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December 13, 2022

Charlene Dindo, Assistant to Legislative Committee on Administrative Rules.
By email

RE: 22-P06: Revised Regulations for the Control of Pesticides

Dear Charlene and Members of LCAR:

Since August 1995 I have studied pesticides and their ecological and human health effects, bringing peer reviewed studies on these subjects to the attention of the Vermont Pesticide Advisory Council and the Vermont Agency of Agriculture, Farms and Markets (VAAFAM), with minimal effect. Legislation had been passed in the Adjourned Session of 1969 creating the Vermont Pesticide Advisory Council to regulate and reduce pesticide use in Vermont. Sadly, pesticide use has increased yearly in Vermont to 1 million pounds. Many of these pesticides, including those used on food crops, interfere with hormonal systems in wildlife and humans in ways that endanger life and health. Now pesticides contaminated with PFAS¹ are contaminating soil, water² and foods and endangering wildlife and human health at concentrations not considered in water quality standards. These regulations do not allay my concerns.

The rules in 22-P06 were an opportunity, after some 30 years, for VAAFAM to review the uses of “economic poisons” in Vermont and adopt new ways to protect human and environmental health in Vermont.

I strongly encourage you to object to these regulations on three main grounds:

1. The rules are arbitrary and inconsistent, as pointed out by Mason Overstreet and the environmental coalition;
2. The rules are contrary to Legislative intent regarding pollinator protection, as explained by Judy Bellairs in her testimony;
3. The filing fails to describe adequately or accurately the true environmental impact of these regulations, including the impacts on global warming,³ the significant and dangerous bio-accumulative effects of PFAS

¹Lasee, Steven et al (2022). Targeted analysis...of several insecticides for PFAS. <https://doi.org/10.1016/j.hazl.2022.100067>. Imidacloprid is contaminated with PFOS, not via container leaching.

² USGS GLYPH1 Results (2021). See column FH for Imidacloprid detections at Burlington WWTF and Potash Brook. Attached.

³ Pesticides and the Climate Crisis. https://www.pesticide.org/pesticides_and_climate_crisis

contamination in pesticides on ecological and human health, and the importance of promoting integrated pest management to avoid the use of toxins in our state.

I urge you to review Dr. Steven Lasee's testimony provided on December 1 regarding PFAS contamination of insecticides, a recent phenomenon not considered at all in the revised regulations.

Protecting ourselves and future generations from unnecessary harmful toxins is important work. May you call on your integrity and your innate courage to insist on more protective regulations for the whole community of life in Vermont.

Thank you for considering these comments.

Sylvia Knight
Earth Community Advocate

A handwritten signature in cursive script that reads "Sylvia Knight". The ink is dark and the signature is centered to the right of the typed name.

Attachment:
USGS GLYPH 1 Results.

