

Split Sampling Results for 3/26/21

The NDEE split samples with Nutrient Advisors (NA) at the AltEn facility on March 26, 2021 following the NDEE sampling plan and QAPP. NDEE samples were sent to Pacific Agricultural Laboratory (PAL) in Sherwood, Oregon and NAs sent theirs to South Dakota Agricultural Laboratories in Brookings, South Dakota.

The NDEE split samples at MW-1 (upgradient) and MW-4 (downgradient). Only the pesticide portion of the analysis was split. The NDEE also collected a duplicate and field blank as per the QAPP.

Review of the data by David Miesbach follows (also see attachments):

1. The duplicate sent to PAL indicated all parameters were under the target relative percent difference (RPD) of 10%.
2. The field blank sent to PAL indicated no contaminants were introduced in the field. All results were less than the limit of quantitation (LOQ).
3. The split sample collected at MW-1 with South Dakota Agricultural Laboratories indicated all analyzed parameters were under the target RPD for split samples of 30% - 35%.
4. The split sample collected at MW-4 with South Dakota Agricultural Laboratories indicated one analyzed parameter (Clothianidin) was over the target RPD for split samples of 30% - 35%.

Conclusions -

The duplicate and blank sample sent to PAL is well within acceptable parameters. The split sent to South Dakota Agricultural Laboratories had one parameter over the target RPD for splits. The RPD for Clothianidin was calculated to be 179%. Calculating a sample 179% higher than what was reported by PAL (72 ug/L) results in a possible concentration of 201 ug/L. This calculated concentration would still fall below the chronic or carcinogenic human health benchmark for pesticides of 630 ug/L. Based on the results, I feel this is a comparable split.

Recommendations -

In the future, I would recommend that Nutrient Advisors duplicate sample include both pesticides and nutrients.


5/6/21

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NDEE split with Nutrient Advisors (NA) of MW-1 (3/26/31)

Analyte	NA Sample	NDEE Split	RPD	NDEE list	cHHBP
AMPA		< 40			
Glufosinate	< 10	< 10		Glufosinate	
Glyphosate	< 10	< 10		Glyphosate	
Abamectin	< 10	< 1		Abamectin	3
Acetamiprid	< 3	< 1		Acetamiprid	
Azoxystrobin	< 3	< 1		Azoxystrobin	1,200
Brassinazole	< 5	< 1		Brassinazole	
Carbendazim		< 1			160
Carboxin		< 1			
Chlorantraniliprole		< 1			10,100
Clothianidin	< 8	< 1		Clothianidin	630
Cyantraniliprole		< 1			60
Cyproconazole	< 5	< 1		Cyproconazole	
Difenoconazole	< 4	< 1		Difenoconazole	60
Dimoxystrobin	< 8	< 1		Dimoxystrobin	
Dinotefuran	< 1.2	< 1		Dinotefuran	
Epoxiconazole	< 3	< 1		Epoxiconazole	
Fluconazole	< 4	< 1		Fluconazole	
Fludioxonil		< 1		Fludioxonil	200
Fluoxastrobin	< 3	< 1		Fluoxastrobin	96
Imidacloprid	< 4	< 1		Imidacloprid	360
Ipconazole	< 6	< 1		Ipconazole	96
Isavuconazole	< 4	< 1		Isavuconazole	
Itraconazole	< 5	< 1		Itraconazole	
Mefenoxam		< 1		Mefenoxam	
Metconazole	< 5	< 1		Metconazole	300
Nitenpyram	< 8	< 1		Nitenpyram	
Orysastrobin	< 7	< 1		Orysastrobin	
Picoxystrobin	< 3	< 1		Picoxystrobin	290
Posaconazole	< 5	< 1		Posaconazole	
Propiconazole	< 5	< 1		Propiconazole	600
Prothioconazole	< 6	< 1		Prothioconazole	60
Pyraclostrobin	< 3	< 1		Pyraclostrobin	220
Ravuconazole	< 3	< 1		Ravuconazole	
Tebuconazole	< 2	< 1		Tebuconazole	190
Tetraconazole	< 4	< 1		Tetraconazole	
Thiabendazole	< 5	< 1		Thiabendazole	
Thiacloprid	< 6	< 1		Thiacloprid	
Thiamethoxam	< 3	< 1		Thiamethoxam	77
Thiophanate methyl		< 1			160
Trifloxystrobin	< 5	< 1		Trifloxystrobin	240
Uniconazole	< 3	< 1		Uniconazole	
Voriconazole	< 4	< 1		Voriconazole	

cHHBP - Chronic or Carcinogenic Human Health Benchmarks for Pesticides

Not on NDEE list
Not Analyzed

NDEE split with Nutrient Advisors (NA) of MW-4 (3/26/31)

