

WISCONSIN ALFALFA YIELD AND PERSISTENCE PROJECT



2007 - 2014 SUMMARY

WISCONSIN ALFALFA YIELD AND PERSISTENCE PROJECT

- **OBJECTIVES:**

- TO VERIFY THE YIELD AND QUALITY OF ALFALFA HARVESTED FROM PRODUCTION FIELDS OVER THE LIFE OF THE STAND BEGINNING WITH THE FIRST PRODUCTION YEAR (YEAR AFTER SEEDING).
- TO QUANTIFY DECREASES IN STAND PRODUCTIVITY OF ALFALFA FIELDS AS THEY AGE.

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- **PROTOCOL**

- IDENTIFY PRODUCERS WILLING TO COOPERATE AND WITH A VESTED INTEREST IN THE RESULTS (MULTI-YEAR COMMITMENT).
- IDENTIFY POTENTIAL FIELDS AND VERIFY ACREAGE.
- NO “SPECIAL” MANAGEMENT REQUIRED
- WEIGH ALL FORAGE FROM PROGRAM FIELDS AT EACH CUTTING.
- SAMPLE FORAGE FROM PROGRAM FIELDS AT EACH CUTTING.
- COLLECT AND ANALYZE DATA AT THE END OF EACH YEAR.

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- ★ 2007: 6 farms, 8 fields
- ★ 2008: 6 farms, 10 fields
- ★ 2009: 6 farms, 8 fields
- ★ 2010: 2 farms, 6 fields
- ★ 2011: 3 farms, 4 fields
- ★ 2012: 4 farms, 8 fields
- ★ 2013: 3 farms, 5 fields
- ★ 2014: 11 farms, 15 fields

Number of Fields:

2007: 8
 2008: 16
 2009: 23
 2010: 23
 2011: 22
 2012: 16
 2013: 13
 2014: 24 **6393 tons**

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- FIELD BACKGROUND INFORMATION (2007-2014)

- ALL SEEDED IN 2006-2013
- 53 SPRING SEEDED, 11 LATE-SUMMER SEEDED
- SEEDING RATES: 12 – 28 LBS. PER ACRE (15-17 MOST COMMON)
- FIELD SIZES: 5.2 TO 194.8 ACRES
- CUTTING SCHEDULES: 3-, 3+1, 4-, AND 5-CUT (4+1) SYSTEMS

Alfalfa Yield and Stand Longevity Project

Grower Name:
 Address:
 County:



Mo/Yr Seeded: April, 2006
 Seeding Rate: 17 lbs./ac
 Variety: Renk SummerGold

2008	1st Cut	2nd Cut	3rd Cut	4th Cut	5th Cut	Total Season
Acres	38.965	38.965	38.965	38.965		
Cutting Date	30-May	5-Jul	7-Aug	17-Sep		
Harvest Date	1-Jun	6-Jul	9-Aug	19-Sep		
Field Wet Yield (lbs)	390850	299860	202340	114780		1007830
DM %	44.45	44.84	50.33	55.87		47.05
Total Field DM Yield (tons)	86.87	67.23	50.92	32.06		237.08
DM Yield per Acre (tons)	2.23	1.73	1.31	0.82	0.00	6.08
% of Total Season Yield	36.6	28.4	21.5	13.5	0.0	100.0
% of 1st Production Year	124.4	145.2	91.7	74.5		110.4
CP	22.6	24.2	21.8	23.8		23.0
ADF	29.2	28.6	30.7	26.9		29.0
NDF	34.5	34.9	37.7	33.5		35.2
NDFD	46.8	46.9	43.0	43.8		45.6
RFQ	190	188	158	191		183
Milk/Ton	3044	3054	2725	3026		2976

Field Notes: (pesticide applications, weather, etc.)