Station_Name	Date_Time	Sample_Type	Dissolved_pH	Specific_C	Temperati
BURLINGTON MAIN WWTP OUTFLOW @ BURLINGTON, VT	8/3/2021 11:22	Effluent	2.4	6.8	1,020 20.7
STEVENS BROOK AT KELLOGG ROAD, NEAR ST. ALBANS, VT	8/3/2021 14:00	Surface Water	9.2	8.3	1,010 19.1
STEVENS BROOK AT KELLOGG ROAD, NEAR ST. ALBANS, VT	10/17/2021 13:30	Surface Water	10	8.2	903 14.6
STEVENS BROOK AT KELLOGG ROAD, NEAR ST. ALBANS, VT	7/2/2021 16:35	Surface Water	8.6	8.2	1,350 18.9
ROCK RIVER NEAR HIGHGATE CENTER, VT	8/3/2021 13:00	Surface Water	4.9	7.3	335 21.5
POTASH BR @ QUEEN CITY PARK RD, NR BURLINGTON, VT	10/17/2021 16:50	Surface Water	9.8	8.2	1,180 14.6
ROCK RIVER NEAR HIGHGATE CENTER, VT	7/2/2021 15:30	Surface Water	4.7	7.5	321 21.5
POTASH BR @ QUEEN CITY PARK RD, NR BURLINGTON, VT	8/3/2021 9:20	Surface Water	9.6	8.2	1,320 16.1
ROCK RIVER NEAR HIGHGATE CENTER, VT	9/15/2021 13:30	Surface Water	5.5	7.4	354 19.1
STEVENS BROOK AT KELLOGG ROAD, NEAR ST. ALBANS, VT	9/15/2021 15:10	Surface Water	8.9	8.3	1,240 18.7
ROCK RIVER NEAR HIGHGATE CENTER, VT	10/17/2021 12:30	Surface Water	2.3	7	329 14.7
ENGLESBY BROOK AT BURLINGTON, VT	8/3/2021 10:31	Surface Water	8.7	7.8	916 17.4
POTASH BR @ QUEEN CITY PARK RD, NR BURLINGTON, VT	9/15/2021 11:00	Surface Water	9.2	8.2	1,460 18.3
ENGLESBY BROOK AT BURLINGTON, VT	9/15/2021 11:50	Surface Water	7.9	7.6	729 19.2
POTASH BR @ QUEEN CITY PARK RD, NR BURLINGTON, VT	6/14/2021 14:45	Surface Water	8.8	8	1,480 18.2
ENGLESBY BROOK AT BURLINGTON, VT	6/14/2021 13:00	Surface Water	7.5	7.6	1,460 19.8
BURLINGTON MAIN WWTP OUTFLOW @ BURLINGTON, VT	10/17/2021 15:40	Effluent	3.2	6.5	538 19.2
ENGLESBY BROOK AT BURLINGTON, VT	7/2/2021 13:10	Surface Water	7.7	7.6	1,060 19.7
ENGLESBY BROOK AT BURLINGTON, VT	10/17/2021 16:15	Surface Water	8.8	7.7	876 14.9
POTASH BR @ QUEEN CITY PARK RD, NR BURLINGTON, VT	7/2/2021 14:05	Surface Water	8.8	8.1	1,410 18.7

Turbidity_	Turbidity_	Ammonia_	Ammonia_	Ammonia_	Ammonia_	Nitrate_pl	Nitrate_pl	Nitrite_mg	Nitrite_mg	Orthopho:	Orthopho:	Phosphori	Phosphori
NA	0.5 NA	3.24 NA	4.4 NA	2.93 NA	0.337 NA	0.013 NA	0.055						
<	0.5 <	0.02 NA	0.24 NA	0.125 <	0.001 NA	0.028 NA	0.034						
NA	1.9 <	0.02 NA	0.36 NA	0.091 NA	0.003 NA	0.034 NA	0.041						
<	0.5 <	0.02 NA	0.38 NA	0.162 <	0.001 NA	0.035 NA	0.043						
NA	38 NA	0.27 NA	1.2 NA	0.119 NA	0.019 NA	0.034 NA	0.067						
NA	11 <	0.02 NA	0.54 NA	0.113 NA	0.002 NA	0.041 NA	0.052						
NA	13 NA	0.08 NA	0.86 <	0.04 NA	0.005 NA	0.068 NA	0.095						
NA	5.1 NA	0.02 NA	0.46 NA	0.24 NA	0.002 NA	0.026 NA	0.035						
NA	18 NA	0.03 NA	1 <	0.04 NA	0.004 NA	0.042 NA	0.092						
<	0.5 <	0.02 NA	0.24 NA	0.095 NA	0.002 NA	0.03 NA	0.04						
NA	32 NA	0.3 NA	1.3 NA	0.348 NA	0.041 NA	0.087 NA	0.114						
NA	9.8 NA	0.03 NA	0.45 NA	0.282 NA	0.003 <	0.004 NA	0.013						
NA	9.3 <	0.02 NA	0.32 NA	0.555 NA	0.007 NA	0.021 NA	0.031						
NA	20 NA	0.04 NA	0.39 NA	0.353 NA	0.013 NA	0.02 NA	0.045						
NA	37 <	0.02 NA	0.56 NA	0.435 NA	0.018 NA	0.005 NA	0.035						
NA	64 <	0.02 NA	0.86 NA	0.291 NA	0.019 NA	0.013 NA	0.078						
<	0.5 NA	0.15 NA	0.78 NA	4.46 NA	0.01 NA	0.013 NA	0.037						
NA	35 NA	0.04 NA	0.53 NA	0.154 NA	0.008 NA	0.033 NA	0.059						
NA	9.2 NA	0.03 NA	0.61 NA	0.167 NA	0.002 NA	0.007 NA	0.018						
NA	16 NA	0.03 NA	0.49 NA	0.411 NA	0.01 NA	0.025 NA	0.039						

