
Methyl Bromide Information Request -- California Response to Follow-up Questions

From: [Rick Melnicoe](#)
To: [Teung F. Chin](#) (APHIS)
Sent: Tuesday, September 27, 2011 11:21 AM
Cc: Kunickis, Sheryl
Subject: RE: Methyl Bromide for Research in California

Teung,

[Attached](#) is the other table with several tabs that we discussed.

Rick

The Western IPM Center is headquartered in the UC Agriculture and Natural Resources Building at 2801 Second Street, Davis, CA 95618.

The use of Methyl Bromide on all sites in California in 2009. Use is given by pounds of active ingredient applied, number of applications, and area or other unit treated.

Site	AI	Lbs AI	Num apps	Unit Treated			Misc.
				Acres	Cu. Ft	Lbs	
ALFALFA	METHYL BROMIDE	102.90	1	0	0	0	105
ALMOND	METHYL BROMIDE	33,358.64	841	8,584	1,971,017	12,000	9,959
APPLE	METHYL BROMIDE	328.66	15	0	0	532,280	0
APRICOT	METHYL BROMIDE	14.33	5	7	0	23,808	0
ASPARAGUS	METHYL BROMIDE	2,180.82	1	10	0	0	0
BEAN, DRIED	METHYL BROMIDE	2,130.00	71	0	0	10,356,000	0
BLACKBERRY	METHYL BROMIDE	14,715.96	6	75	0	0	0
BLUEBERRY	METHYL BROMIDE	1,994.59	2	9	0	0	0
BUSHBERRY	METHYL BROMIDE	161.00	49	1	0	0	0
CELERY	METHYL BROMIDE	380.19	1	2	0	0	0
CHERRY	METHYL BROMIDE	16,870.43	203	834	14,427	0	129,209
CHESTNUT	METHYL BROMIDE	14.00	1	1	0	0	0
COMMODITY FUMIGATION	METHYL BROMIDE	190,323.15	4,129	0	3,038	0	0
COTTON	METHYL BROMIDE	95.00	5	5	0	0	0
DATE	METHYL BROMIDE	817.50	119	0	0	2,445,416	274,626
DRIED FRUIT	METHYL BROMIDE	4,465.03	1,006	10	3,423,278	0	774,000
EGGPLANT	METHYL BROMIDE	1,463.95	1	7	0	0	0
FIG	METHYL BROMIDE	3,403.18	217	0	1,909,432	0	1,128,120
FOOD PROCESSING PLANT	METHYL BROMIDE	55.00	11	0	0	283,869	0
FOREST, TIMBERLAND	METHYL BROMIDE	385.00	1	2	0	0	0
FUMIGATION, OTHER	METHYL BROMIDE	68,365.70	3,164	0	0	0	0
GRAIN	METHYL BROMIDE	24,214.63	3	116	0	0	0
GRAPE	METHYL BROMIDE	78,364.46	197	131	9,508,000	13,842	1,760
GRASS, SEED	METHYL BROMIDE	3,528.00	3	9	0	0	0
KIWI	METHYL BROMIDE	522.35	6	1	0	0	299
LANDSCAPE MAINTENANCE	METHYL BROMIDE	16,002.71	297	19	0	0	0
LEMON	METHYL BROMIDE	352.80	1	1	0	0	0
LETTUCE, HEAD	METHYL BROMIDE	56,864.91	4	77	0	0	0
LUMBER, TREATED	METHYL BROMIDE	17,604.42	118	0	2,169,470	0	0
NECTARINE	METHYL BROMIDE	3,114.24	143	0	0	4,650,310	0
N-GRNHS FLOWER	METHYL BROMIDE	17,050.88	103	59	0	0	0
N-GRNHS PLANTS IN CONTAINERS	METHYL BROMIDE	24.50	1	0	0	0	0
N-GRNHS TRANSPLANTS	METHYL BROMIDE	644.10	2	4	0	0	0
N-OUTDR FLOWER	METHYL BROMIDE	38,565.47	182	198	0	0	4,700
N-OUTDR PLANTS IN CONTAINERS	METHYL BROMIDE	161,344.27	44	665	0	0	0
N-OUTDR TRANSPLANTS	METHYL BROMIDE	370,815.13	111	1,514	0	0	1,080
NURSERY SOIL	METHYL BROMIDE	196.00	2	0	21,600	0	0
NUTS	METHYL BROMIDE	368.89	3	0	1,000	17,000	14,000
PEACH	METHYL BROMIDE	17,823.97	118	339	0	3,303,592	339
PECAN	METHYL BROMIDE	12,073.60	1	31	0	0	0
PEPPER, FRUITING	METHYL BROMIDE	171.00	1	1	0	0	0
PISTACHIO	METHYL BROMIDE	671.10	19	0	0	764,825	0
PLUM	METHYL BROMIDE	3,589.81	115	3	0	3,955,308	0
PRUNE	METHYL BROMIDE	4,188.08	30	199	683,695	0	0
QUINCE	METHYL BROMIDE	92.58	5	0	0	53,620	0
RASPBERRY	METHYL BROMIDE	295,845.99	129	1,409	0	0	0
REGULATORY PEST CONTROL	METHYL BROMIDE	21,698.50	275	0	0	0	0

