APPENDIX A

North Dakota Agricultural Statistics Service

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NASS
FACT FINDERS FOR AGRICULTURE
UNITED STATES DEPARTMENT OF AGRICULTURE

Douglas Hartwig
State Statistician
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Deputy State Statistician

February 16, 2001

Dear North Dakota Farm Operator:

Help us keep the record straight! Managing pest problems in agriculture is a challenge you face every growing season. Your background in handling these demands is unique. When it comes to pesticides in agriculture, much of the controversy over their usage is fueled by misinformation. It is vitally important that current, accurate pesticide usage information is available to demonstrate that producers are good stewards of the land. This study will provide a profile of pesticide use and pest management practices at state and district levels for North Dakota.

This study is a joint undertaking of the North Dakota State University Extension Service, North Dakota Department of Agriculture and the North Dakota Agricultural Statistics Service. Through this cooperative effort, we are able to provide reliable results in a very efficient manner.

The study will be conducted as a telephone interview. Interviews will begin in late February and continue through March. Information that will be requested includes crop acres, use of seed treatments, acres and crops treated with specific pesticides, use of genetically modified crops and information about pest management practices and decisions.

Regarding the interview, confidentiality is assured and response will be voluntary. Since you are only part of a small group selected from across the state, we hope you understand the importance and value of this information and will be willing to participate when contacted. The results of the survey will be available by Fall 2001 through NDSU and your local extension agent.

Thank you in advance for your time and cooperation.

Sincerely,

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Extension Service
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Deputy State Statistician
ND Agricultural Statistics Service

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Agricultural
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North Dakota Pesticide Use Survey Instrument for 2000 Cropping Year

I. ACREAGE AND TREATMENTS BY CROP

REPORT FOR THE FARM YOU OPERATE *(Include Land Rented From Others, Exclude Land Rented Out)*

2000 Crop	Total Acres Planted	Acres Planted with Treated Seed *(Exclude Inoculant)*		Number of Acres Treated for Each of the Following: *(Include 1999 applications for 2000 Crop)*			
		Total	With on Farm Treated Seed	Weed Control *(Herbicides)*	Insect Control *(Insecticides) (Exclude seed treatment)*	Disease Control *(Fungicides) (Exclude seed treatment)*	Dessicants *(Vine killers, etc.)*
WHEAT *(Durum, Other Spring, Winter)*	1001	1002	1003	1004	1005	1006	1007
BARLEY	1011	1012	1013	1014	1015	1016	1017
OATS	1021	1022	1023	1024	1025	1026	1027
FLAX	1031	1032	1033	1034	1035	1036	1037
CORN	1041	1042	1043	1044	1045	1046	1047
SUNFLOWER	1051	1052	1053	1054	1055	1056	1057
SOYBEANS	1061	1062	1063	1064	1065	1066	1067
FIELD PEAS	1071	1072	1073	1074	1075	1076	1077
LENTILS	1081	1082	1083	1084	1085	1086	1087
POTATOES	1091	1092	1093	1094	1095	1096	1097
SUGARBEETS	1101	1102	1103	1104	1105	1106	1107
DRY EDIBLE BEANS	1111	1112	1113	1114	1115	1116	1117
CANOLA	1121	1122	1123	1124	1125	1126	1127
CRAMBE	1131	1132	1133	1134	1135	1136	1137
SAFFLOWER	1141	1142	1143	1144	1145	1146	1147
MUSTARD, DRY	1151	1152	1153	1154	1155	1156	1157
ALFALFA HAY	1161	1162	1163	1164	1165	1166	1167
OTHER HAY	1171	1172	1173	1174	1175	1176	1177
CRP	1301	1302	1303	1304	1305	1306	1307
FALLOW AND SET ASIDE ACREAGE	1311	1312	1313	1314	1315	1316	1317
PASTURE AND RANGE	1321	1322	1323	1324	1325	1326	1327
TOTAL ACRES OPERATED	1501						

II. FARM TREATED SEED - for 2000 crop *(Please report for seed that was treated on your farm and used on your operation, excluding inoculants. Include on-farm custom and self applied treatment.)*

