UNIVERSITY OF WISCONSIN AGRONOMY, SOYBEAN RESEARCH, UNIVERSITY OF WISCONSIN-EXTENSION

Hybrid Rye Nitrogen Management Trial Results – 2022

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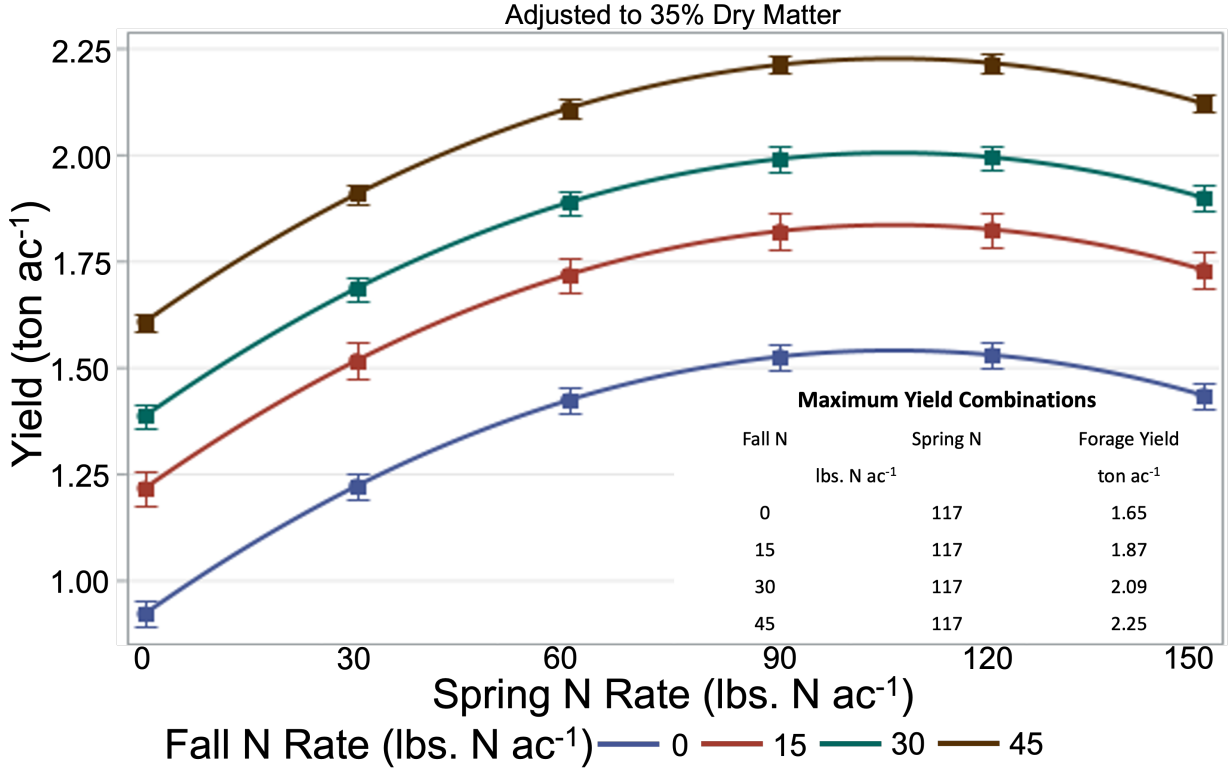
Experimental Procedure		Arlington Agricultural Research Station	
Exp. Design:	Split Plot RCB	Planted:	September 29, 2021
Replicates:	4	Forage Harvest:	May 17, 2022
Plot Size:	Forage: 3’ x 6’	Grain Harvest:	July 30, 2022
	Grain:5’ x 14’	Lancaster Agricultural Research Station	
Row Spacing:	7.5”	Planted:	September 27, 2021
Seeding Rate:	Hybrid Rye: 800k	Forage Harvest:	May 23, 2022
(seeds ac^{-1})	Non-Hybrid Rye: 1.0 mil	Grain Harvest:	July 26, 2022
	Triticale: 1.5 mil	Tillage: Conventional Tillage	
Treatments			
Hybrid Rye: Propower & Serafino		Controls : Non-Hybrid Rye & Triticale (Data Not Shown)	
Fall N Rates: 0, 15, 30, 45 lbs. N ac^{-1}			
Spring N Rates: 0, 30, 60, 90, 120, 150 lbs. N ac^{-1}			

This is a preliminary report meant to relay preliminary findings. More data will be released once the trial is complete. This data is not for publication.

