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## Napropamide (Devrinol) Use on Strawberries in California

Date: July 25, 2005

To: [Monisha Kaul](#)  
Biological and Economic Analysis Division  
Office of Pesticide Programs  
US Environmental Protection Agency

From: [Rick Melnicoe](#)  
Director, Western Region Integrated Pest Management Center

Dear Monisha,

Linda Herbst forwarded your [request](#) for information regarding the use of napropamide on strawberries to me for reply.

I ran a query of the 2003 California Pesticide Use Report, which is attached. This report shows each application made to strawberries in 2003. Most applications take place from late summer to the end of the year. Pages 17-18 of the California Strawberry Pest Management Strategic Plan discuss weeds and the control options. This PMSP can be accessed at <http://www.ipmcenters.org/pmsp/pdf/CASTRAWBERRY.PDF>.

I expect the use of alternative herbicides, including napropamide to increase as methyl bromide is phased out.

If you need further information, please contact me.

Sincerely,

[Rick Melnicoe](#)  
Director, Western Region Pest Management Center  
Director, Office of Pesticide Information and Coordination (UC Statewide Pesticide Coordinator)  
One Shields Avenue  
University of California  
Davis, CA 95616-8588  
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[Attachment \(Excel spread sheet\)](#)

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Date: July 15, 2005

To: [Linda Herbst](#)  
Assistant Director  
WIPMC

From: [Monisha Kaul](#)  
Biological and Economic Analysis Division

Office of Pesticide Programs  
US Environmental Protection Agency

Subject: Napropamide use on strawberries

Hello, Linda,

I'm looking for information on the benefits and uses of napropamide on strawberries in California.

Napropamide is currently going through the reregistration process at the US EPA and ecological risks of concern have been identified. From what I understand, napropamide is applied in the late summer and early fall when plants are transplanted and during stand establishment. Pesticide use data indicate that it's used more than other herbicides although soil fumigation is the primary form of weed control. As methyl bromide use decreases, is napropamide use expected to increase? Are there any specific benefits of or effective alternatives to napropamide?