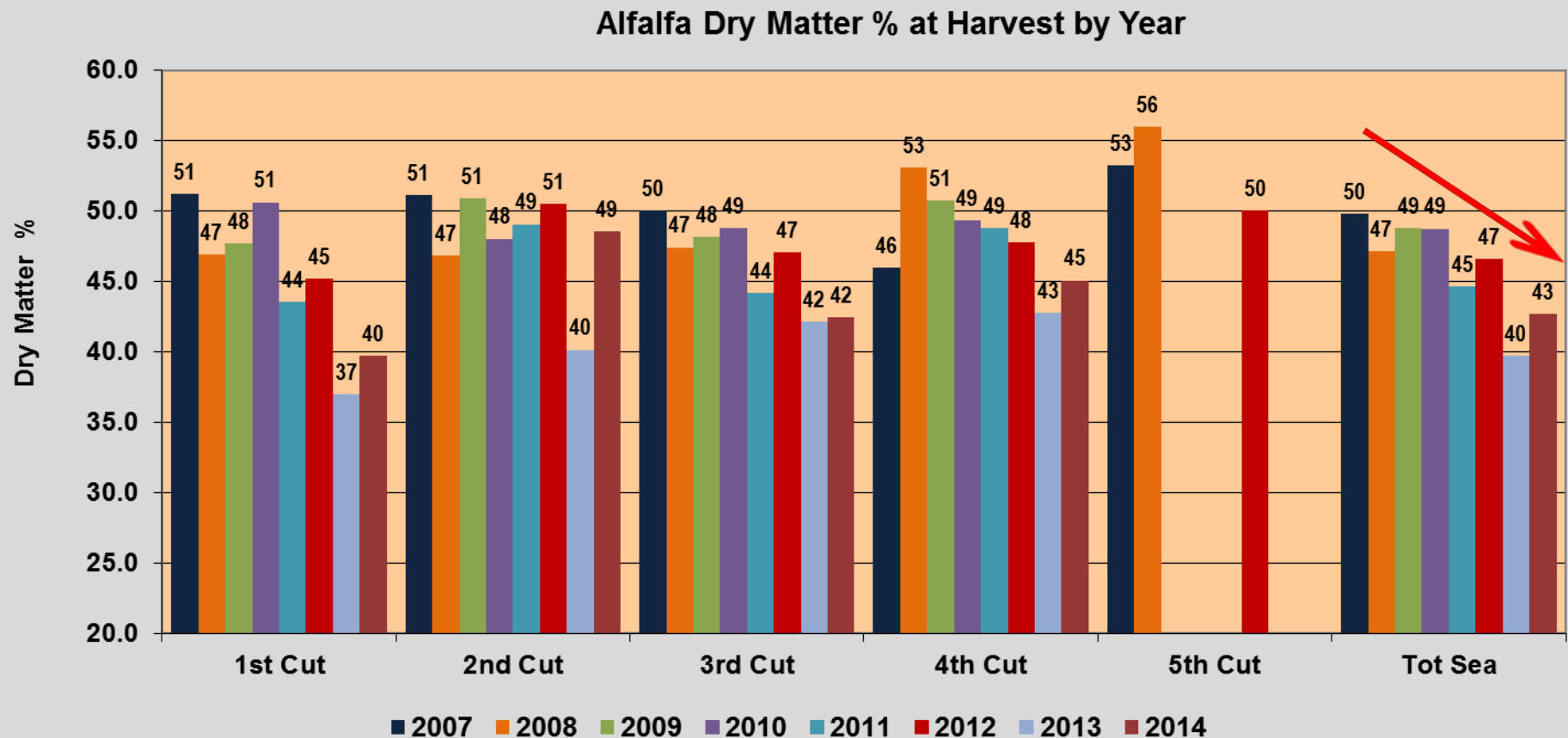
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SUMMARY OF MEAN CUTTING DATES

	1 st Cut	2 nd Cut	3 rd Cut	4 th Cut*	5 th Cut
2007	22-May	24-June	25-July	30-Aug	21-Oct
2008	3-Jun	3-Jul	3-Aug	29-Aug	29-Oct
2009	31-May	1-Jul	4-Aug	5-Sep	
2010	22-May	28-Jun	2-Aug	29-Aug	12-Oct
2011	31-May	1-Jul	31-Jul	31-Aug	
2012	16-May	14-Jun	14-Jul	10-Aug	21-Sep
2013	10-Jun	11-Jul	6-Aug	7-Sep	
2014	4-Jun	9-Jul	7-Aug	13-Sep	

