

**Appendix VIII. Fall nitrates in the top 3-ft of soil at Arlington Research Station in 1991-2004.**

Crop	Sys	Phase	91	92	93	94	95	96	97	98	99	00	01	02	03	04
<b>Corn</b>	CS1	<b>Cont. Corn</b>	48	97	102	154	179	164	115	148	87	130	79	110	110	82
	CS2	<b>After Soybeans</b>	41	105	105	166	141	170	128	100	77	107	68	55	59	77
	CS3	<b>After Red Clover</b>	- - <sup>1</sup>	67	83	100	145	45	129	112	83	61	81	44	96	70
	CS4	<b>After 3 yrs. Alf</b>	- -	- -	142	164	184	94	229	121	153	189	171	140	187	142
	CS5	<b>After 2 yrs. Alf</b>	- -	101	118	150	202	82	180	145	173	121	154	121	142	151
<b>Soybean</b>	CS2	<b>Narrow-row</b>	42	74	100	71	145	73	143	100	94	81	101	71	108	61
	CS3	<b>Wide-row</b>	25	66	89	83	140	76	127	98	71	68	53	64	100	55
<b>Wheat</b>	CS3	<b>Wheat / Red Clover</b>	26	48	65	48	85	38	90	76	51	57	53	37	46	45
<b>Alfalfa</b>	CS4	<b>Dir-seed Alfalfa</b>	32	61	80	77	117	59	114	100	75	69	101	96	101	75
	CS4	<b>Alfalfa Hay I</b>	27	49	55	46	117	62	112	111	74	65	85	66	93	69
	CS4	<b>Alfalfa Hay II</b>	- -	60	69	46	105	61	141	92	69	98	83	87	58	87
	CS5	<b>Alfalfa with Oats</b>	- -	- -	103	67	101	65	97	81	62	65	72	77	98	69
	CS5	<b>Alfalfa Hay</b>	- -	- -	84	67	107	51	116	72	63	70	71	57	79	56
<b>Pasture</b>	CS6	<b>Rotational Grazing</b>	- -	- -	91	58	98	90	100	88	62	60	50	50	76	88
<b>Check</b>			26	28	-	72	108	31	209	158	50	38	26	19	33	31

\* staggered start - soil nitrates not tested until after first season in the rotation.

<sup>2</sup> prairie plots established in 1999 which were then used as the check. Previous years, the check was the North fenceline, adjacent to a neighboring field which received hog manure.

Starting in 1998, soil was sampled to a 3-ft depth for every plot using Giddings probe from Soils Dept.

3<sup>rd</sup> foot nitrate levels from 1993 to 1997 estimated using various regression equations (see previous WICST Technical Reports): Source: Ehrhardt, P.D. and L.G. Bundy. 1995. Predicting Nitrate-N in the two- to three-foot soil depth from nitrate measurements on shallower samples. J. Prod. Agric. Vol. 8, no. 3.