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Monisha

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(Phone) 703-308-0098

PRODUCTNAME	CHEMNAME	LBS CHM USED	LBS PRD USED	AMT PRD USED	ACRE PLANTED	UNIT PLANTED	ACRE TREATED	UNIT TREATED	UNIT OF MEAS	APPLIC DT	YEAR	COUNTY	COMTRS	GROWER_ID	AER GND IND	SITENAME	SITE LOC ID
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	31.5	63	63	120	A	31.5	A	LB	7/1/03	2003	Ventura	56S01N22W06	560356C0474	G	STRAWBERRY (ALL OR UNSPEC)	11
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	176	352	352	44	A	44	A	LB	8/25/03	2003	Ventura	56S02N22W13	560356X0026	G	STRAWBERRY (ALL OR UNSPEC)	6
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	68	136	136	100	A	17	A	LB	8/28/03	2003	Santa Cruz	44M12S01E13	4403440211A	G	STRAWBERRY (ALL OR UNSPEC)	1A
DEVIRINOL 50-WP SELECTIVE HERBICIDE	NAPROPAMIDE	67	134	134	67	A	67	A	LB	9/18/03	2003	Santa Barbara	42S10N33W16	42034202374	G	STRAWBERRY (ALL OR UNSPEC)	30000101
DEVIRINOL 50-WP SELECTIVE HERBICIDE	NAPROPAMIDE	37	74	74	37	A	37	A	LB	9/18/03	2003	Santa Barbara	42S10N34W08	42034202374	G	STRAWBERRY (ALL OR UNSPEC)	31000101
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	15	30	30	45	A	15	A	LB	9/20/03	2003	Ventura	56S02N21W35	560356C0853	G	STRAWBERRY (ALL OR UNSPEC)	3
DEVIRINOL 50-WP SELECTIVE HERBICIDE	NAPROPAMIDE	84	168	168	84	A	84	A	LB	9/22/03	2003	Santa Barbara	42S10N34W04	42034202374	G	STRAWBERRY (ALL OR UNSPEC)	50000103
DEVIRINOL 50-WP SELECTIVE HERBICIDE	NAPROPAMIDE	112	224	224	117	A	112	A	LB	9/25/03	2003	Santa Barbara	42S10N33W29	42034202374	G	STRAWBERRY (ALL OR UNSPEC)	91000205
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	94	188	188	102	A	23.5	A	LB	9/29/03	2003	Santa Cruz	44M12S01E13	4403440211A	G	STRAWBERRY (ALL OR UNSPEC)	1A
DEVIRINOL 50-WP SELECTIVE HERBICIDE	NAPROPAMIDE	66	132	132	66	A	66	A	LB	10/1/03	2003	Santa Barbara	42S10N34W13	42034202374	G	STRAWBERRY (ALL OR UNSPEC)	60000102
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	35	70	70	130	A	35	A	LB	10/1/03	2003	Ventura	56S01N22W12	560356C0853	G	STRAWBERRY (ALL OR UNSPEC)	2
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	15	30	30	45	A	15	A	LB	10/1/03	2003	Ventura	56S02N21W35	560356C0853	G	STRAWBERRY (ALL OR UNSPEC)	3
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	420	840	840	106	A	105	A	LB	10/2/03	2003	Ventura	56S02N22W14	560356X0026	G	STRAWBERRY (ALL OR UNSPEC)	5
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	20	40	40	102	A	5	A	LB	10/3/03	2003	Santa Cruz	44M12S01E13	4403440211A	G	STRAWBERRY (ALL OR UNSPEC)	1A
DEVIRINOL 50-WP SELECTIVE HERBICIDE	NAPROPAMIDE	46	92	92	46	A	46	A	LB	10/5/03	2003	Santa Barbara	42S10N33W18	42034202374	G	STRAWBERRY (ALL OR UNSPEC)	70000202
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	183	366	366	44	A	42	A	LB	10/6/03	2003	Ventura	56S02N22W13	560356X0026	G	STRAWBERRY (ALL OR UNSPEC)	6
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	4	8	8	140	A	5	A	LB	10/7/03	2003	Santa Cruz	44M12S01E13	4403440245A	G	STRAWBERRY (ALL OR UNSPEC)	3A
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	332	664	664	100	A	83	A	LB	10/7/03	2003	Ventura	56S02N21W29	560356X0026	G	STRAWBERRY (ALL OR UNSPEC)	8
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	82.5	165	165	63	A	55	A	LB	10/8/03	2003	Santa Barbara	42S10N33W32	42034202591	G	STRAWBERRY (ALL OR UNSPEC)	2000101
DEVIRINOL 50-DF ORNAMENTAL SELECTIVE HERBICIDE	NAPROPAMIDE	9	18	18	32	A	6	A	LB	10/8/03	2003	Santa Cruz	44M12S01E11	4403440413A	G	STRAWBERRY (ALL OR UNSPEC)	1A
DEVIRINOL 50-WP SELECTIVE HERBICIDE	NAPROPAMIDE	140	280	280	140	A	140	A	LB	10/10/03	2003	Santa Barbara	42S10N33W27	42034202374	G	STRAWBERRY (ALL OR UNSPEC)	20000101
DEVIRINOL 50-DF ORNAMENTAL SELECTIVE HERBICIDE	NAPROPAMIDE	10.5	21	21	32	A	7	A	LB	10/10/03	2003	Santa Cruz	44M12S01E11	4403440413A	G	STRAWBERRY (ALL OR UNSPEC)	1A
DEVIRINOL 50-DF ORNAMENTAL SELECTIVE HERBICIDE	NAPROPAMIDE	14.25	28.5	28.5	32	A	9.5	A	LB	10/12/03	2003	Santa Cruz	44M12S01E11	4403440413A	G	STRAWBERRY (ALL OR UNSPEC)	1A
DEVIRINOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	18	36	36	24	A	12	A	LB	10/14/03	2003	Santa Barbara	42S10N33W30	42034010053	G	STRAWBERRY (ALL OR UNSPEC)	8700010
DEVIRINOL 50-DF ORNAMENTAL SELECTIVE HERBICIDE	NAPROPAMIDE	6	12	12	32	A	4	A	LB	10/14/03	2003	Santa Cruz	44M12S01E11	4403440413A	G	STRAWBERRY (ALL OR UNSPEC)	1A

DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	240	480	480	107	A	60	A	LB	10/14/03	2003	Ventura	56S02N21W28	560356X0026	G	STRAWBERRY (ALL OR UNSPEC)	3
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	12	24	24	18	A	8	A	LB	10/17/03	2003	Santa Barbara	42S10N33W30	42034202175	G	STRAWBERRY (ALL OR UNSPEC)	2000201
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	21	42	42	22	A	14	A	LB	10/18/03	2003	Santa Barbara	42S10N33W27	42034202247	G	STRAWBERRY (ALL OR UNSPEC)	3000601
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	47.25	94.5	94.5	27	A	27	A	LB	10/20/03	2003	Santa Barbara	42S10N34W05	42034202086	G	STRAWBERRY (ALL OR UNSPEC)	4000101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	30	60	60	45	A	20	A	LB	10/21/03	2003	Santa Barbara	42S10N34W25	42034202119	G	STRAWBERRY (ALL OR UNSPEC)	2000101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	13.5	27	27	9	A	9	A	LB	10/21/03	2003	Santa Barbara	42S09N33W07	42034202175	G	STRAWBERRY (ALL OR UNSPEC)	3000101
DEVRIKOL 50-WP SELECTIVE HERBICIDE	NAPROPAMIDE	8	16	16	3	A	2	A	LB	10/21/03	2003	Santa Cruz	44M12S01E02	440327P192A	G	STRAWBERRY (ALL OR UNSPEC)	10A
DEVRIKOL 50-DF ORNAMENTAL SELECTIVE HERBICIDE	NAPROPAMIDE	12	24	24	8	A	8	A	LB	10/22/03	2003	Santa Barbara	42S10N34W29	42034202207	G	STRAWBERRY (ALL OR UNSPEC)	1000301
DEVRIKOL 50DF SELECTIVE HERBICIDE	NAPROPAMIDE	40.5	81	81	20	A	13.5	A	LB	10/23/03	2003	Monterey	27M13S02E14	270327P064A	G	STRAWBERRY (ALL OR UNSPEC)	10001
DEVRIKOL 50DF SELECTIVE HERBICIDE	NAPROPAMIDE	24	48	48	15	A	6	A	LB	10/23/03	2003	Monterey	27M13S02E10	270327P033A	G	STRAWBERRY (ALL OR UNSPEC)	40001
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	97.5	195	195	74	A	65	A	LB	10/23/03	2003	San Luis Obispo	40S11N34W28	40034010535	G	STRAWBERRY (ALL OR UNSPEC)	60003
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	27	54	54	18	A	18	A	LB	10/24/03	2003	San Luis Obispo	40S11N34W28	40034010535	G	STRAWBERRY (ALL OR UNSPEC)	60002
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	15	30	30	45	A	10	A	LB	10/24/03	2003	Santa Barbara	42S10N34W25	42034202119	G	STRAWBERRY (ALL OR UNSPEC)	2000101
DEVRIKOL 5-G ORNAMENTAL SELECTIVE HERBICIDE	NAPROPAMIDE	1.65	33	33	11	A	11	A	LB	10/24/03	2003	Santa Barbara	42S10N34W20	42034202207	G	STRAWBERRY (ALL OR UNSPEC)	4000101
DEVRIKOL 50-DF ORNAMENTAL SELECTIVE HERBICIDE	NAPROPAMIDE	9	18	18	6	A	6	A	LB	10/24/03	2003	Santa Barbara	42S10N34W20	42034202207	G	STRAWBERRY (ALL OR UNSPEC)	4001201
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	93	186	186	66	A	62	A	LB	10/25/03	2003	San Luis Obispo	40S11N34W28	40034010535	G	STRAWBERRY (ALL OR UNSPEC)	60001
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	12	24	24	22	A	8	A	LB	10/25/03	2003	Santa Barbara	42S10N33W27	42034202247	G	STRAWBERRY (ALL OR UNSPEC)	3000601
DEVRIKOL 50DF SELECTIVE HERBICIDE	NAPROPAMIDE	30	60	60	23	A	20	A	LB	10/25/03	2003	Santa Barbara	42S10N33W32	42034202303	G	STRAWBERRY (ALL OR UNSPEC)	5000101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	33.25	66.5	66.5	19	A	19	A	LB	10/27/03	2003	Santa Barbara	42S10N34W22	42034202086	G	STRAWBERRY (ALL OR UNSPEC)	5000101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	13.5	27	27	9	A	9	A	LB	10/30/03	2003	Santa Barbara	42S10N34W24	42034202021	G	STRAWBERRY (ALL OR UNSPEC)	1001001
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	14.25	28.5	28.5	9.5	A	9.5	A	LB	10/30/03	2003	Santa Barbara	42S10N34W24	42034202021	G	STRAWBERRY (ALL OR UNSPEC)	1001902
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	7.5	15	15	14	A	5	A	LB	10/31/03	2003	Santa Barbara	42S10N33W27	42034202531	G	STRAWBERRY (ALL OR UNSPEC)	1000301
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	22.5	45	45	45	A	15	A	LB	10/31/03	2003	Santa Barbara	42S10N34W25	42034202119	G	STRAWBERRY (ALL OR UNSPEC)	2000101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	48	96	96	24	A	12	A	LB	11/1/03	2003	Santa Barbara	42S10N34W30	42034202176	G	STRAWBERRY (ALL OR UNSPEC)	2000101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	10.95	21.9	21.9	7.3	A	7.3	A	LB	11/5/03	2003	Santa Barbara	42S10N34W24	42034202021	G	STRAWBERRY (ALL OR UNSPEC)	1001101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	216	432	432	56	A	56	A	LB	11/5/03	2003	Santa Cruz	44M11S02E16	4403440651A	G	STRAWBERRY (ALL OR UNSPEC)	1A

DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	140	280	280	35	A	35	A	LB	11/6/03	2003	Monterey	27M13S02E25	270327S207A	G	STRAWBERRY (ALL OR UNSPEC)	90001
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	30	60	60	20	A	20	A	LB	11/6/03	2003	Santa Barbara	42S10N34W33	42034202238	G	STRAWBERRY (ALL OR UNSPEC)	3000401
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	18	36	36	24	A	12	A	LB	11/6/03	2003	Santa Barbara	42S10N33W30	42034010053	G	STRAWBERRY (ALL OR UNSPEC)	8000101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	0.375	0.75	0.75	0.25	A	0.25	A	LB	11/7/03	2003	Santa Barbara	42S10N34W24	42034202021	G	STRAWBERRY (ALL OR UNSPEC)	1001101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	120	240	240	30	A	30	A	LB	11/10/03	2003	Monterey	27M13S02E27	270327S207A	G	STRAWBERRY (ALL OR UNSPEC)	30001
DEVRIKOL 2-G ORNAMENTAL SELECTIVE HERBICIDE	NAPROPAMIDE	0.4224	21.12	21.12	11	A	2.64	A	LB	11/10/03	2003	Santa Cruz	44M11S02E34	4403440253A	G	STRAWBERRY (ALL OR UNSPEC)	30001
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	24	48	48	44	A	6	A	LB	11/12/03	2003	Monterey	27M13S03E30	270327S298A	G	STRAWBERRY (ALL OR UNSPEC)	20001
DEVRIKOL 2-E SELECTIVE HERBICIDE	NAPROPAMIDE	61.04	280	280	70	A	70	A	LB	11/13/03	2003	Santa Barbara	42S10N33W18	42034202130	G	STRAWBERRY (ALL OR UNSPEC)	2000101
DEVRIKOL 2-E SELECTIVE HERBICIDE	NAPROPAMIDE	61.04	280	280	70	A	70	A	LB	11/15/03	2003	Santa Barbara	42S10N34W24	42034202130	G	STRAWBERRY (ALL OR UNSPEC)	7000101
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	100	200	200	39	A	25	A	LB	11/16/03	2003	Santa Cruz	44M11S02E36	4403270297A	G	STRAWBERRY (ALL OR UNSPEC)	1A
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	54	108	108	36	A	36	A	LB	11/20/03	2003	Santa Barbara	42S10N34W33	42034202238	G	STRAWBERRY (ALL OR UNSPEC)	3000501
DEVRIKOL 2-G ORNAMENTAL SELECTIVE HERBICIDE	NAPROPAMIDE	0.5872	29.36	29.36	13	A	3.67	A	LB	11/20/03	2003	Santa Cruz	44M12S02E03	4403440253A	G	STRAWBERRY (ALL OR UNSPEC)	70001
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	120	240	240	110	A	30	A	LB	11/25/03	2003	Monterey	27M13S02E35	270327S207A	G	STRAWBERRY (ALL OR UNSPEC)	20001
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	6	12	12	5	A	4	A	LB	11/28/03	2003	San Joaquin	39M02N06E17	39033900218	G	STRAWBERRY (ALL OR UNSPEC)	1-Jan
DEVRIKOL 50-DF SELECTIVE HERBICIDE	NAPROPAMIDE	126	252	252	102	A	32	A	LB	11/28/03	2003	Santa Cruz	44M12S01E13	4403440211A	G	STRAWBERRY (ALL OR UNSPEC)	1A
DEVRIKOL 50DF SELECTIVE HERBICIDE	NAPROPAMIDE	165	330	330	90	A	55	A	LB	12/1/03	2003	Monterey	27M13S03E27	270327S293A	G	STRAWBERRY (ALL OR UNSPEC)	20001

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