





# FERTILIZER AND PESTICIDE APPLICATION AND HAYING OPERATIONS

## STATEWIDE AVERAGES, NORTH DAKOTA, 2020

Operation	2020				2016 Average Rate	2020 as Percent of 2016
	Number of Reports	Range in Rates	Most Frequent Rate Reported	Average Rate		
	(number)	(dollars per acre)	(dollars per acre)	(dollars per acre)	(dollars per acre)	(percent)
<b>FERTILIZER APPLICATION</b>						
<b>Dry Fertilizer:</b>						
Broadcast .....	220	1.00 - 20.00	1/	6.98	6.39	109
Deep Banded .....	11	6.00 - 35.00	12.00	14.55	21.78	67
<b>Liquid Fertilizer:</b>						
Broadcast.....	37	4.50 - 13.00	7.00	7.38	6.92	107
Side-Dressing.....	11	6.00 - 15.00	1/	9.91	9.75	102
<b>Anhydrous Ammonia:</b>						
With Knife Applicator.....	11	6.00 - 15.00	12.00	10.23	10.78	95
While Chiseling.....	11	8.00 - 22.50	9.00	13.33	15.16	88
<b>PESTICIDE APPLICATION</b>						
<b>By Surface Vehicles</b>						
Herbicides:						
Broadcast, Liquid .....	202	2.00 - 28.00	7.00	7.32	6.57	111
Dry .....	44	4.00 - 26.00	7.00	7.85	6.28	125
Incorporated, Liquid .....	17	5.00 - 15.00	7.00	8.43	7.01	120
Dry .....	9	5.00 - 13.50	1/	9.11	7.89	115
Insecticides:						
Broadcast, Liquid .....	76	2.00 - 9.00	7.00	6.89	6.60	104
Dry .....	20	6.00 - 9.00	6.50	7.06	6.81	104
Incorporated, Liquid .....	6	6.00 - 12.00	1/	7.58	7.98	95
Dry .....	(D)	(D)	(D)	(D)	(D)	(D)
Fungicides .....	80	2.00 - 10.00	7.00	6.99	6.57	106
Desiccants.....	47	2.00 - 10.00	6.75	7.00	6.76	104
<b>By Aircraft (All Pesticides):</b>						
1 Gallon.....	32	6.50 - 27.00	8.00	8.95	7.74	116
2-3 Gallons.....	74	4.00 - 12.00	7.50	8.00	7.82	102
4-5 Gallons.....	56	5.00 - 25.00	8.00	8.27	7.93	104
Over 5 Gallons.....	33	5.00 - 15.00	8.00	8.42	8.17	103
<b>HAYING OPERATIONS</b>						
<b>Mowing and Raking:</b>						
Mowing.....	18	1.00 - 30.00	1/	9.83	12.06	82
Mowing and Conditioning .....	25	3.00 - 30.00	1/	12.12	12.90	94
Swathing.....	18	8.00 - 25.00	12.00	13.00	12.54	104
Raking .....	23	1.00 - 25.00	5.00	5.48	3.93	139
<b>Baling (Wire or Twine Included):</b>						
		(dollars per bale)	(dollars per bale)	(dollars per bale)	(dollars per bale)	
Small Square Bales, 250 lbs or less	7	0.50 - 8.00	2.00	2.50	1.79	140
Large Square Bales, Over 250 lbs ..	7	3.00 - 14.00	1/	8.43	8.40	100
Round Bales, 1,500 lbs or less.....	36	6.00 - 25.00	10.00	11.43	9.34	122
Round Bales, Over 1,500 lbs .....	25	3.00 - 25.00	10.00	10.88	10.08	108

<sup>1/</sup> Data not available due to multiple rates being reported at the highest frequency. (D) Withheld to avoid disclosing data for individual operations.