Escherichi	Escherichi	Total_colii	Total_colif	Aminomethyl	Aminometh	Glufosinat	Glufosinat	Glyphosat	Glyphosat	2_Chloro_2_Chloro_4_2_Chloro_
<	1 NA	260 NA	0.31 <	0.02 <	0.02 NA	5.1 <				
NA	330 NA	4,100 NA	0.16 <	0.02 <	0.02 NA	11.1 NA				
NA	NA NA	NA NA	0.07 <	0.02 <	0.02 NA	5.4 NA				
NA	NA NA	NA NA	0.05 <	0.02 <	0.02 NA	31.4 NA				
NA	1,400 NA	7,700 NA	0.04 <	0.02 <	0.02 NA	11.1 <				
NA	NA NA	NA NA	0.04 <	0.02 <	0.02 NA	5.6 NA				
NA	NA NA	NA NA	0.04 <	0.02 <	0.02 NA	30.7 NA				
NA	160 NA	9,200 NA	0.03 <	0.02 <	0.02 NA	13.8 NA				
NA	3,700 NA	16,000 NA	0.03 <	0.02 <	0.02 NA	6.5 <				
NA	920 NA	20,000 NA	0.03 <	0.02 <	0.02 NA	8.8 NA				
NA	NA NA	NA NA	0.03 <	0.02 <	0.02 NA	6.1 NA				
NA	170 NA	10,000 <	0.02 <	0.02 <	0.02 NA	4 <				
NA	1,700 NA	20,000 <	0.02 <	0.02 <	0.02 NA	NA NA				
NA	11,000 NA	140,000 NA	0.02 <	0.02 <	0.02 NA	NA NA				
NA	7,700 NA	580,000 <	0.02 <	0.02 <	0.02 NA	95.2 NA				
NA	37,000 NA	820,000 <	0.02 <	0.02 NA	0.08 NA	106 NA				
NA	NA NA	NA NA	0.02 <	0.02 <	0.02 NA	4 <				
NA	NA NA	NA <	0.02 <	0.02 <	0.02 NA	57.6 NA				
NA	NA NA	NA <	0.02 <	0.02 <	0.02 NA	2.6 <				
NA	NA NA	NA <	0.02 <	0.02 <	0.02 NA	22.7 NA				

2_Chloro	3_4_Dichl	3_4_Dichl	3_4_Dichl	3_4_Dichl	3_5_Dichl	3_5_Dichl	5_hydroxy	5_hydroxy	Acetamipr	Acetamipr	Acetochlo	Acetochlo	Atrazine_r
1 <	1 <	1 <	1 <	1 <	2 <	1 NA	4.5 <	1 NA					
4.5 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
2.9 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
18.1 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
1 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
3 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
14.9 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
4.9 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
1 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
4.1 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
2.1 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
1 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
82.9 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 NA	5 NA					
96.3 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 NA	2.8 NA					
1 <	1 <	1 <	1 <	1 <	2 <	1 NA	3.5 <	1 NA					
45.8 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 NA	2.4 NA					
1 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					
16.8 <	1 <	1 <	1 <	1 <	2 <	1 <	0.5 <	1 NA					

Atrazine_r Azoxystrol|Azoxystrol|Benzobicy Benzobicy Benzovind Benzovind Boscalid_r Boscalid_r Boscalid_r Boscalid_r Broflanilid Broflanilid Bromocon

5 NA	4.1 <	1 <	0.5 <	0.5 NA	5.6 <	0.5 <
47.8 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
4.4 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
27 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
6.9 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
2.2 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
23.7 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
12.7 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
2 NA	0.9 <	1 <	0.5 <	0.5 <	1 <	0.5 <
7.4 NA	0.8 <	1 <	0.5 <	0.5 <	1 <	0.5 <
1.2 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
3.8 <	0.5 <	1 <	0.5 <	0.5 NA	6.3 <	0.5 <
NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
34.8 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
32.3 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
3.6 NA	2.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
38.2 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <
1.6 NA	4.7 <	1 <	0.5 <	0.5 <	1 <	0.5 <
14.6 <	0.5 <	1 <	0.5 <	0.5 <	1 <	0.5 <

