

# Western Region 2016 Efficacy Trials-LateSeason Report 36 Projects

Researcher	Project	Pesticide	Commodity	Plan 1st App	Started	Report/WR	Report/HQ	Efficacy Summary
ADASKAVEG	P11461.16-CAP12	KASUGAMYCIN	ALMOND	15-Dec-15	15-Jan-16	03-Nov-16	03-Nov-16	The most effective treatments included kasugamycin which significantly reduced disease incidence to very low levels with 4 applications of Kasumin at 64 fl oz/a with and without Manzate. [SF 11/3/16]
ADASKAVEG	P11737.16-CAP19	OXYTETRACYCLINE	OLIVE	19-Jan-16	22-Jan-16	01-Nov-16	31-Oct-16	The inoculated trial at UCD showed significant disease control in 3 of 6 evaluations. "oxytetracycline provided moderate control of olive knot when applied as a pre-infection treatment. Copper and kasugamycin in most cases demonstrated significantly better control" and "The antibiotic has potential for use for control of olive knot if the formulation can be optimized to overcome degradation by sunlight and other environmental factors." [JA, 10/31/16]
ADASKAVEG	P11737.16-CAP20	OXYTETRACYCLINE	OLIVE	16-Dec-15	15-Dec-15	01-Nov-16	31-Oct-16	The inoculated trial at UCR showed significant disease control in 5 of 8 evaluations. "oxytetracycline provided moderate control of olive knot when applied as a pre-infection treatment. Copper and kasugamycin in most cases demonstrated significantly better control" and "The antibiotic has potential for use for control of olive knot if the formulation can be optimized to overcome degradation by sunlight and other environmental factors." [JA, 10/31/16]

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BOLDA	P9055.16-CAP10	INDOXACARB	STRAWBERRY	01-Jun-16	05-Jul-16	06-Sep-16	07-Sep-16	This trial was conducted on San Andreas strawberries located in Watsonville, California. Adult Tarnished Plant Bug populations were significantly lowered at 2 and 14 days after the second application at the 6 oz rate. The 5 oz rate of Avaunt also lowered populations at 2 days after the second application. Nymphal populations by the 5 and 6 oz rate of Avaunt at 2 and 7 days after the first application. In addition, the 6 oz rate lowered populations at 14 days after the second application. The high rate (6 oz.) of Avaunt significantly reduced fruit scarring. [SF, 9/7/16]

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BOYDSTON	P11773.16-WAPo5	LINURON	MINT (FUTURE: HERBS)	20-Feb-16	17-Feb-16	05-Oct-16	06-Oct-16	<p>All preemergence (dormant) applications yielded similar hay yield to the nontreated check (10.7 ton/A) and the Sinbar control (12.0 ton/A) except the linuron at 1 lb ai/a that yielded higher (average 12.9 ton/A) than the nontreated check. All preemergence (dormant) applications yielded similar oil yield to the nontreated check (56 lbs/A) and the Sinbar control (54 lbs/A) except the linuron plus Prowl (1 + 1.2 lb ai/a) treatment that yielded higher (69 lbs/A) than both the nontreated check and Sinbar control.</p> <p>The greater mint injury following POST applications of linuron (compared to PRE applications) may not warrant labeling linuron as a POST application in Washington State. The 0.5 lb ai/a rate was relatively safe, but weed control with the low rate was not as consistent. Despite the visual injury observed with the early POST applications of linuron, most treatments did not reduce hay or oil yield of the Scotch spearmint. The exception was the high rate of linuron applied at 2 lb ai/a.</p> <p>Hay yield following late POST applications of linuron (after first cutting) was no significantly different between treatments, but the sequential treatments of linuron tended to average less hay than the nontreated, hand-weeded checks. Oil yields were also negatively effected by sequential linuron applications. [SF, 10/6/16]</p>