Forage Yield – Arlington 2022

Adjusted to 35% Dry Matter

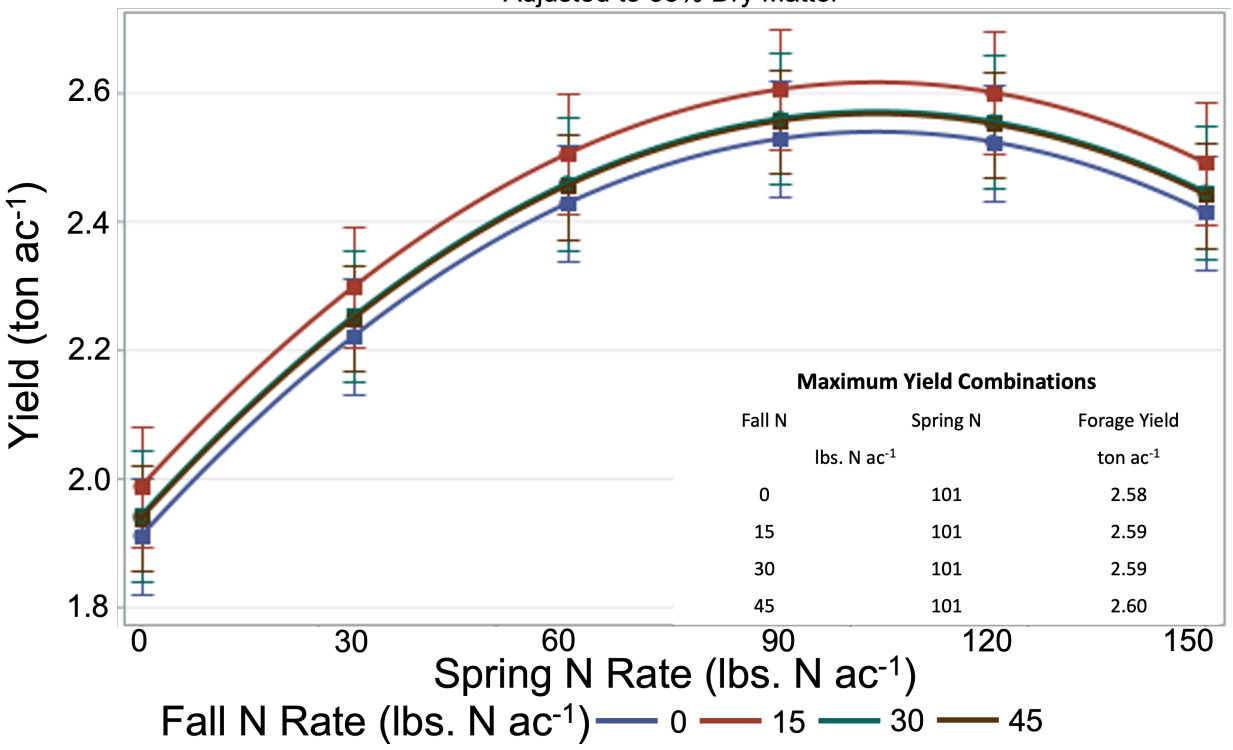


Maximum Yield Combinations

Fall N	Spring N	Forage Yield
lbs. N ac^{-1}		ton ac^{-1}
0	117	1.65
15	117	1.87
30	117	2.09
45	117	2.25

