



Rain Fastness of Sugarbeet Fungicides

Sugarbeet Cercospora leaf spot fungicide rain fastness can vary from leaf dry to two hours depending on the material being applied.

Sugarbeet growers in the Great Lakes growing region will average from three to five leaf spot fungicide applications per year. Ideal weather conditions exist for Cercospora infections when daytime air temperatures are 75-90 degrees Fahrenheit with night temperatures above 60 degrees and coupled with wet leaves (from rain or dew) for 10 or more hours. Spores are produced and are deposited on the leaf where they germinate and enter through the stomata into the leaf. Visible symptoms (spots) can take from 5 days to 3 weeks to appear. This is depend on environmental conditions and plant resistance

Both systemic and contact fungicides options are available to control Cercospora leaf spot in sugarbeets. Systemic compounds give longer control compared to contact fungicides. Systemic compounds include the triazole and strobilurin chemistries. These fungicides will penetrate into the leaves and move a small distance. Depending on the label, rain-fast of these fungicides can range from leaf dry to 2 hours. Contact type fungicides such as the EBDC's, copper and Tin products are generally rain fast when dry on the leaf. Michigan Sugar Company and Michigan State University Extension recommend for resistance management that two different chemistries be tank mixed for all applications.

Rainfall will have little effect on systemic fungicides once absorbed into the leaf. However contact fungicides remain on the leaf surface and effectiveness will be reduced with each rainfall. It is estimated that the contact fungicides lose about half of their effectiveness with each inch of rainfall. REACH recommended spray re-application intervals should be followed closely by utilizing BEETcast and/or label directions. Timely re-application intervals are needed to maintain season long control. Over time as leaf area expands, fungicides will become diluted and broken down. Any new growth that appears after fungicide applications will also be left unprotected.

Coverage of foliage is extremely important with fungicide application and need to penetrate to the new growth in the plant's crown. Recent Michigan Sugar research indicates that water rates of 20 gallons per acre coupled with 100 to 120 PSI pump pressure are best for fungicide applications, especially protectants. Always apply fungicides to dry leaf surfaces, which will reduce the likelihood of fungicide run off. Do not spray "FLAT" (dry-wilted) beets as coverage will not be complete.

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