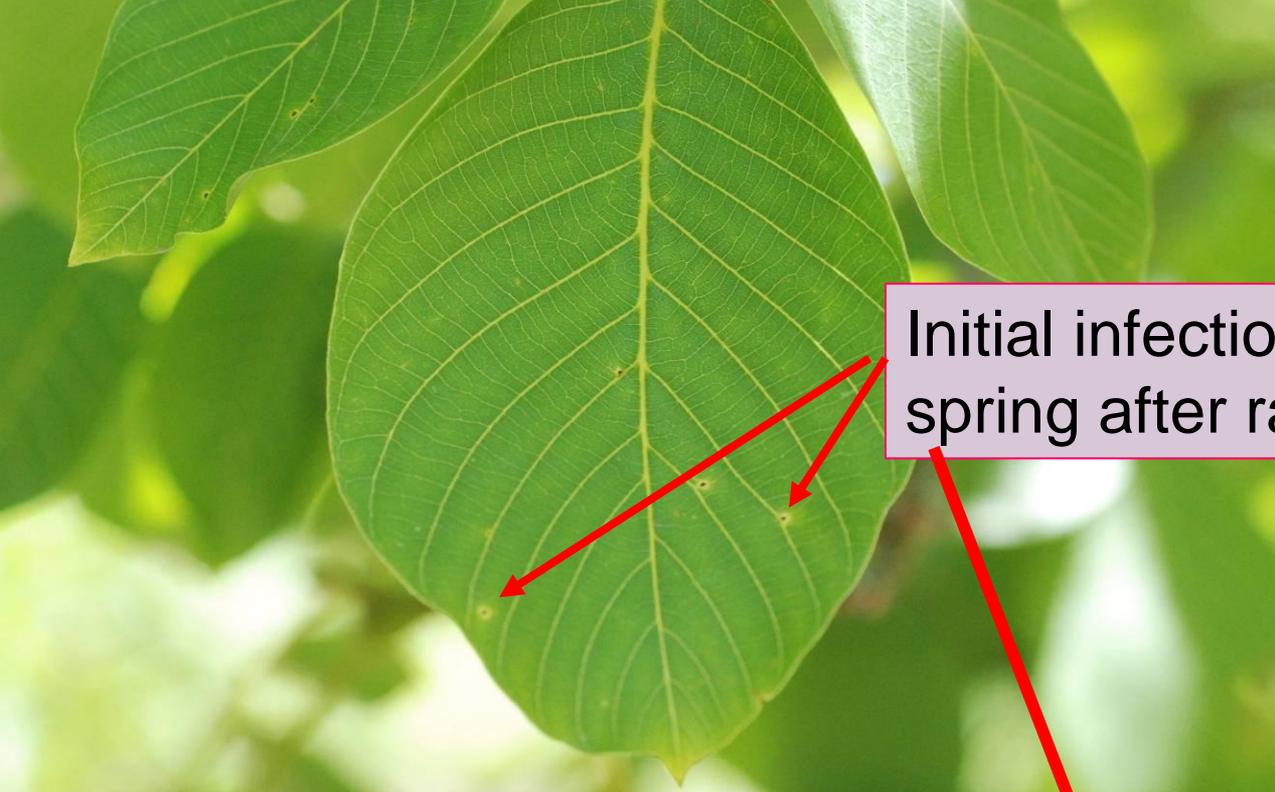
	<u>RATING</u>	<u># OF OBS</u>
Serr	4.5	4
92-016-1	4.2	5
Payne	4.0	1
Hartley	2.7	3
Chandler	2.4	9
93-045-1	2.3	3
Pedro	2.0	1
Howard	2.0	4
64-57	2.0	3
Tulare	1.3	3

Most
susceptible

Least
susceptible

Serr, Payne > Hartley, Chandler > Howard > Tulare

Initial infections in the
spring after rains



Severe anthracnose – leaf necrotic lesions







Anthracnose of walnut fruit



Anthracnose

France





Anthracnose of walnut fruit

Anthracnose of black walnut



Anthracnose of black walnut



Blight

Anthracnose

France