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DEFRANCESCO	P11079.16-ORPo4	SAFLUFENACIL	CANEBERRY	15-Feb-16	12-Feb-16	17-Nov-16	17-Nov-16	No phytotoxicity symptoms were observed in the stems, leaves or fruit of floricanes. For all the plants in all the treatments, primocanes grew tall enough, with a sufficient number of canes per hill, to train onto the trellis wire for a good crop next year (2017). [JD, 11/17/16]
DEFRANCESCO	P11762.16-ORPo3	CYFLUMETOFEN	PLUM	15-Jun-16	01-Jun-16	13-Oct-16	14-Oct-16	Nealta was applied on 6/3/16 & 8/24/16 to Moyer Italian plums in Monmouth, Oregon. All treatments showed no foliar phytotoxicity, but clear "ringing" on the lower portions of the fruit. This ringing resulted in necrotic blemishes on the fruit that appeared to be associated with the high rate of NIS surfactant applied. All treatments included the NIS and all treatments had statistically similar phytotoxicity symptoms. [SF, 10/14/16]
ENNES	P11747.16-CAP24	CYFLUMETOFEN	CHERRY	15-Apr-16	15-Mar-16	03-Oct-16	03-Oct-16	Foliar phytotoxicity was evaluated at 3, 7 and 14 days after treatment and there were no observed foliar symptoms. Fruit blemishes were significant in all treatments. All trees were sprayed with an airblast sprayer calibrated at 400gpa and Induce NIS at the max label rate of 3 Pts/100 GA. [SF, 9/30/16]
ENNES	P11761.16-CAP07	CYFLUMETOFEN	PEACH	11-Apr-16	14-Mar-16	28-Sep-16	28-Sep-16	Foliar phytotoxicity was evaluated at 3, 7 and 14 days after treatment and there were no observed foliar symptoms. Fruit blemishes were significant in Regimin D which received a overspray of 13.7 oz Nealta, 5 oz of Vanguard and 12 oz of Asana, along with 3 pts/100 gallon of Induce NIS. All trees were sprayed with an airblast sprayer calibrated at 400gpa. [SF, 9/28/16]

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ENNES	P11762.16-CAPo8	CYFLUMETOFEN	PLUM	08-Apr-16	07-Apr-16	28-Sep-16	28-Sep-16	Foliar phytotoxicity was evaluated at 3, 7 and 14 days after treatment and there were no observed foliar symptoms. Fruit blemishes were significant in all treatments, and statistically higher in Regimin D which received a overspray of 13.7 oz Nealta, 14 oz of Pristine and 12 oz of Asana, along with 3 pts/100 gallon of Induce NIS. All trees were sprayed with an airblast sprayer calibrated at 400gpa. [SF, 9/28/16]
FELIX	P11620.16-ORPo2	FOMESAFEN	ONION	12-May-16	15-May-16	20-Oct-16	01-Nov-16	Reflex on a Treasure Valley, Oregon silt loam soil, applied pre and post in various combinations ranging from .125 to .25 lbs ai/acre with and without NIS showed marginal control of yellow nutsedge and good to excellent control of common lambsquarter and red root pigweed. Most reflex treatment showed some signs of phytotoxicity (some significant and some not) and all treatments significantly decreased the size of #1 onions harvested, compared to a hand-weeded check but not in comparison to the grower standard. Various onion grades had lower yields than the hand-weeded check, but similar yields to the grower standard. [SF, 10/21/16]
HANSON	P10606.16-CAP23	RIMSULFURON	POMEGRANATE	12-Aug-16	09-Sep-16	12-Jan-17	12-Jan-17	No crop injury symptoms were observed from rimsulfuron in 2015 or 2016 at any rating interval. The same plots were treated in 2015 and again in 2016 with .0625 & .125 lb ai/A. [SF, 1/12/17]