Analyte	NA Sample	NDEE Split	RPD	NDEE list	cHHBP
AMPA		< 40			
Glufosinate	< 10	< 10		Glufosinate	
Glyphosate	< 10	< 10		Glyphosate	
Abamectin	< 10	< 1		Abamectin	3
Acetamiprid	< 3	< 1		Acetamiprid	
Azoxystrobin	< 3	< 1		Azoxystrobin	1,200
Brassinazole	< 5	< 1		Brassinazole	
Carbendazim		< 1			160
Carboxin		< 1			
Chlorantraniliprole		< 1			10,100
Clothianidin	< 8	72	179%	Clothianidin	630
Cyantraniliprole		< 1			60
Cyproconazole	< 5	< 1		Cyproconazole	
Difenoconazole	< 4	< 1		Difenoconazole	60
Dimoxystrobin	< 8	< 1		Dimoxystrobin	
Dinotefuran	< 1.2	< 1		Dinotefuran	
Epoxiconazole	< 3	< 1		Epoxiconazole	
Fluconazole	< 4	< 1		Fluconazole	
Fludioxonil		< 1		Fludioxonil	200
Fluoxastrobin	< 3	< 1		Fluoxastrobin	96
Imidacloprid	< 4	< 1		Imidacloprid	360
Ipconazole	< 6	< 1		Ipconazole	96
Isavuconazole	< 4	< 1		Isavuconazole	
Itraconazole	< 5	< 1		Itraconazole	
Mefenoxam		1.1	200%	Mefexoxam	
Metconazole	< 5	< 1		Metconazole	300
Nitenpyram	< 8	< 1		Nitenpyram	
Orysastrobin	< 7	< 1		Orysastrobin	
Picoxystrobin	< 3	< 1		Picoxystrobin	290
Posaconazole	< 5	< 1		Posaconazole	
Propiconazole	< 5	< 1		Propiconazole	600
Prothioconazole	< 6	< 1		Prothioconazole	60
Pyraclostrobin	< 3	< 1		Pyraclostrobin	220
Ravuconazole	< 3	< 1		Ravuconazole	
Tebuconazole	< 2	< 1		Tebuconazole	190
Tetraconazole	< 4	< 1		Tetraconazole	
Thiabendazole	< 5	< 1		Thiabendazole	
Thiacloprid	< 6	< 1		Thiacloprid	
Thiamethoxam	37.2	29	25%	Thiamethoxam	77
Thiophanate methyl		< 1			160
Trifloxystrobin	< 5	< 1		Trifloxystrobin	240
Uniconazole	< 3	< 1		Uniconazole	
Voriconazole	< 4	< 1		Voriconazole	

cHHBP - Chronic or Carcinogenic Human Health Benchmarks for Pesticides

Not on NDEE list Not Analyzed

NDEE lab duplicate (PAL) of MW-4 (3/26/21)