Forage Yield – Lancaster 2022

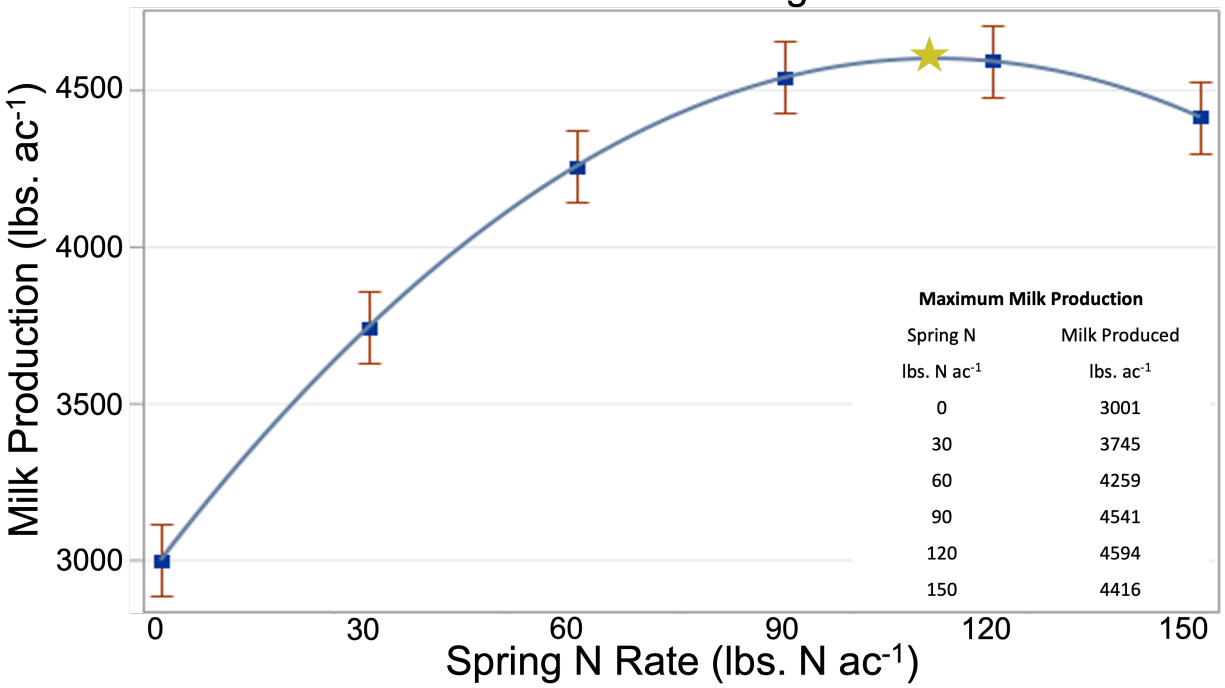
Adjusted to 35% Dry Matter



Maximum Yield Combinations

Fall N	Spring N	Forage Yield
lbs. N ac^{-1}		ton ac^{-1}
0	101	2.58
15	101	2.59
30	101	2.59
45	101	2.60

