Virus problems found in garlic early this year

Jerry Brust UME, May 2017

Last year I had an article sometime in July about what I called “garlic viruses” which I had not seen in our area before, but I know must have been around before this. This year some garlic growers are noticing this virus complex already in their fields and I am not sure if that is because they are more aware of it or because the virus complex is expressing itself earlier. Symptoms of virus infection are plants that display yellowing tips on many leaves with some that are completely yellow (fig 1). If you look closely at the yellow leaves you’ll see mottling or striping on the leaves (fig 2). Symptoms are usually more pronounced on young leaves. Infected plants are stunted and bulb size can be reduced. Garlic crops infected with certain of these viruses are more susceptible to weather conditions like extreme heat, and do not keep well post-harvest.

What I am calling garlic virus is caused by several different viruses that can be grouped under the name “Potyvirus”; all symptomatic garlic that was tested this year was positive for Potyvirus. Some people lump these viruses under the name “garlic mosaic”. In this case garlic mosaic is thought of as a disease caused by one or more viruses belonging to the Potyvirus group which includes onion yellow dwarf virus, leek yellow stripe virus, and others. These viruses can be transmitted through the planting stock or by aphids and it is thought because garlic is clonally propagated probably most of the planting stock is infected with some type of virus. These viruses are usually mild and do not seriously affect yield. The problem comes in when the plants are infected with several different Potyviruses, and then there can be moderate to severe yield reductions. We may have had more aphid movement earlier in the year because of the mild winter and early spring, which may have increased additional virus infections in garlic plantings. You cannot reduce virus transmission by spraying pesticides. Any garlic with symptoms should be watched and possibly harvested early or rouged out if yellowing and decline increase in the coming weeks.

Fig. 1 Garlic plants showing symptoms of infection with virus complex
Fig. 2 Streaking, striping on leaves of garlic infected with virus complex