

Evaluation of fungicide programs for management of pear scab in Northern California, 2013.

Fungicides were evaluated for pear scab control in a field trial conducted in a pear orchard near Ukiah, California during spring 2013. Treatments were arranged in a complete randomized design using four single tree replicates per treatment. Fungicides were applied using backpack sprayers (model Stihl SR420, discharge rate 1.8 L/minute) on Mar 13 (green tip), Apr 5 (red bud), Apr 13 (full bloom) and May 13 (petal fall) using 150 gal/A. Recorded precipitation events between green tip and disease evaluation date at the Hopland CIMIS weather station indicated there were eight infection events (Mar 15-May 23) which corresponded to the eight rainfall events that occurred during the trial: Mar 19 (0.24 in), Mar 20 (0.28 in), Mar 30 (0.08 in), Mar 31 (0.24 in), Apr 4 (0.63 in), Apr 6 (0.04 in), Apr 7 (0.12 in) and May 6 (0.08 in). The first rain events on Mar 19 and 20 allowed for ascospore release from pseudothecia in overwintering leaf litter. These spores were dispersed to leaves, flowers and fruits. Subsequent rain events allowed conidia from primary infection sites to infect new tissues. Disease incidence and severity (lesion density) were evaluated on May 23 for leaf and fruit. Disease incidence was expressed as the percentage of sampled leaves and fruit per tree (n = 40) that were visibly infected. Disease severity, defined as the number of lesions per sampled leaves and fruit (n=40), was expressed as an average per tree.

Pear scab disease pressure was low due to warm, dry conditions, with less than 15% fruit disease incidence in the unsprayed control. Overall, treatments provided a significant reduction in disease incidence and lesion severity on fruit and leaves compared to unsprayed control, but efficacy among treatments varied. Lesion severity was defined as the number of lesions per fruit or leaf. The most effective treatment overall was a proprietary treatment, X4605 with fruit incidence of 0.8%, fruit severity of 0.01% and no leaf lesions. Fontelis was the next best at reducing fruit disease incidence (2.5%) and fruit severity (0.03) compared to the negative control with fruit disease incidence of 14.5% and fruit severity of 0.20. For leaf disease incidence and severity, Syllit was the next most effective with 3.4% leaf disease incidence and .04 leaf severity, compared to negative control with 26.8% leaf incidence and 0.40 leaf severity.

Treatment, amount/acre, Active ingredient (%)	Fruit Disease Incidence (%)*	Fruit Severity (Lesions/fruit)*	Leaf Disease Incidence (%)*	Leaf Severity (lesions/leaf)*
Unsprayed Control	14.5 a	0.20 a	26.8 a	0.40 a
Ziram, 6 lb/A	10.0 ab	0.11 ab	14.5 bcd	0.08 bc
Sovran, 4 oz/A	9.8 ab	0.10 bc	10.8 bc	0.15 bc
GWN-10073, 32 oz/A	8.5 abc	0.10 bc	8.0 bcd	0.09 bc
Topsin-M, 16 oz/A	5.3 bcd	0.06 bc	10.3 bcd	0.13 bc
Fontelis, 20 oz/A	2.5 cd	0.03 bc	5.0 bcd	0.07 bc
Elite 45 DF 2 fl oz/A	5.3 bcd	0.07 bc	4.8 bcd	0.06 bc
Microthiol, 30 lb/A	6.0 bcd	0.07 bc	9.3 bcd	0.12 bc
Serenade Optimum, 24 oz/A	6.3 bcd	0.06 bc	14.5 b	0.18 b
Syllit, .75 qt/A	4.5 bcd	0.06 bc	3.4 cd	0.04 bc
Merivon, 5 oz/A	4.0bcd	0.05 bc	4.3 bcd	0.06 bc
X4605, 12 oz/A	0.8 d	0.01 c	0.0 d	0.00 c

*Column numbers followed by the same letter are not significantly different according to Fisher's Protected LSD test (P ≤ 0.05).