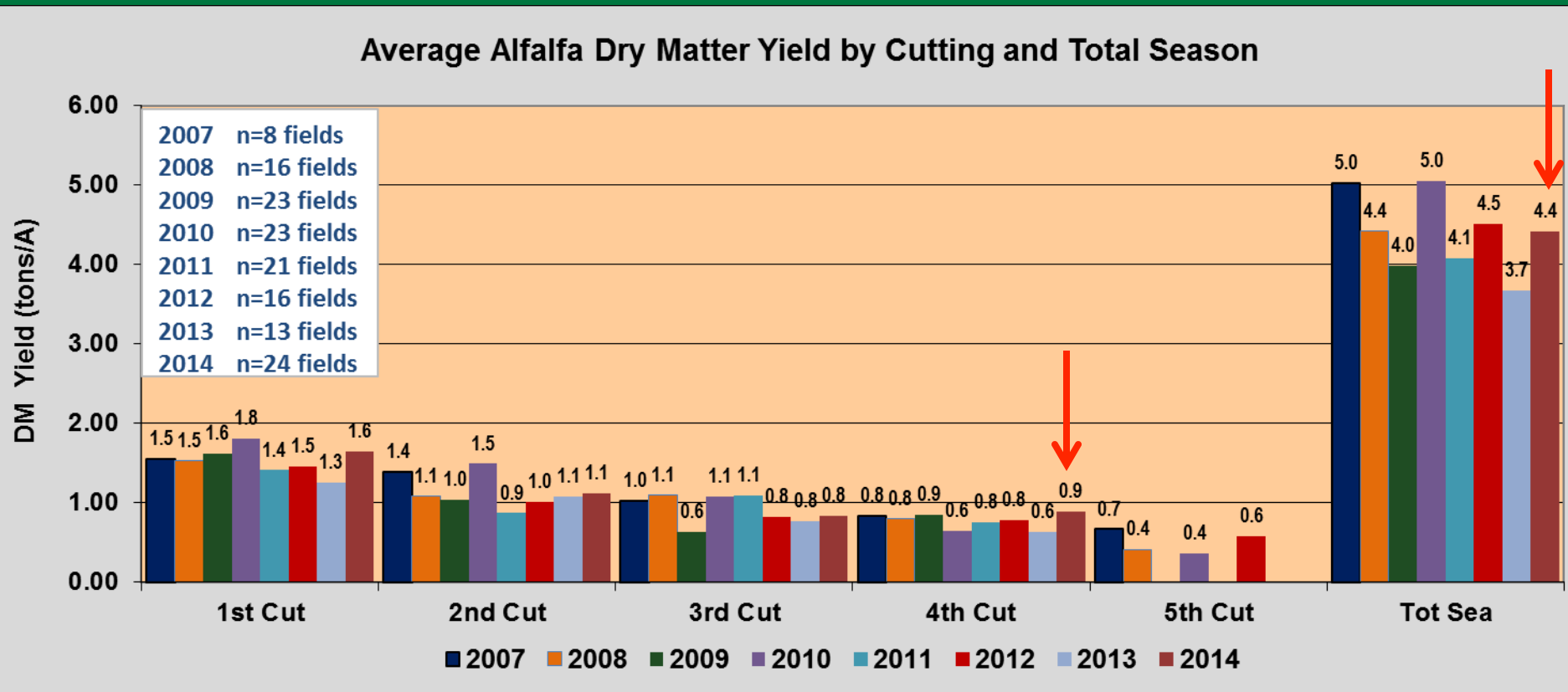
* avg. excludes any field where a 4th cut was taken in October