Milk Production – Arlington 2022

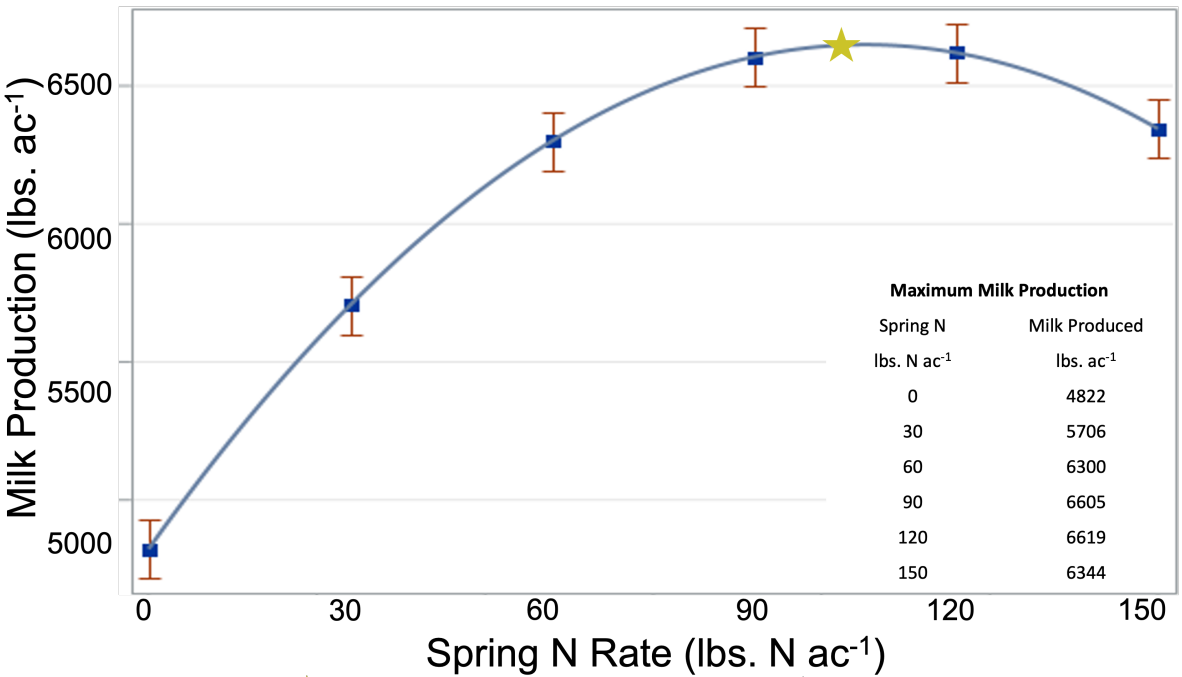


Maximum Milk Production

Spring N	Milk Produced
lbs. N ac^{-1}	lbs. ac^{-1}
0	3001
30	3745
60	4259
90	4541
120	4594
150	4416

★ Maximum production reached at 112 lbs. N ac^{-1} in the spring.

Milk Production – Lancaster 2022

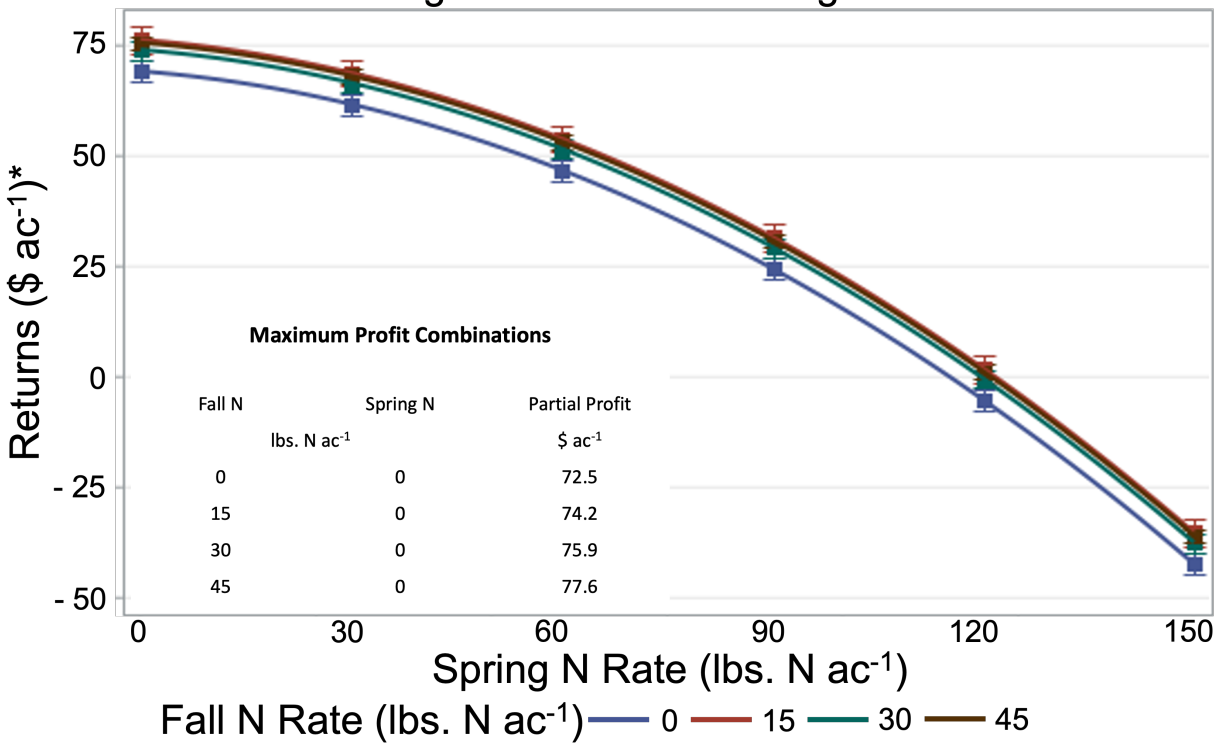


Maximum Milk Production

Spring N	Milk Produced
lbs. N ac^{-1}	lbs. ac^{-1}
0	4822
30	5706
60	6300
90	6605
120	6619
150	6344

★ Maximum production reached at 107 lbs. N ac^{-1} in the spring.