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HANSON	P11429.16-CAP14	INDAZIFLAM	ASPARAGUS	08-Feb-16	10-Feb-16	20-Jul-16	20-Jul-16	At 15 days after application spear injury was observed in all treated plots including the grower standard. At 30 and 37 days after application there was minor spear injury in the flumioxazin/linuron treatment. No asparagus injury was observed from any indaziflam treatments at 30 days after application. In this study, indaziflam up to .13 lb ai/a appeared to be safe on asparagus spears with a pre-harvest interval of 30 days and would likely be acceptable in commercial production. [SW, 7/20/16]
HANSON	P11545.16-CAP15	FLUMIOXAZIN	FIG	25-Feb-16	26-Feb-16	06-Oct-16	06-Oct-16	Chateau (flumioxazin) applied at 12 and 24 oz product/acre (.38 & .77 lb ai/a) applied twice per season in 2015 and 2016 to both 3/4 year old Black Mission and 2/3 year old Brown Turkey figs showed no phytotoxicity. [SF, 10/6/16]
HANSON	P11545.16-CAP16	FLUMIOXAZIN	FIG	25-Feb-16	26-Feb-16	06-Oct-16	06-Oct-16	Chateau (flumioxazin) applied at 12 and 24 oz product/acre (.38 & .77 lb ai/a) applied twice per season in 2015 and 2016 to both 3/4 year old Black Mission and 2/3 year old Brown Turkey figs showed no phytotoxicity. [SF, 10/6/16]
HANSON	P11557.16-CAP17	SAFLUFENACIL	FIG	25-Feb-16	26-Feb-16	06-Oct-16	06-Oct-16	Treevix (Saflufenacil) applied at 1 and 2 oz product per acre, four times per season in 2015 and 2016 showed no phytotoxicity to both 3/4 year old Black Mission in Le Grande, California [SF, 11/22/16]
HANSON	P11557.16-CAP18	SAFLUFENACIL	FIG	25-Feb-16	26-Feb-16	06-Oct-16	06-Oct-16	Treevix (Saflufenacil) applied at 1 and 2 oz product per acre, four times per season in 2015 and 2016 showed no phytotoxicity to 2/3 year old Brown Turkey figs located in Chowchilla, California. [SF, 11/22/16]

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HANSON	P9959.16-CAP03	PENDIMETHALIN	BEAN (FAVA)	10-Dec-15	08-Dec-15	01-Aug-16	10-Aug-16	Pendimethalin applied pre-plant with mechanical incorporation and pre-plant with irrigation incorporation at .95 and 1.9 lbs ai/acre was safe to the crop and there were no negative yield affects. [SF, 8/10/16]
JOSEPH	P9055.16-CAP09	INDOXACARB	STRAWBERRY	01-Jun-16	21-Jul-16	06-Sep-16	07-Sep-16	This trial was conducted on Monterey strawberries located in Salinas, California. Starting at 4 days after the first application and continuing through seven evaluations stretching until 21 days after the second application there was no significant effect on Tarnished plant bug adults. Tarnished plant bug nymphs populations were lowered at 4 and 7 days after application two with the 6 oz rate of Avaunt. The 5 oz rate of Avaunt also lowered populations at 7 days after application two. There was no treatment effect on fruit scaring. [SF, 9/7/16]
KAWATE	P11527.16-HIP01	BIFENTHRIN	COFFEE	24-Aug-16	26-Jul-16	08-Sep-16	08-Sep-16	Brigade WSB was tested at 16 and 32 oz/100 gal in sleeved and unsleeved coffee. The sleeved experiments introduced CBB adults while the unsleeved experiment relied on natural infestation. Both experiments showed significant control of CBB which was better than the BotaniGard standard. A separate phytotoxicity experiment using a backpack sprayer show no phytotoxicity at the 32 oz/100 gal Brigade treatment. [SF, 9/9/16]
KRUGNER	P11675.16-CAP06	AFIDOPYROPEN	CUCUMBER (GH)	01-Jun-16	21-May-16	23-Jul-16	28-Jul-16	Two of fifteen evaluations showed significant control of whitefly nymphs, there was no significant control of adults or eggs. The data was transformed to meet the homogeneity requirements for an ANOVA, possible need to increase number of reps for future studies or cage individual treatment plants. [SF, 7/28/16]

