

ABSTRACT In western Nebraska, significant stand losses have resulted from the use of
planting time insecticides applied alone and in combination with pre-plant herbicides. The
influence of different placements of planting-time insecticides was evaluated in two separate
studies each conducted for two years. The first study evaluated the effect of five different
placements of granular insecticides at planting and one post-emergence liquid application at

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Alisal St., Salinas, CA 93905. - Implications of sweetpotato
whitefly biotype changes on lettuce infectious yellows virus.

Lettuce infectious yellows virus (LIYV) became a major disease
inducing agent of sugarbeet in the southwest desert region of U.S.A.
during the 1980's. Losses as high as 20-30% were reported. The
virus is vectored by the sweetpotato whitefly (*Bemisia tabaci*) in a
semipersistent manner. During the Fall of 1990, changes in host
preference of the whitefly were noticed in California and isolations
of the whiteflies were shown to be a mixture of two biotypes. The
population prevalent in California since 1981 has been termed the "A"
biotype and the new population the "B" biotype. The biotypes differ
in a number of ways including their host preference, larval
development, esterase banding patterns, their abilities to induce
systemic phytotoxemia and to transmit viruses. LIYV was transmitted
100 times less efficiently by the "B" biotype. Populations of the
"B" biotype exploded in the southwest deserts during 1991 and 1992
and reached populations 10X those previously recorded for the region.
The introduction of the new biotype into the southwest desert, the
resulting host reactions, coupled with its inefficiency to transmit
important viruses, has significantly altered epidemiological
characteristics of the whitefly-transmitted viruses of the region.
LIYV levels in desert crops were less than 1.0% in 1991 and 1992 in
comparison to over 70% in 1990 and in the previous 10 years.

previous studies. The effect of placement was significant in both years with the placement
behind the press which provided the greatest protection from phytotoxicity in both years. The
results from both studies in both years indicate that the safest placement for planting time
insecticides is to apply these chemicals in a band behind the press which thus insuring
maximum separation between the seed and the insecticide.