	Bromocon	Butralin_n	Butralin_n	Carbaryl_r	Carbaryl_r	Carbendaz	Carbendaz	Carbofura	Carbofura	Chlorantra	Chlorantraniliprole_r	Chlorpyrif	Chlorpyrif
	1 <		1 <		0.5 NA		203 <		0.5 NA		3.9 <		0.5
	1 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
	1 <		1 <		0.5 NA		12.6 <		0.5 NA		1.2 <		0.5
	1 <		1 <		0.5 NA		4.9 <		0.5 NA		1.5 <		0.5
	1 <		1 <		0.5 <		0.5 <		0.5 NA		2.3 <		0.5
	1 <		1 <		0.5 NA		12.5 <		0.5 NA		11.7 <		0.5
	1 <		1 <		0.5 <		0.5 <		0.5 NA		3.4 <		0.5
	1 <		1 <		0.5 <		0.5 <		0.5 NA		19.2 <		0.5
	1 <		1 <		0.5 <		0.5 <		0.5 NA		2 <		0.5
	1 <		1 <		0.5 NA		1.6 <		0.5 NA		2.2 <		0.5
	1 <		1 <		0.5 <		0.5 <		0.5 NA		2.6 <		0.5
	1 <		1 <		0.5 <		0.5 <		0.5 NA		108 <		0.5
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1 <		1 <		0.5 NA		26.3 <		0.5 NA		3.1 <		0.5
	1 <		1 <		0.5 NA		29.4 <		0.5 NA		9.8 <		0.5
	1 <		1 <		0.5 NA		178 <		0.5 NA		2.9 <		0.5
	1 <		1 NA		13 NA		4.9 <		0.5 NA		23.3 <		0.5
	1 <		1 <		0.5 NA		3.7 <		0.5 NA		72.6 <		0.5
	1 <		1 <		0.5 NA		44 <		0.5 NA		7.4 <		0.5

Chlorpyrif	Chlorpyrif	Clomazon	Clomazon	Clothianid	Clothianid	Coumaph	Coumaph	Cyantranil	Cyantranil	Cyazofami	Cyazofami	Cycloate_1	Cycloate_1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 NA	8.2 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 NA	10.2 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 NA	2.3 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<	1 <	0.5 NA	4.8 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 NA	3 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1
<	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1 <	1 <	0.5 <	0.5 <	1	1

Difenocon	Difenocon	Dimethorr	Dimethorr	Dinotefur:	Dinotefur:	Diuron_ng	Diuron_ng	S_Ethyl_di	S_Ethyl_di	Ethaboxar	Ethaboxar	Etoxazole_	Etoxazole_
<	1 NA	1.8 <	1 NA	17 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 NA	11.8 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 NA	1.3 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<	1 <	0.5 <	1 NA	2.3 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 NA	30.9 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 <	0.5 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 NA	1.2 <	2 <	1 <	0.5						
<	1 <	0.5 <	1 NA	5.6 <	2 <	1 <	0.5						

	Fluindapyi	Fluindapyi	Flumetrali	Flumetrali	Fluopicolic	Fluopicolic	Fluopyranr	Fluopyranr	Fluoxastrc	Fluoxastrc	Flupyradif	Flupyradif	Fluridone_	Fluridone_
<		0.5 <		1 <		0.5 NA		3.4 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 NA		8.1 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 NA		468 <		0.5 <		0.5 <		0.5
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<		0.5 <		1 <		0.5 NA		5.3 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 NA		3.7 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 <		0.5 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 NA		13.1 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 NA		74.6 <		0.5 <		0.5 <		0.5
<		0.5 <		1 <		0.5 NA		1.4 <		0.5 <		0.5 <		0.5