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KRUGNER	P11676.16-CAPo5	AFIDOPYROPEN	PEPPER (GH)	01-Jun-16	14-Oct-16	02-Dec-16	07-Dec-16	Afidopyropen applied at 220 mls/A & 440 mls/A effectively reduced Potato psyllid populations at two days after treatment, compared to AgriMeck at 1 DAT. At 14 days after treatment both rates of afidopyropen had equivalent control to the AgriMeck standard. For most evaluations between 2 DAT and 14 DAT, afidopyropen at the lower rate significantly lowered psyllid populations, but was not as effective as the standard. The high rate of afidopyropen was equivalent in control to the standard in 4 of the 9 post treatment evaluations. No phytotoxicity was observed at any evaluation times, and no yield was evaluated as plants were not taken to harvest. [SF, 12/7/16]
KRUGNER	P11677.16-CAPo4	AFIDOPYROPEN	TOMATO (GH)	01-Jun-16	14-Oct-16	07-Dec-16	07-Dec-16	Afidopyropen applied at 220 mls/A & 440 mls/A effectively reduced Potato psyllid populations at four days after treatment, compared to 1 day after treatment for the AgriMek standard. The high rate of afidopyropen was equivalent to the AgriMek standard at 5, 6, 7, 10 & 14 DAT. The lower rate was only equivalent to AgriMek at 14 DAT. No phytotoxicity was observed at any evaluation times, and no yield was evaluated as plants were not taken to harvest. [SF, 12/7/16]
KRUGNER	P11680.16-CAP11	AFIDOPYROPEN	STRAWBERRY (GH)	01-Jun-16	06-Jan-17	26-Jan-17	27-Jan-17	One application of Afidopyropen at 202 and 404 mls of product/acre (20.2 and 40.4 grms ai) significantly controlled aphid populations at 3, 7, and 14 days after treatment. All treatments ranged from 92-100% control of the aphid population. No phytotoxicity was observed with any of the treatments at 0, 7 and 14 days after application. [SF, 1/26/17]



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MALLORY-SMITH	P11773.16-ORP06	LINURON	MINT (FUTURE: HERBS)	08-Feb-16	18-Feb-16	11-Jan-17	17-Jan-17	Dormant applications of .5, 1 & 2 lbs ai/a showed no phytotoxicity to mint, .5, and 1 lb ai/a applied at 2-8" of regrowth with or without COC showed minor phytotoxicity but no differences in final yield. All dormant and inseason applications (including 2 lbs ai/a w/o COC) did not negatively affect yield. [SF, 1/11/17]
MICHAILIDES	P11754.16-CAP21	FLUXAPYROXAD + PYRACLOSTROBIN	POMEGRANATE	05-Apr-16	12-Apr-16	19-Dec-16	22-Dec-16	Blackheart infection rates at Dudley Ridge were 13.6% in the control as compared to 6.7% and 6.8% in the 7 oz/ac and 14oz/ac Merivon rates. The individual rates were not significantly different than the control, but the combined rates compared in a t-test were statistically lower than the control. Surface blemishes on fruit appeared to be related to R-11 Surfactant applied at .125% v/v in the tank mix. [SF, 12/22/16]
MICHAILIDES	P11754.16-CAP22	FLUXAPYROXAD + PYRACLOSTROBIN	POMEGRANATE	05-Apr-16	18-Apr-16	19-Dec-16	22-Dec-16	The KARE trial on Early Wonderful pomegranate did not have adequate infection in spite of direct inoculation. Surface blemishes on fruit appeared to be related to R-11 Surfactant applied at .125% v/v in the tank mix. [SF, 12/22/16]

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MILLER	P11079.16-WAP03	SAFLUFENACIL	CANEBERRY	20-Mar-16	02-Mar-16	11-Oct-16	14-Oct-16	Saflufenacil appears to be safe for use at this rate in established red raspberry. Broadleaf weed control from Dormant and Cane timings was excellent. No crop injury was apparent, beyond the desirable aspects of this herbicide for primocane management. It will be important to count raspberry floricanes in early 2017, and to note whether there is a delay in initial primocane emergence in 2017. It is also important to note that 0.178 lb saflufenacil/a is probably a much higher rate than will eventually be registered in this crop, so these three years of data provide good evidence that healthy established raspberry is very tolerant of this herbicide. [TM, 5/14/16]
PEACHEY	P11621.16-ORP01	BICYCLOPYRONE	CARROT	01-May-16	22-May-16	30-Nov-16	30-Nov-16	Bicyclopyrone at .0875, 1.75 & 3.5 oz/ac (.011, .023 & .046 lbs ai/a), applied to a Chehalis silt loam in Corvallis, Oregon significantly reduced plant stand, injured carrots and reduced yields. [EP, 11/30/16]
PEACHEY	P11857.16-ORP07	FOMESAFEN	ONION (GREEN)	01-May-16	08-May-16	03-Nov-16	03-Nov-16	Fomesafen applied PRE reduced emergence and caused significant stunting. Post applications of fomesafen at 29 DAP caused significant stunting and yield loss compared to the weed-free check plots. Weed control was good to excellent with fomesafen. The trial was potentially affected by very hot weather at planting. [EP, 11/3/16]