Forage Partial Profit– Arlington 2022

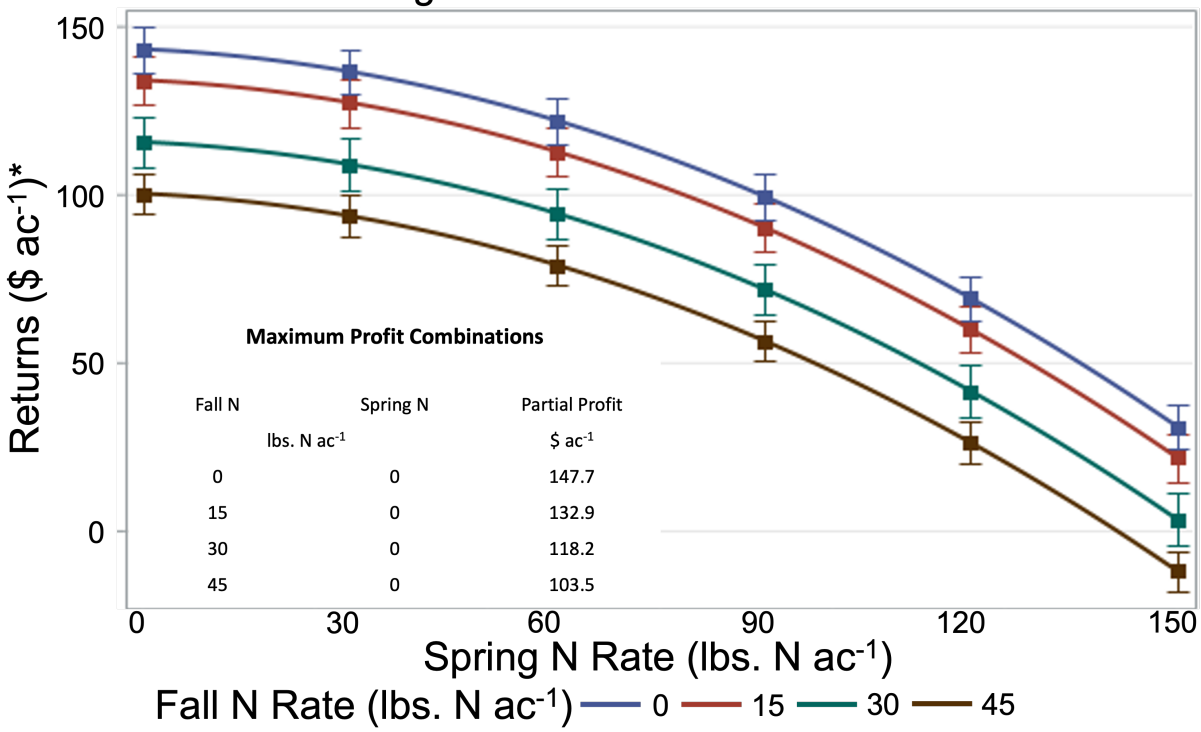


Maximum Profit Combinations

Fall N	Spring N	Partial Profit
lbs. N ac^{-1}		$ ac^{-1}
0	0	72.5
15	0	74.2
30	0	75.9
45	0	77.6

* Calculated using $75 ton^{-1} forage and $1 lb.$^{-1}$ urea.