Imidacloprid	Imidacloprid	Imidacloprid	Imidacloprid	Imidacloprid	Imidacloprid	Indaziflam	Indaziflam	Indoxacarb	Indoxacarb	Ipconazole	Ipconazole	Iprodione	Iprodione
<	0.5	NA	101	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	NA	8.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	NA	13	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	NA	2.6	<	1	<	0.5	<	1	<	0.5	<	1
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<	0.5	NA	60.4	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	NA	35	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	<	0.5	<	1	<	0.5	<	1	<	0.5	<	1
<	0.5	NA	8.9	<	1	<	0.5	<	1	<	0.5	<	1

	Metalaxyl	Metalaxyl	Metconaz	Metconaz	Methoxyf	Methoxyf	Metolachl	Metolachl	Myclobut	Myclobut	N_2_chlor	N_2_chlor	N_3_4_Di	N_3_4_Di
<		0.5 <		0.5 <		0.5 NA		3 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		5.1 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		3.3 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		11.1 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		9.5 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		30.7 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		14.9 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		154 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		2.8 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		2.7 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		3.1 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		2.1 <		0.5 <		1 <		1
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<		0.5 <		0.5 <		0.5 NA		19.7 NA		3.8 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		13.8 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		2.2 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		41.6 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		1.7 <		0.5 <		1 <		1
<		0.5 <		0.5 <		0.5 NA		14 NA		1.5 <		1 <		1

	Naled_ng.	Naled_ng.	Napropam	Napropam	Oryzalin_r	Oryzalin_r	Oxadiazon	Oxadiazon	Oxathiapiç	Oxathiapiç	Oxyfluorfe	Oxyfluorfe	Paclobutrç	Paclobutrç
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<		10 <			0.5 <			2 <			1 <		1 NA	2.7
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1
<		10 <			0.5 <			2 <			1 <		1 <	1

Pendimetl	Pendimetl	Penoxsula	Penoxsula	Penthiopy	Penthiopy	Phosmet_	Phosmet_	Picarbutra	Picarbutra	Picoxystro	Picoxystro	Piperonyl_	Piperonyl_
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 NA	16.2					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 NA	4.6					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 NA	10.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 NA	1.4					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 NA	2					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 NA	4.3					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					
<	1 <	1 <	1 <	0.5 <	0.5 <	0.5 <	0.5 <	0.5					

Prodiamin	Prodiamin	Prometon	Prometon	Prometryr	Prometryr	Propanil_r	Propanil_r	Propargite	Propargite	Propiconaz	Propiconaz	Propyzam	Propyzam
<	2 NA	2.4 <	0.5 <	1 <	0.5 NA	3.9 <	1						
<	2 <	0.5 <	0.5 <	1 <	0.5 NA	6.7 <	1						
<	2 <	0.5 <	0.5 <	1 <	0.5 NA	8.3 <	1						
<	2 NA	1 <	0.5 <	1 <	0.5 NA	5.5 <	1						
<	2 <	0.5 <	0.5 <	1 <	0.5 <	0.5 <	1						
<	2 NA	1 <	0.5 <	1 <	0.5 NA	1.9 <	1						
<	2 <	0.5 <	0.5 <	1 <	0.5 <	0.5 <	1						
<	2 NA	1.6 <	0.5 <	1 <	0.5 NA	2.8 <	1						
<	2 <	0.5 <	0.5 <	1 <	0.5 <	0.5 <	1						
<	2 <	0.5 <	0.5 <	1 <	0.5 NA	2.1 <	1						
<	2 <	0.5 <	0.5 <	1 <	0.5 NA	0.8 <	1						
<	2 NA	1.5 <	0.5 <	1 <	0.5 NA	32.1 <	1						
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<	2 NA	3.6 <	0.5 <	1 <	0.5 NA	4.1 <	1						
<	2 NA	13.4 <	0.5 <	1 <	0.5 NA	21.2 <	1						
<	2 NA	1.5 <	0.5 <	1 <	0.5 NA	3.7 <	1						
<	2 NA	6.6 <	0.5 <	1 <	0.5 NA	22 <	1						
<	2 NA	1.4 <	0.5 <	1 <	0.5 NA	18.2 <	1						
<	2 NA	3.2 <	0.5 <	1 <	0.5 NA	3.1 <	1						