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SALISBURY	P11755.16-ORPo5	FLUPYRADIFURONE	GRASSES (SEED CROP)	15-Sep-16	25-Aug-16	06-Feb-17	06-Feb-17	At 7 days following application, wingless aphid populations were reduced significantly by the 10.5 fl oz Sivanto rate (high). At 14 days following application only the Lorsban standard was significantly different from the control, but both Sivanto treatments were statistically similar to the Lorsban treatment and showed 90-97% reduction in aphid populations from the pre-treatment counts. There was no phytotoxic response from any treatments both during the study and for several weeks after study completion. [SF, 2/6/17]
SMITH	P11324.16-CAPo2	PYROXASULFONE	CELERY	01-May-16	28-Apr-16	13-Oct-16	14-Oct-16	This King City area trial was conducted on a Rincon loam soil. At-transplant applications of Zidua from .027 (.5oz) to .133 lbs ai/a (2.5 oz) showed increasing phytotoxicity, with the high rate receiving at 9/10 rating where 10=no crop. Weed control was excellent but all rates of at-transplant applications resulted in significantly reduced yields. Foliar broadcast applications at 47 days post transplant of .106 (2oz) and .213 lbs. ai/a (4oz) were safe to celery but ineffective in weed control. [SF, 10/14/16]
SMITH	P11324.16-CAP25	PYROXASULFONE	CELERY	01-May-16	13-Apr-16	14-Oct-16	14-Oct-16	This Salinas area trial was conducted on a Clear Lake Clay soil. At-transplant applications of Zidua from .027 (.5oz) to .133 lbs ai/a (2.5 oz) showed increasing phytotoxicity. The yield of celery was negatively impacted at the high rate of at-transplant Zidua. Foliar broadcast applications at 25 days post transplant of .106 (2oz) and .213 lbs. ai/a (4oz) were safe to celery but ineffective in weed control. [SF, 10/14/16]

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STODDARD	P11775.16-CAP01	FLURIDONE	SWEET POTATO	29-Apr-16	27-Apr-16	08-Mar-17	08-Mar-17	From report: "Unlike the research done at NCSU and Mississippi State, results from this research show poor crop tolerance and weed control with pre-plant applications of fluridone under the typical soil and environmental conditions for sweetpotatoes in California. Crop injury increased and yields decreased as the fluridone rate increased from 9.6 to 38.4 fl oz/A. The post-plant application of fluridone fared much better, with little impact on yield and improved weed control relative to the pre-plant applications. However, the POST application caused extensive, though slight, crop injury compared to the POST applied Devrinol, which was very evident 2 weeks after application." [SF, 3/8/17]
WATERS	P11620.16-WAP02	FOMESAFEN	ONION	12-May-16	01-Jun-16	01-Nov-16	26-Oct-16	After the initial application to a Quincy Fine Sand soil all treatments significantly improved weed control in 2 of 3 evaluations. All treatments with the exception of the low rate (.125 lb ai/a) without surfactant also caused significant phytotoxicity to the crop. There were numerical decreases in yield but no statistically significant yield reductions. [SF, 11/1/16]
WATERS	P11621.16-WAP01	BICYCLOPYRONE	CARROT	19-Apr-16	05-Jun-16	01-Nov-16	26-Oct-16	Treatments of bicyclopyrone (.875-3.5oz/a) to a Quincy Loamy Fine Sand, pre-emergent and at the 2-3 leaf stage showed some measure of weed control, but also significant phytotoxicity at the higher pre-plant rates and at all post-emergent treatment rates. The pre-plant rates of 1.75 and 3.5 oz/a significantly reduced yields, while all treatments numerically reduced yields. [SF, 11/1/16]
<b>Totals:</b>				<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	