Forage Partial Profit– Lancaster 2022

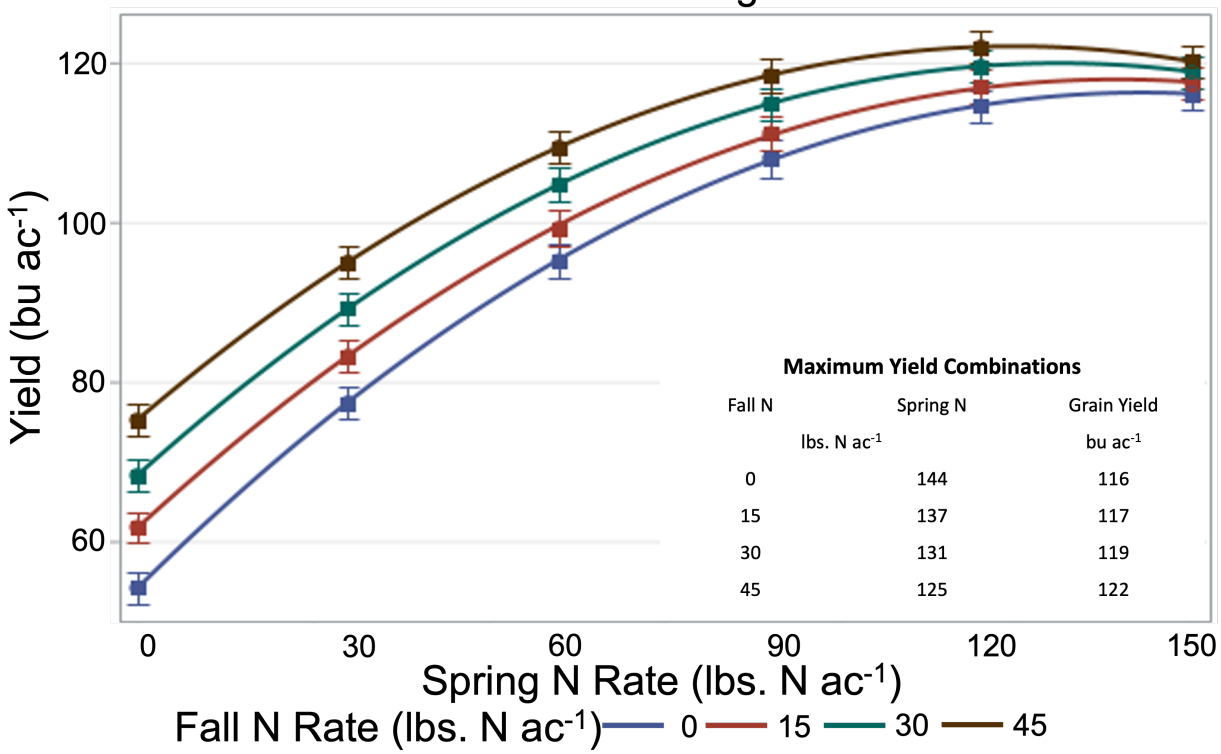


Maximum Profit Combinations

Fall N	Spring N	Partial Profit
lbs. N ac^{-1}		$ ac^{-1}
0	0	147.7
15	0	132.9
30	0	118.2
45	0	103.5

* Calculated using $75 ton^{-1} forage and $1 lb.$^{-1}$ urea.