Analyte	Sample	Duplicate	RPD	NDEE list
AMPA	< 40	< 40		
Glufosinate	< 10	< 10		Glufosinate
Glyphosate	< 10	< 10		Glyphosate
Abamectin	< 1	< 1		Abamectin
Acetamiprid	< 1	< 1		Acetamiprid
Azoxystrobin	< 1	< 1		Azoxystrobin
Brassinazole	< 1	< 1		Brassinazole
Carbendazim	< 1	< 1		
Carboxin	< 1	< 1		
Chlorantraniliprole	< 1	< 1		
Clothianidin	70	72	2.82%	Clothianidin
Cyantraniliprole	< 1	< 1		
Cyproconazole	< 1	< 1		Cyproconazole
Difenoconazole	< 1	< 1		Difenoconazole
Dimoxystrobin	< 1	< 1		Dimoxystrobin
Dinotefuran	< 1	< 1		Dinotefuran
Epoxiconazole	< 1	< 1		Epoxiconazole
Fluconazole	< 1	< 1		Fluconazole
Fludioxonil	< 1	< 1		Fludioxonil
Fluoxastrobin	< 1	< 1		Fluoxastrobin
Imidacloprid	< 1	< 1		Imidacloprid
Ipconazole	< 1	< 1		Ipconazole
Isavuconazole	< 1	< 1		Isavuconazole
Itraconazole	< 1	< 1		Itraconazole
Mefenoxam	1	1.1	9.52%	Mefexoxam
Metconazole	< 1	< 1		Metconazole
Nitenpyram	< 1	< 1		Nitenpyram
Orysastrobin	< 1	< 1		Orysastrobin
Picoxystrobin	< 1	< 1		Picoxystrobin
Posaconazole	< 1	< 1		Posaconazole
Propiconazole	< 1	< 1		Propiconazole
Prothioconazole	< 1	< 1		Prothioconazole
Pyraclostrobin	< 1	< 1		Pyraclostrobin
Ravuconazole	< 1	< 1		Ravuconazole
Tebuconazole	< 1	< 1		Tebuconazole
Tetraconazole	< 1	< 1		Tetraconazole
Thiabendazole	< 1	< 1		Thiabendazole
Thiacloprid	< 1	< 1		Thiacloprid
Thiamethoxam	29	29	0.00%	Thiamethoxam
Thiophanate methyl	< 1	< 1		
Trifloxystrobin	< 1	< 1		Trifloxystrobin
Uniconazole	< 1	< 1		Uniconazole
Voriconazole	< 1	< 1		Voriconazole

 = Not on NDEE list

NDEE field blank (PAL) (3/26/21)

Analyte	LOQ	Blank	NDEE list
AMPA	< 40	< 40	
Glufosinate	< 10	< 10	Glufosinate
Glyphosate	< 10	< 10	Glyphosate
Abamectin	< 1	< 1	Abamectin
Acetamiprid	< 1	< 1	Acetamiprid
Azoxystrobin	< 1	< 1	Azoxystrobin
Brassinazole	< 1	< 1	Brassinazole
Carbendazim	< 1	< 1	
Carboxin	< 1	< 1	
Chlorantraniliprole	< 1	< 1	
Clothianidin	< 1	< 1	Clothianidin
Cyantraniliprole	< 1	< 1	
Cyproconazole	< 1	< 1	Cyproconazole
Difenoconazole	< 1	< 1	Difenoconazole
Dimoxystrobin	< 1	< 1	Dimoxystrobin
Dinotefuran	< 1	< 1	Dinotefuran
Epoxiconazole	< 1	< 1	Epoxiconazole
Fluconazole	< 1	< 1	Fluconazole
Fludioxonil	< 1	< 1	Fludioxonil
Fluoxastrobin	< 1	< 1	Fluoxastrobin
Imidacloprid	< 1	< 1	Imidacloprid
Ipconazole	< 1	< 1	Ipconazole
Isavuconazole	< 1	< 1	Isavuconazole
Itraconazole	< 1	< 1	Itraconazole
Mefenoxam	< 1	< 1	Mefenoxam
Metconazole	< 1	< 1	Metconazole
Nitenpyram	< 1	< 1	Nitenpyram
Orysastrobin	< 1	< 1	Orysastrobin
Picoxystrobin	< 1	< 1	Picoxystrobin
Posaconazole	< 1	< 1	Posaconazole
Propiconazole	< 1	< 1	Propiconazole
Prothioconazole	< 1	< 1	Prothioconazole
Pyraclostrobin	< 1	< 1	Pyraclostrobin
Ravuconazole	< 1	< 1	Ravuconazole
Tebuconazole	< 1	< 1	Tebuconazole
Tetraconazole	< 1	< 1	Tetraconazole
Thiabendazole	< 1	< 1	Thiabendazole
Thiacloprid	< 1	< 1	Thiacloprid
Thiamethoxam	< 1	< 1	Thiamethoxam
Thiophanate methyl	< 1	< 1	
Trifloxystrobin	< 1	< 1	Trifloxystrobin
Uniconazole	< 1	< 1	Uniconazole
Voriconazole	< 1	< 1	Voriconazole

= Not on NDEE list