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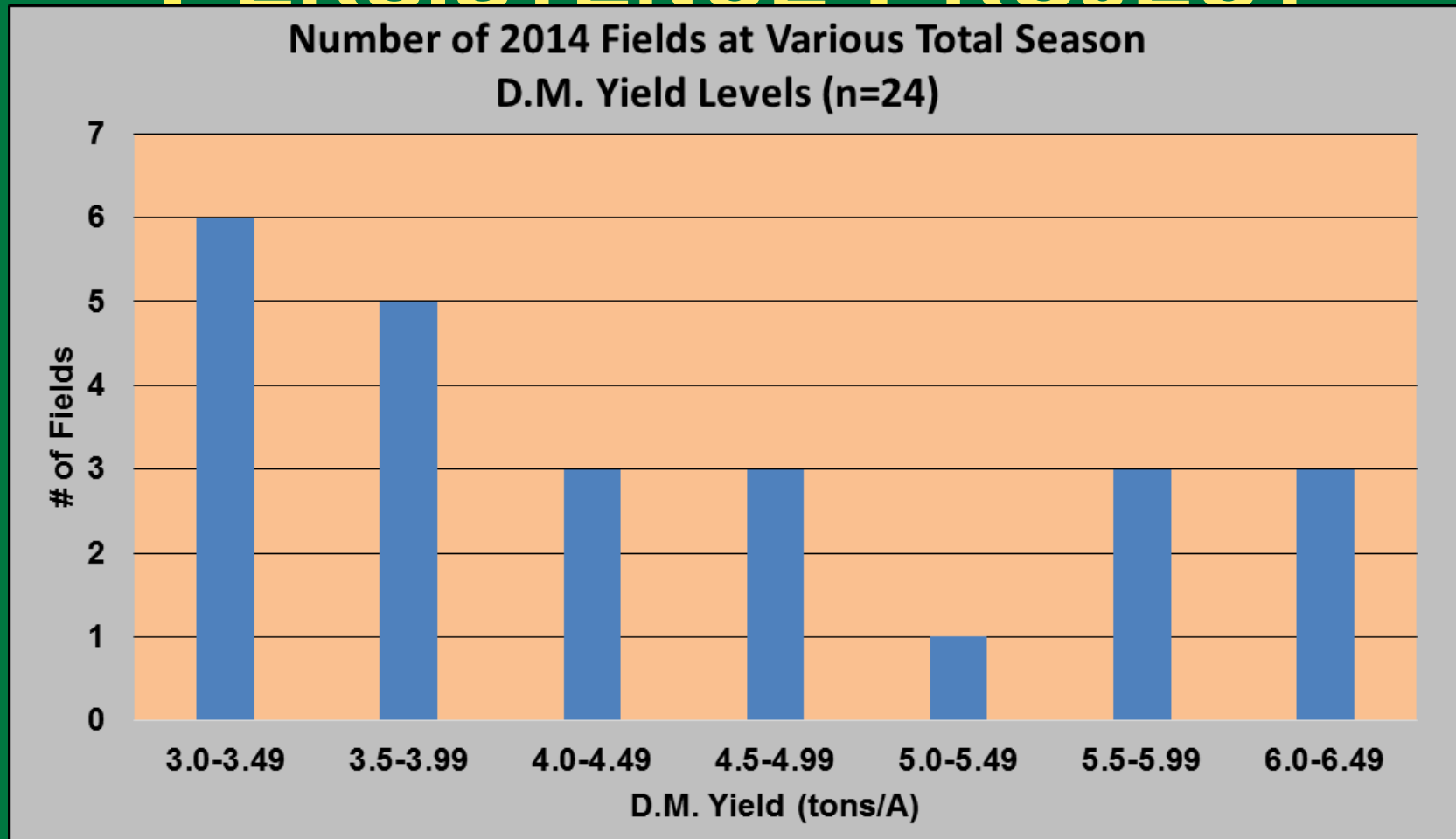