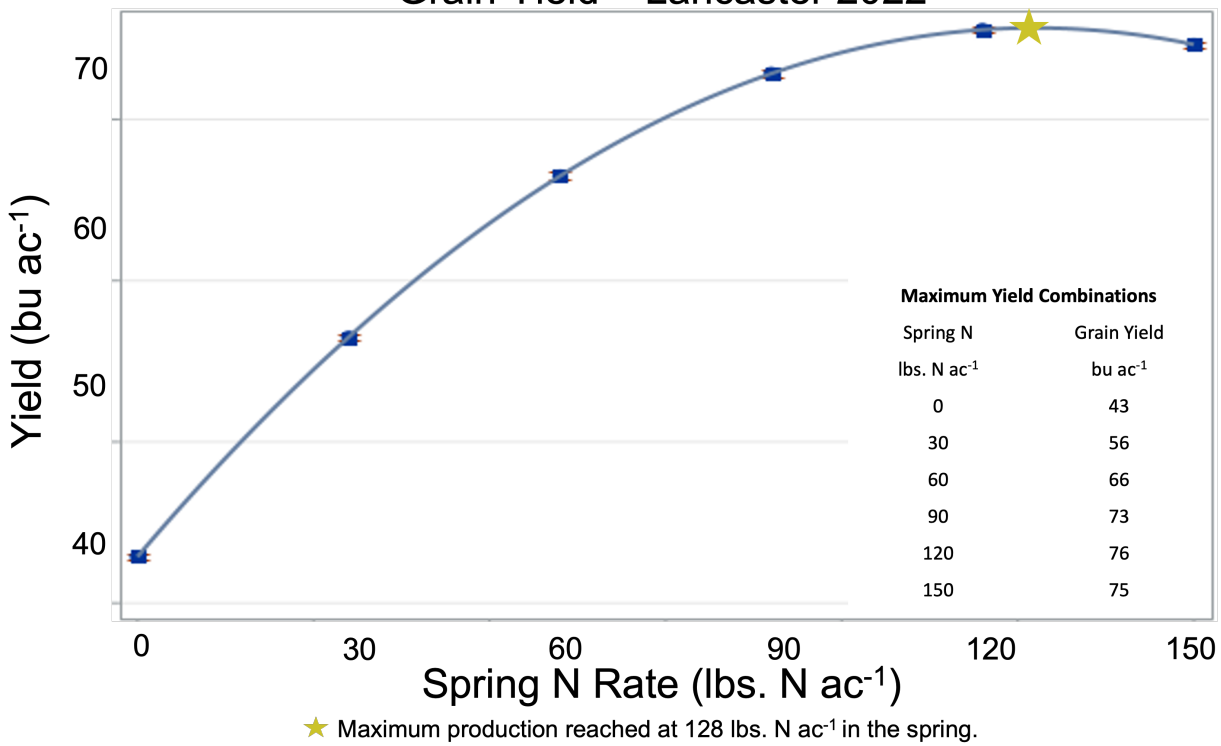
Grain Yield – Arlington 2022



Maximum Yield Combinations

Fall N	Spring N	Grain Yield
	lbs. N ac^{-1}	bu ac^{-1}
0	144	116
15	137	117
30	131	119
45	125	122

Grain Yield – Lancaster 2022

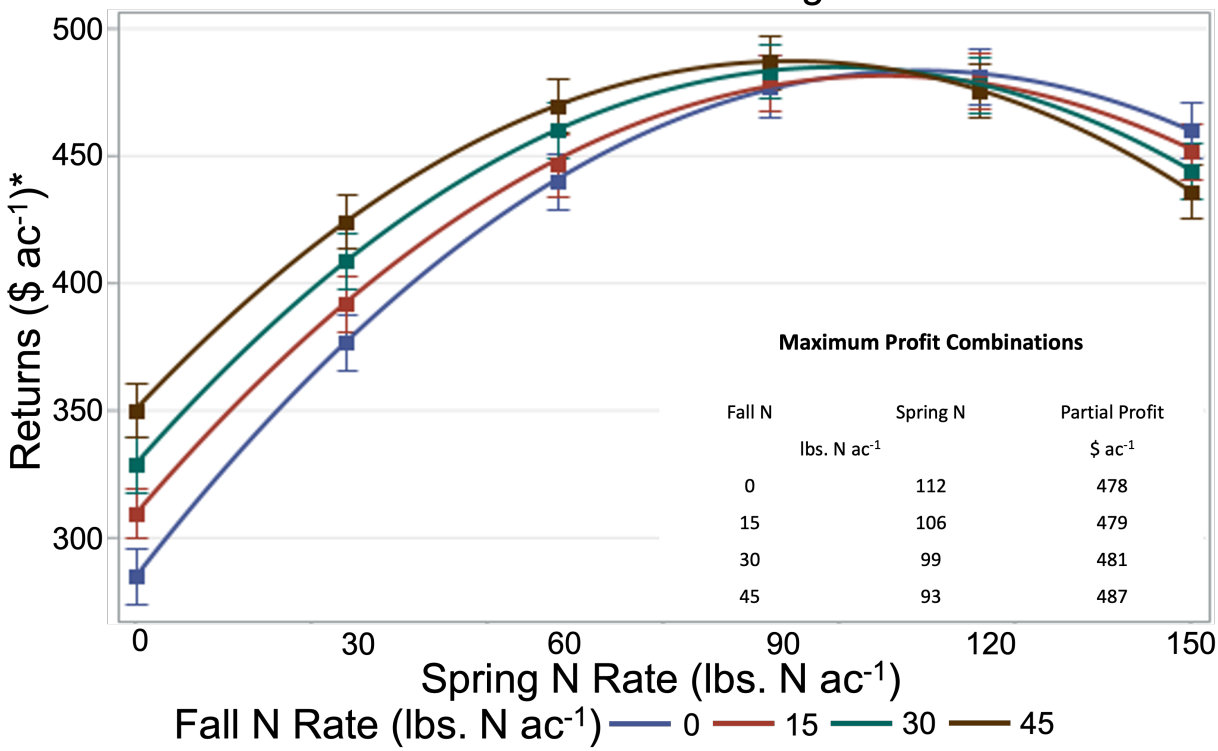


Maximum Yield Combinations

Spring N	Grain Yield
lbs. N ac^{-1}	bu ac^{-1}
0	43
30	56
60	66
90	73
120	76
150	75

★ Maximum production reached at 128 lbs. N ac^{-1} in the spring.

