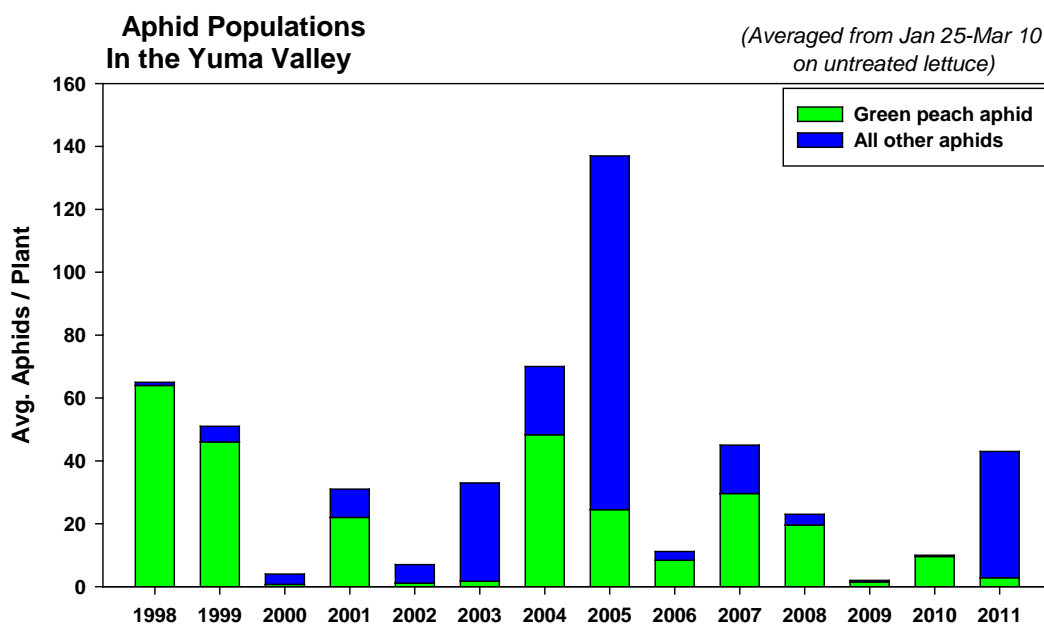




Historical Trends in Aphid Abundance in Desert Lettuce

Historically, aphid abundance in the Yuma Valley has varied considerably from year to year. Over the past 14 years, there have been a number of years that aphids (green peach aphid, lettuce aphid, foxglove aphid, potato aphid and *Acyrtosiphon lactucae*) have been very low. For example, aphid abundance was extremely low in 2001, 2002 and again in 2009. In contrast, aphid abundance was extremely high in 1998-1999 and 2004-2005. However, increases in aphid abundance historically occur during the month of February, often peaking in early March. Although weather patterns (rainfall and temperatures) likely influence aphid abundance in desert lettuce, significant correlations between annual rainfall and aphid abundance on lettuce have not been observed using the data collected over the past 14 years. However, weak correlations were observed between some aphid species and maximum and average temperatures recorded during February suggesting that aphid abundance in general is greater when temperatures are cooler (i.e., MAX < 69 °F, and AVG < 56 °F).



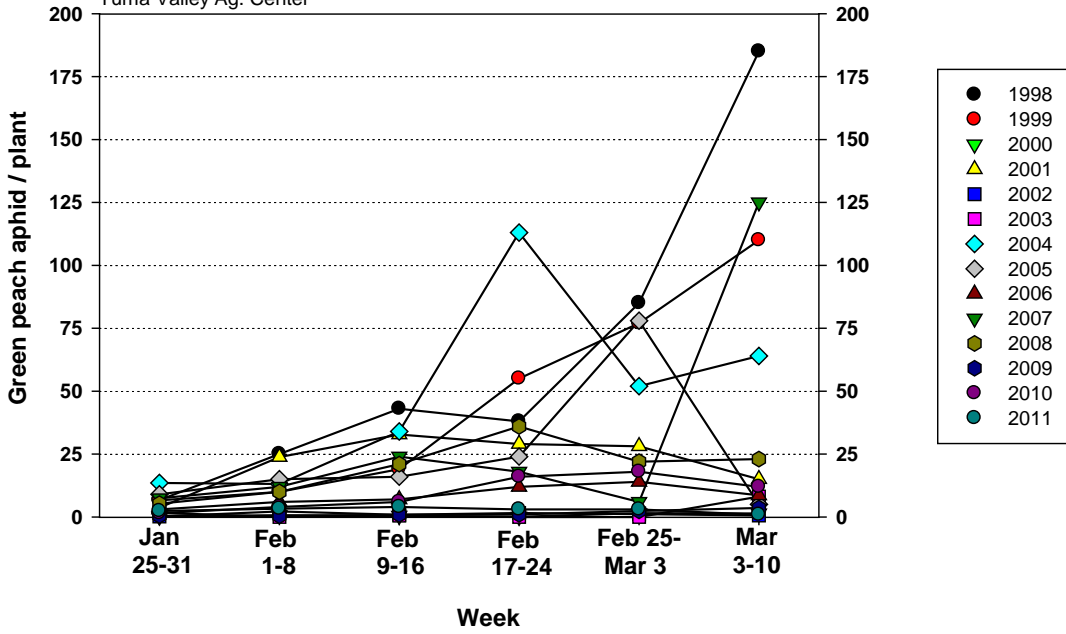
Correlation Coefficients between Weather and Aphid abundance in Lettuce in Yuma, 1998-2011

	Rainfall (Nov-Dec)	Rainfall (Jan-Mar)	Rain (Seasonal)	Temp (F) Max.	Temp (F) Min.	Temp (F) Avg.
Green peach aphid	0.33	0.01	0.14	-0.33	-0.10	-0.36
Other aphid species	0.04	0.06	0.05	-0.51 *	0.24	-0.41
All aphid species	0.20	0.06	0.13	-0.60 *	0.16	-0.56 *

* correlation significant; $p < 0.05$ (n=14)

Green Peach Aphid on Untreated Lettuce, 1998-2011

Yuma Valley Ag. Center



All other aphids on Untreated Lettuce, 1998-2011

Yuma Valley Ag. Center