PRODUCT USED TO TREAT *(Refer to enclosed list)*	Office Use	Acres Seeded With this Seed	Method 1 = Drill box 2 = Auger 3 = Other	PRODUCT USED TO TREAT *(Refer to enclosed list)*	Office Use	Acres Seeded With this Seed	Method 1 = Drill box 2 = Auger 3 = Other
WHEAT SEED *(All)*				CANOLA SEED			
	2001	2002	2003		2401	2402	2403
	2011	2012	2013		2411	2412	2413
	2021	2022	2023		2421	2422	2423
	2031	2032	2033	SOYBEAN SEED			
	2041	2042	2043		2501	2502	2503
BARLEY SEED					2511	2512	2513
	2101	2102	2103	POTATO SEED			
	2111	2112	2113		2601	2602	2603
	2121	2122	2123		2611	2612	2613
OAT SEED					2621	2622	2623
	2201	2202	2203	FIELD PEA SEED			
	2211	2212	2213		2701	2702	2703
FLAX SEED					2711	2712	2713
	2301	2302	2303	OTHER SEED			
	2311	2312	2313		2801	2802	2803
	2321	2322	2323		2811	2812	2813

III. USAGE OF INDIVIDUAL PESTICIDES ON 2000 CROPS - Include applications after September 1, 1999 on crops for 2000 harvest. *(Please report below the acres treated with each individual chemical during 2000 by crop and/or land use. If pesticides were applied in combination, report each separately.* ***Exclude seed treatment and inoculants.****)*

NAME OF PESTICIDE USED *(Please list chemicals used. If necessary, refer to the enclosed list)*	Office Use	Acres Treated	No. of Applications	APPLICATOR 1 = Self 2 = Custom	METHOD 1 = Aerial 2 = ground	NAME OF PESTICIDE USED *(Please list chemicals used. If necessary, refer to the enclosed list)*	Office Use	Acres Treated	No. of Applications	APPLICATOR 1 = Self 2 = Custom	METHOD 1 = Aerial 2 = ground
WHEAT *(Durum, Other Spring, Winter)*						BARLEY					
	3001	3002	3003	3004	3005		3101	3102	3103	3104	3105
	3011	3012	3013	3014	3015		3111	3112	3113	3114	3115
	3021	3022	3023	3024	3025		3121	3122	3123	3124	3125
	3031	3032	3033	3034	3035		3131	3132	3133	3134	3135
	3041	3042	3043	3044	3045		3141	3142	3143	3144	3145
	3051	3052	3053	3054	3055		3151	3152	3153	3154	3155
OATS						FLAX					
	3201	3202	3203	3204	3205		3301	3302	3303	3304	3305
	3211	3212	3213	3214	3215		3311	3312	3313	3314	3315
	3221	3222	3223	3224	3225		3321	3322	3323	3324	3325
CORN						SOYBEANS					
	3401	3402	3403	3404	3405		3501	3502	3503	3504	3505
	3411	3412	3413	3414	3415		3511	3512	3513	3514	3515
	3421	3422	3423	3424	3425		3521	3522	3523	3524	3525
	3431	3432	3433	3434	3435		3531	3532	3533	3534	3535
SUNFLOWER						DRY EDIBLE BEANS					
	3601	3602	3603	3604	3605		3701	3702	3703	3704	3705
	3611	3612	3613	3614	3615		3711	3712	3713	3714	3715
	3621	3622	3623	3624	3625		3721	3722	3723	3724	3725

III. USAGE OF INDIVIDUAL PESTICIDES ON 2000 CROPS CONTINUED

NAME OF PESTICIDE USED *(Please list chemicals used. If necessary, refer to the enclosed list)*	Office Use	Acres Treated	No. of Appli-cations	APPLI-CATOR 1 = Self 2 = Custom	METHOD 1 = Aerial 2 = ground	NAME OF PESTICIDE USED *(Please list chemicals used. If necessary, refer to the enclosed list)*	Office Use	Acres Treated	No. of Appli-cations	APPLI-CATOR 1 = Self 2 = Custom	METHOD 1 = Aerial 2 = ground
POTATOES						SUGARBEETS					
	3801	3802	3803	3804	3805		3901	3902	3903	3904	3905
	3811	3812	3813	3814	3815		3911	3912	3913	3914	3915
	3821	3822	3823	3824	3825		3921	3922	3923	3924	3925
	3831	3832	3833	3834	3835		3931	3932	3933	3934	3935
	3841	3842	3843	3844	3845		3941	3942	3943	3944	3945
	3851	3852	3853	3854	3855		3951	3952	3953	3954	3955
	3861	3862	3863	3864	3865		3961	3962	3963	3964	3965
CANOLA						CRAMBE					
	4001	4002	4003	4004	4005		4101	4102	4103	4104	4105
	4011	4012	4013	4014	4015		4111	4112	4113	4114	4115
	4021	4022	4023	4024	4025		4121	4122	4123	4124	4125
SAFFLOWER						MUSTARD, DRY					
	4201	4202	4203	4204	4205		4301	4302	4303	4304	4305
	4211	4212	4213	4214	4215		4311	4312	4313	4314	4315
	4221	4222	4223	4224	4225		4321	4322	4323	4324	4325
FIELD PEAS						LENTILS					
	4401	4402	4403	4404	4405		4501	4502	4503	4504	4505
	4411	4412	4413	4414	4415		4511	4512	4513	4514	4515
	4421	4422	4423	4424	4425		4521	4522	4523	4524	4525
ALFALFA HAY						OTHER HAY					
	4601	4602	4603	4604	4605		4701	4702	4703	4704	4705
	4611	4612	4613	4614	4615		4711	4712	4713	4714	4715
	4621	4622	4623	4624	4625		4721	4722	4723	4724	4725
CRP						FALLOW, SET ASIDE ACREAGE					
	4801	4802	4803	4804	4805		4901	4902	4903	4904	4905
	4811	4812	4813	4814	4815		4911	4912	4913	4914	4915
	4821	4822	4823	4824	4825		4921	4922	4923	4924	4925