The use of Methyl Bromide on all sites in California in 2009. Use is given by pounds of active ingredient applied, number of applications, and area or other unit treated.

ALL USES				Unit Treated			
Site	AI	Lbs AI	Num apps	Acres	Cu. Ft	Lbs	Misc.
RESEARCH COMMODITY	METHYL BROMIDE	703.50	1	4	0	0	0
RICE	METHYL BROMIDE	6.00	2	2	0	0	0
RYE	METHYL BROMIDE	9,233.66	1	44	0	0	0
SOIL FUMIGATION/PREPLANT	METHYL BROMIDE	1,199,953.08	337	5,564	576,000	0	8,176
SPINACH	METHYL BROMIDE	1,259.70	1	6	0	0	0
STRAWBERRY	METHYL BROMIDE	2,515,939.27	1,321	13,587	0	0	64,286
STRUCTURAL PEST CONTROL	METHYL BROMIDE	23,245.06	844	0	0	0	0
SWEET POTATO	METHYL BROMIDE	4,228.26	5	29	0	0	0
TOMATO	METHYL BROMIDE	49,114.24	29	648	0	0	0
TURF/SOD	METHYL BROMIDE	60,860.77	14	170	0	0	0
UNCULTIVATED AG	METHYL BROMIDE	12,355.33	10	181	0	0	0
UNCULTIVATED NON-AG	METHYL BROMIDE	24,500.00	1	62	0	0	0
WALNUT	METHYL BROMIDE	219,478.79	1,876	4,939	2,962,795	2,833,565	1,223,944
WHEAT	METHYL BROMIDE	4,194.20	1	18	0	0	0

The production agricultural use of Methyl Bromide on all crops in California in 2009. The measures of use are described in the accompanying table.