**OTHER CUSTOM WORK AND HISTORICAL DATA**

**OTHER CUSTOM WORK, STATEWIDE AVERAGES, NORTH DAKOTA, 2020**

Operation	2020				2016 Average Rate	2020 as Percent of 2016
	Number of Reports	Range in Rates	Most Frequent Rate Reported	Average Rate		
	(number)	(dollars per head)	(dollars per head)	(dollars per head)	(dollars per head)	(percent)
<b>Branding Calves</b> .....	13	2.00 - 12.00	4.00	6.23	1.55	402
<b>Shearing Sheep</b> .....	7	3.00 - 10.00	1/	5.57	3.38	165
<b>Custom Feeding Livestock:</b>		(dollars/head/day)	(dollars/head/day)	(dollars/head/day)	(dollars/head/day)	
Weaned Calves .....	8	1.00 - 2.50	1.50	1.71	2.48	69
Yearlings and Cull Cows .....	8	1.00 - 2.50	1.00	1.64	3.08	53
Wintering Pregnant Beef Cows .....	15	1.00 - 3.75	1.00	1.83	5.02	36
Calving Out Cows .....	7	1.00 - 3.75	1.00	1.89	(D)	
<b>On-Farm Feed Grinding &amp; Mixing:</b>		(dollars per ton)	(dollars per ton)	(dollars per ton)	(dollars per ton)	
Mobile Truck .....	(D)	(D)	(D)	(D)	(D)	(D)
PTO Unit .....	(D)	(D)	(D)	(D)	(D)	(D)
<b>Tub Grinding Hay:</b>		(dollars per hour)	(dollars per hour)	(dollars per hour)	(dollars per hour)	
Farmer Supplies Power .....	6	72.50 - 300.00	1/	224.58	(D)	
Power Supplied.....	7	70.00 - 250.00	250.00	191.43	235.83	81
Self Contained Unit.....	25	75.00 - 385.00	250.00	241.20	223.57	108
<b>Pneumatic Handling of Grain</b> .....	17	0.03 - 0.15	0.10	0.08	0.19	42
<b>Post Hole Digging:</b>		(dollars per hole)	(dollars per hole)	(dollars per hole)	(dollars per hole)	
Digging.....	9	1.00 - 25.00	1/	7.44	5.00	149
<b>Building Multi-Strand Wire Fence:</b> (No Supplies Included)		(dollars)	(dollars)	(dollars)	(dollars)	
Per Rod.....	10	1.10 - 25.00	16.50	13.51	13.60	99
Per Hour .....	(D)	(D)	(D)	(D)	(D)	(D)
<b>Loader Work:</b>		(dollars per hour)	(dollars per hour)	(dollars per hour)	(dollars per hour)	
Skid-Steer Loader.....	21	20.00 - 150.00	100.00	74.76	60.96	123
Tractor Loader.....	13	20.00 - 150.00	40.00	63.46	66.64	95
Industrial Loader .....	13	25.00 - 175.00	1/	87.23	99.82	87

<sup>1/</sup> Data not available due to multiple rates being reported at the highest frequency. (D) Withheld to avoid disclosing data for individual operations.

**HISTORICAL DATA, STATEWIDE AVERAGES, NORTH DAKOTA, 1995 - 2020**

Operation	1995	1998	2001	2004	2007	2010	2013	2016	2020
	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)
<b>Plowing (Moldboard)</b> .....	6.78	7.48	7.22	8.44	9.65	10.03	11.88	10.88	10.50
<b>Chisel Plowing</b> .....	4.93	5.41	5.47	5.99	8.01	9.09	10.80	11.85	11.30
<b>Field Cultivation</b> .....	4.13	4.40	4.85	5.15	6.96	7.65	8.97	9.36	9.27
<b>Small Grain Drilling:</b>									
Regular, With Fertilizer .....	6.00	6.48	7.30	7.95	10.32	12.37	13.69	17.97	14.99
Regular, Without Fertilizer.....	5.44	6.27	6.38	7.18	9.53	10.93	13.24	16.94	14.28
Air Seeding <sup>1</sup> .....	7.36	7.92	8.50	9.49	11.46	13.24	14.35	16.67	16.13
No-Till Drilling <sup>1</sup> .....	8.60	9.00	9.19	10.26	12.14	14.37	15.06	17.80	16.47
<b>Fertilizer Application</b>									
Dry Fertilizer (Broadcast) .....	2.95	3.27	3.64	3.87	4.54	5.17	6.15	6.39	6.98
Liquid Fertilizer (Broadcast) <sup>2</sup> .....								6.92	7.38
Anhydrous Ammonia:									
With Knife Applicator .....	4.66	5.11	5.33	6.12	7.62	9.39	10.40	10.78	10.23
While Chiseling .....	5.38	5.79	6.32	6.61	8.76	10.00	12.44	15.16	13.33
<b>Ground Application of:</b>									
Liquid Herbicides (Broadcast).....	2.85	3.32	3.89	4.07	4.69	5.44	6.35	6.57	7.32
Liquid Insecticides (Broadcast).....	2.88	3.38	3.93	4.11	4.77	5.42	6.61	6.60	6.89
<b>Haying:</b>									
Mowing and Conditioning .....	6.77	6.76	7.06	7.14	8.95	9.73	10.78	12.90	12.12
Swathing .....	4.89	5.31	5.72	6.01	7.88	9.13	9.66	12.54	13.00
Raking.....	2.60	2.54	2.90	3.47	3.88	4.18	5.57	3.93	5.48
<b>Post Holes:</b>									
Digging.....	(\$/hole)	(\$/hole)	(\$/hole)	(\$/hole)	(\$/hole)	(\$/hole)	(\$/hole)	(\$/hole)	(\$/hole)
	1.82	2.38	2.49	2.64	4.60	4.04	6.33	5.00	7.44

<sup>1</sup> Without fertilizer. <sup>2</sup> Data series began in 2016.