Grain Partial Profit – Arlington 2022

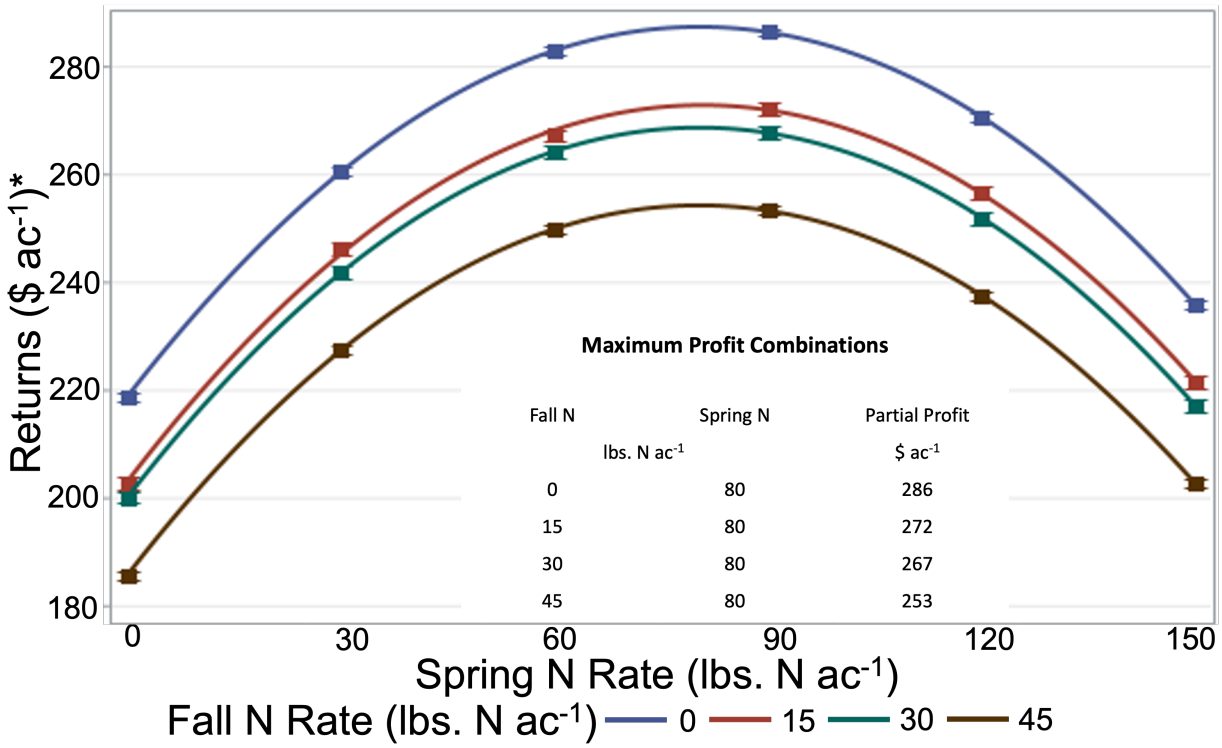


Maximum Profit Combinations

Fall N	Spring N	Partial Profit
lbs. N ac^{-1}		$ ac^{-1}
0	112	478
15	106	479
30	99	481
45	93	487

* Calculated using \$5.25 bu^{-1} grain and \$1 lb.$^{-1}$ urea.

Grain Partial Profit – Lancaster 2022



Maximum Profit Combinations

Fall N	Spring N	Partial Profit
lbs. N ac^{-1}		$ ac^{-1}
0	80	286
15	80	272
30	80	267
45	80	253

* Calculated using \$5.25 bu^{-1} grain and \$1 lb.$^{-1}$ urea.