AG USES							Lbs AI/ acre treated			Num. Applications per treated field							
Crop or Site	AI	Num. of Fields	% Base Acres Treated	Base Acres Treated	Cum. Acres Treated	Total Lbs AI	Med rate	Min rate	Max rate	Num. apps	Med apps/ field	Min apps/ field	Max apps/ field	Num. WFE apps	Med WFE/ field	Min WFE/ field	Max WFE/ field
ALFALFA	METHYL BROMIDE	1				103				1	1.00	1.00	1.00				
ALMOND	METHYL BROMIDE	271	0.91	7,961	8,167	27,414	1.49	0.11	277.67	284	1.00	1.00	2.00			0.00	1.00
APRICOT	METHYL BROMIDE	3	0.09	7	7	11	2.50	2.50	2.50	3	1.00	1.00	1.00	3.0	1.00	1.00	1.00
ASPARAGUS	METHYL BROMIDE	1	0.06	10	10	2,181	218.08	218.08	218.08	1	1.00	1.00	1.00	1.0	1.00	1.00	1.00
BLACKBERRY	METHYL BROMIDE	5	3.76	58	75	14,716	200.01	184.25	204.18	5	1.00	1.00	1.00	4.50	0.63	0.55	0.93
BLUEBERRY	METHYL BROMIDE	2	0.22	9	9	1,995	226.06	217.63	234.50	2	1.00	1.00	1.00	1.34	0.67	0.34	1.00
CELERY	METHYL BROMIDE	1	0.00	2	2	380	200.10	200.10	200.10	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CHERRY	METHYL BROMIDE	107	2.11	677	834	9,105	1.76	0.49	81.25	116	1.00	1.00	2.00				2.00
EGGPLANT	METHYL BROMIDE	1	0.91	7	7	1,464	209.14	209.14	209.14	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GRAIN	METHYL BROMIDE	3	7.82	116	116	24,215	205.20	205.20	205.20	3	1.00	1.00	1.00	2.13	0.81	0.81	0.81
GRAPE	METHYL BROMIDE	4	0.03	103	103	71,686	40.66	38.89	941.05	4	1.00	1.00	1.00	3.93	0.98	0.97	0.99
GRASS, SEED	METHYL BROMIDE	1	1.32	9	9	3,528	392.00	392.00	392.00	2	2.00	2.00	2.00	0.72	0.72	0.72	0.72
KIWI	METHYL BROMIDE	5	0.04	1	1	522	106.58	106.58	106.58	6	1.00	1.00	1.00				
LANDSCAPE MAINTENANCE	METHYL BROMIDE	2	0.17	19	19	7,095	343.00	294.00	392.00	2	1.00	1.00	1.00	1.62	0.81	0.74	0.88
LEMON	METHYL BROMIDE	1	0.00	1	1	353	352.80	352.80	352.80	1	1.00	1.00	1.00	0.10	0.10	0.10	0.10
LETTUCE, HEAD	METHYL BROMIDE	3	0.01	77	77	56,865	269.84	268.00	271.67	4	1.00	1.00	1.00	1.01	0.21	0.21	0.21
N-GRNHS FLOWER	METHYL BROMIDE	6	1.63	29	59	17,051	294.00	213.44	348.44	98	17.50	3.00	20.00	14.01	0.64	0.49	1.03
N-GRNHS PLANTS IN CONTAINERS	METHYL BROMIDE	1	0.00	0	0	25	213.44	213.44	213.44	1	1.00	1.00	1.00	0.02	0.02	0.02	0.02
N-GRNHS TRANSPLANTS	METHYL BROMIDE	2	0.26	4	4	644	195.23	179.55	210.90	2	1.00	1.00	1.00	2.0	1.00	1.00	1.00
N-OUTDR FLOWER	METHYL BROMIDE	27	2.18	195	198	38,565	294.00	184.25	352.80	129	2.00	1.00	28.00	14.68	0.43	0.13	1.23
N-OUTDR PLANTS IN CONTAINERS	METHYL BROMIDE	35	2.14	644	665	161,344	223.23	199.50	305.76	41	1.00	1.00	2.00	22.77	0.61	0.04	1.44
N-OUTDR TRANSPLANTS	METHYL BROMIDE	64	18.32	1,493	1,514	370,815	235.17	127.30	301.50	84	1.00	1.00	3.00			0.05	1.27
NURSERY SOIL	METHYL BROMIDE	1				196				2	2.00	2.00	2.00				
NUTS	METHYL BROMIDE	1				330				1	1.00	1.00	1.00				
PEACH	METHYL BROMIDE	23	0.50	339	339	16,252	56.13	0.74	392.00	24	1.00	1.00	1.00		1.00	0.01	1.00
PECAN	METHYL BROMIDE	1	1.54	31	31	12,074	392.00	392.00	392.00	1	1.00	1.00	1.00	0.3	0.27	0.27	0.27
PEPPER, FRUITING	METHYL BROMIDE	1	0.00	1	1	171	171.00	171.00	171.00	1	1.00	1.00	1.00	0.25	0.25	0.25	0.25
PLUM	METHYL BROMIDE	2	0.01	3	3	269	163.03	4.50	321.56	2	1.00	1.00	1.00	1.01	0.51	0.01	1.00
PRUNE	METHYL BROMIDE	6	0.30	198	198	2,961	4.24	3.68	45.61	6	1.00	1.00	1.00	5.5	1.00	0.93	1.00
RASPBERRY	METHYL BROMIDE	58	17.08	1,401	1,408	295,804	200.14	162.94	235.17	78	1.00	1.00	3.00	40.2	0.74	0.14	1.06
RESEARCH COMMODITY	METHYL BROMIDE	1	0.91	4	4	704	201.00	201.00	201.00	1	1.00	1.00	1.00	1.0	1.00	1.00	1.00
RYE	METHYL BROMIDE	1	1.83	44	44	9,234	212.27	212.27	212.27	1	1.00	1.00	1.00	0.99	0.99	0.99	0.99
SOIL FUMIGATION/PREPLANT	METHYL BROMIDE	211	5.65	5,461	5,564	1,199,953	207.70	84.78	305.52	263	1.00	1.00	3.00		0.99	0.04	2.00
SPINACH	METHYL BROMIDE	1	0.00	6	6	1,260	203.18	203.18	203.18	1	1.00	1.00	1.00	0.02	0.02	0.02	0.02
STRAWBERRY	METHYL BROMIDE	358	11.22	12,711	13,582	2,514,078	199.50	85.54	234.50	586	1.00	1.00	5.00	291.10	0.83	0.05	3.00
SWEET POTATO	METHYL BROMIDE	5	0.30	29	29	4,228	206.68	93.49	209.63	5	1.00	1.00	1.00	3.07	0.62	0.37	1.00