IV. Genetically modified crops are available in North Dakota for corn, soybeans, canola, and potatoes. Please report the acres you planted of these crops in 2000.

CORN	*Bt* variety for insect resistance	Glyphosate resistant variety	Liberty resistant variety	Clearfield, non-GM, herbicide resistant variety	Stacked Gene Variety (*Bt* + Herbicide)
Acres =	6101	6102	6103	6104	6105

SOYBEANS	Glyphosate resistant variety
Acres =	6111

POTATOES	*Bt* variety for insect resistance
Acres =	6121

CANOLA	Glyphosate resistant variety	Liberty resistant variety	Clearfield, non-GM, herbicide resistant variety
Acres =	6131	6132	6133

V. Please report crops you grew in 2000 and the pest problem *(Weed, Insect, Disease)* that you did not have a pesticide *(Herbicide, Insecticide, Fungicide)* available to adequately manage the problem.

CROP	Office Use	Pest Problem with no pesticide available *(see codes)*		
		WEED	INSECT	DISEASE
	6201	6202	6203	6204
	6211	6212	6213	6214
	6221	6222	6223	6224
	6231	6232	6233	6234

Codes:

Weeds
1 = annual broadleaf
2 = annual grasses
3 = perennial weeds
4 = other _____

Insects
1 = grasshoppers
2 = soil insects *(example, wireworms)*
3 = caterpillar(s)
4 = plant bugs *(example, Lygus, leafhoppers)*
5 = beetles
6 = aphids
7 = other _____

Diseases
1 = leaf diseases *(example, rust, Septoria, brown spot, Cercospora)*
2 = head diseases *(sclerotinia , white mold, head scab)*
3 = seed diseases *(example, mildew, Aschochyta)*
4 = root diseases *(example, blackleg, Rhizoctonia, Phytopthora, Fusarium, Helminthsporium, Aphonomyces)*
5 = other _____

VI. Your pest management decisions and practices **Yes = 1 No = 3**

Do you . . . answer Yes or No for each pest category	Weeds	Insects	Diseases
• scout fields regularly for pests?	6301	6302	6303
• make routine treatments for pests you experienced the previous year?	6311	6312	6313
• make treatments based on identity, density, or population size?	6321	6322	6323
• use University or Extension treatment guidelines for making pest treatment decisions?	6331	6332	6333
• use tilling, chopping, mowing, burning of field edges, lanes, ditches, roadways or fence lines to manage pests in your fields?	6341	6342	6343
• consider pest resistence when selecting varieties to manage pests?	6351	6352	6353
• alternate pesticides to keep pests from becoming resistant to pesticides?	6361	6362	6363
• rotate crops to manage pests?	6371	6372	6373
• use predictive models to schedule pest management practices?	6381	6382	6383
• employ the services of a crop consultant to help manage pests?	6391	6392	6393
• plan to **INCREASE** acres of genetically modified crops used for pest management?	6401	6402	6403
• plan to **DECREASE** acres of genetically modified crops used for pest management?	6411	6412	6413
• use internet to find information necessary for pest management decisions?	6421	6422	6423

At what spray volume (gallons per acre, *gpa*) do you normally apply postemergence herbicides by ground? . . .

1	2.5 to 5 gpa
2	5 to 10 gpa
3	10 to 15 gpa
4	15 to 20 gpa
5	greater than 20 gpa

. . . . . **Code** 6501

Have you experienced pesticide spray drift injury on your farm during the past four years? . . . . Yes = 1 No = 3 — 6601

If **YES**, how many incidents? . . . . . Number — 6602

If **YES**, estimated acres affected? . . . . . Acres — 6603

Yes = 1 No = 3

Have you managed spray drift by using - drift-retarding nozzles? 6604

- drift-retarding adjuvants? 6605
- sprayer boom shields? 6606
- other? _____ 6607