

## Scouting Silverleaf Whiteflies in Cotton

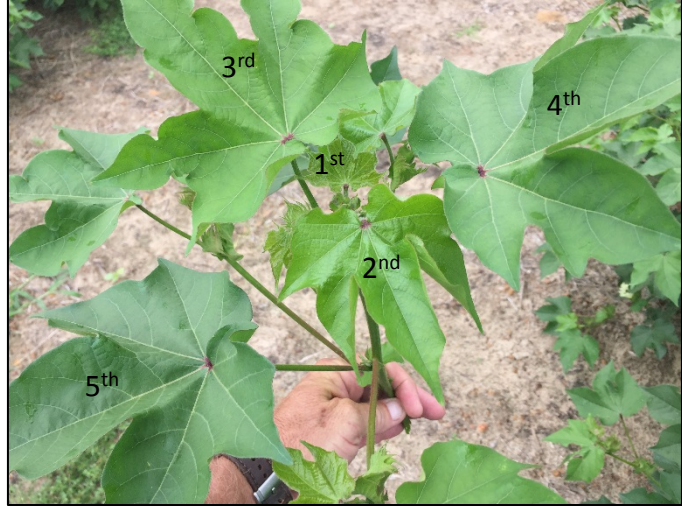
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The goal in silverleaf whitefly (SLWF) management is to initiate control measures just prior to the period of most rapid pest population development. Routine sampling is required to identify the rate of SLWF population increase. IPM principles and practices such as conservation of beneficial insects should be employed to delay population buildup. A well-timed initial SLWF insecticide application will pay significant economic dividends in reducing overall insecticide inputs and plant injury.

SLWF adults (solid white wings) and immatures will be found on the underside of leaves. SLWF populations are best estimated from the 5<sup>th</sup> main stem leaf below the terminal. Main stem leaves are attached directly to the main stem by their petioles. The top or first main stem leaf is defined as the uppermost leaf which is 1 inch or larger in diameter. Adults and nymphs should be counted on the 5<sup>th</sup> main stem leaf below the terminal.

### Steps for Efficient Sampling of Whiteflies

1. Familiarize yourself with the general location of the 5<sup>th</sup> main stem leaf in each field.
2. Select plants at random at least 25 paces into the field and at least 10 paces apart, being careful to keep your shadow from passing over the plant you plan to sample.
3. Turn the 5<sup>th</sup> leaf over slowly by its tip or petiole and count the leaf as infested with adults if it has 3 or more adults on it. Include in your counts any adults that fly up from the leaf as you turn it over.
4. Detach the leaf by the petiole from the main stem. If it fails to snap off easily, you have likely sampled a leaf that is too high on the plant. Recheck your leaf position to make sure you are sampling the 5<sup>th</sup> leaf.
5. Examine the bottom of the leaf for the presence of immature SLWFs. Count the leaf as infested if it has 5 or more immatures on the underside of the leaf. Sample at least 30 plants (leaves) per field.
6. Calculate the percentage of leaves infested with adults and the percentage of leaves infested with immatures.
7. Treatment is recommended when 50 percent of sampled leaves are infested with immature SLWFs.



Find the 5<sup>th</sup> main stem leaf below the terminal.



Adult SLWF Infestations: leaves are considered infested if 3 adult SLWFs are observed. After counting adults detach the leaf from the main stem.



Immature SLWF Infestations: leaves are considered infested if 5 immatures are observed.