The production agricultural use of Methyl Bromide on all crops in California in 2009. The measures of use are described in the accompanying table.

AG USES							Lbs AI/ acre treated			Num. Applications per treated field							
Crop or Site	AI	Num. of Fields	% Base Acres Treated	Base Acres Treated	Cum. Acres Treated	Total Lbs AI	Med rate	Min rate	Max rate	Num. apps	Med apps/ field	Min apps/ field	Max apps/ field	Num. WFE apps	Med WFE/ field	Min WFE/ field	Max WFE/ field
TOMATO	METHYL BROMIDE	5	0.99	538	648	49,114	76.03	4.69	171.14	14	2.00	1.00	5.00	5.05	0.98	0.52	1.34
TURF/SOD	METHYL BROMIDE	9	1.22	169	170	60,861	273.75	206.25	616.84	11	1.00	1.00	2.00	2.89	0.09	0.01	1.00
UNCULTIVATED AG	METHYL BROMIDE	5	0.03	87	181	12,355	75.29	2.69	246.02	6	1.00	1.00	1.00	8.18	0.85	0.64	3.00
UNCULTIVATED NON-AG	METHYL BROMIDE	1	0.23	62	62	24,500	395.16	395.16	395.16	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00
WALNUT	METHYL BROMIDE	302	1.63	3,996	4,587	211,176	2.13	0.22	392.00	323	1.00	1.00	2.00				1.83
WHEAT	METHYL BROMIDE	1	0.01	18	18	4,194	234.31	234.31	234.31	1	1.00	1.00	1.00	0.22	0.22	0.22	0.22

Worksheet "ag uses" gives pesticide use statistics for all reported production agriculture uses.

"Nonag uses" gives use by site and AI for other uses. "Nonag" applications on crops are mostly post harvest applications.

"All uses" gives both agricultural and other uses.

Description of all columns used in the "ag uses" pesticide use table

"Num. of Fields" is the number of fields that were treated with an AI.

"% Base Acres Treated" is the percent of acres of crop planted, as calculated from the PUR, that were treated one or more times by each active ingredient (AI).

"Base Acres Treated" is the total number of acres planted that were treated one or more times by each AI.

"Cumulative Acres Treated" is the sum of the acres treated for each application even when the same area was treated more than once.

"Total Lbs AI" is the sum of pounds of each AI used on this crop.

"Med rate" is the median rate of all applications.

"Min rate" is the smallest rate after removing the lowest 2.5% of the rate values.

"Max rate" is the largest rate after removing the highest 2.5% of the rate values.

"Num. apps." is the number of applications of the AI in the crop. Applications of the same AI to the same field within 2 days is counted as one application.

"Med apps/field" is the median number of applications per field, taken over only fields treated with the AI.

"Min apps/field" is the smallest number of applications per treated field after removing the lowest 2.5% of values.

"Max apps/field" is the largest number of applications per treated field after removing the highest 2.5% of values

"Num. WFE apps" is the number of "whole field equivalent (WFE)" applications. A WFE application is the acres treated divided by acres planted in that field.

"Med WFE/ field" is the median number of WFE applications per field, taken over all treated fields

Min WFE/ field" is the smallest number of WFE applications per treated field after removing the lowest 1.0% of values

"Max WFE/ field" is the largest number of WFE applications per treated field after removing the highest 1.0% of values

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NON AG USES

Site	AI	Lbs AI	Num apps	Unit Treated			
				Acres	Cu. Ft	Lbs	Misc.
ALMOND	METHYL BROMIDE	5,944.26	546	417	1,971,017	12,000	1,862
APPLE	METHYL BROMIDE	328.66	15	0	0	532,280	0
APRICOT	METHYL BROMIDE	2.90	2	0	0	23,808	0
BEAN, DRIED	METHYL BROMIDE	2,130.00	71	0	0	10,356,000	0
BUSHBERRY	METHYL BROMIDE	161.00	49	1	0	0	0
CHERRY	METHYL BROMIDE	7,765.70	81	0	14,427	0	121,731
CHESTNUT	METHYL BROMIDE	14.00	1	1	0	0	0
COMMODITY FUMIGATION	METHYL BROMIDE	190,323.15	4,129	0	3,038	0	0
COTTON	METHYL BROMIDE	95.00	5	5	0	0	0
DATE	METHYL BROMIDE	817.50	119	0	0	2,445,416	274,626
DRIED FRUIT	METHYL BROMIDE	4,465.03	1,006	10	3,423,278	0	774,000
FIG	METHYL BROMIDE	3,403.18	217	0	1,909,432	0	1,128,120
FOOD PROCCESSING PLANT	METHYL BROMIDE	55.00	11	0	0	283,869	0
FOREST, TIMBERLAND	METHYL BROMIDE	385.00	1	2	0	0	0
FUMIGATION, OTHER	METHYL BROMIDE	68,365.70	3,164	0	0	0	0
GRAPE	METHYL BROMIDE	6,678.64	193	29	9,508,000	13,842	1,760
LANDSCAPE MAINTENANCE	METHYL BROMIDE	8,907.51	295	0	0	0	0
LUMBER, TREATED	METHYL BROMIDE	17,604.42	118	0	2,169,470	0	0
NECTARINE	METHYL BROMIDE	3,114.24	143	0	0	4,650,310	0
NUTS	METHYL BROMIDE	38.89	2	0	1,000	17,000	0
PEACH	METHYL BROMIDE	1,571.90	94	0	0	3,303,592	0
PISTACHIO	METHYL BROMIDE	671.10	19	0	0	764,825	0
PLUM	METHYL BROMIDE	3,321.31	113	0	0	3,955,308	0
PRUNE	METHYL BROMIDE	1,226.83	24	0	683,695	0	0
QUINCE	METHYL BROMIDE	92.58	5	0	0	53,620	0
RASPBERRY	METHYL BROMIDE	42.00	14	0	0	0	0
REGULATORY PEST CONTROL	METHYL BROMIDE	21,698.50	275	0	0	0	0
RICE	METHYL BROMIDE	6.00	2	2	0	0	0
SOIL FUMIGATION/PREPLANT	METHYL BROMIDE	0.38	1	0	576,000	0	0
STRAWBERRY	METHYL BROMIDE	1,861.00	409	5	0	0	64,286
STRUCTURAL PEST CONTROL	METHYL BROMIDE	23,245.06	844	0	0	0	0
WALNUT	METHYL BROMIDE	8,303.23	1,541	351	2,962,795	2,833,565	1,210,752