2014 Total Season Range: 33.9 – 56.2

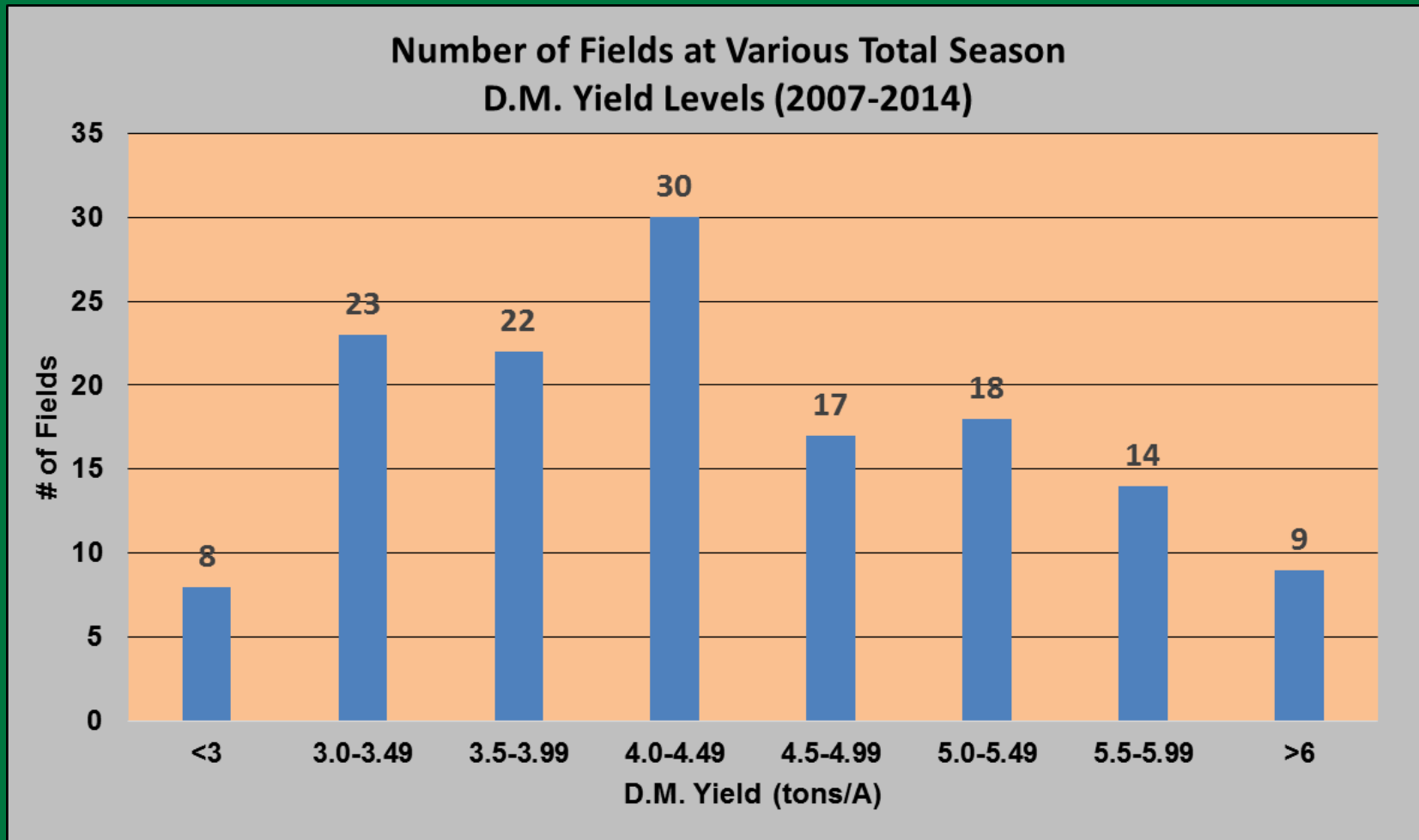
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n=141 site years

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RANGE IN DRY MATTER ALFALFA YIELD BY CUTTING AND YEAR

	1 st Cut		2 nd Cut		3 rd Cut		4 th Cut		5 th Cut		Total Season	
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
2007	1.00	1.79	1.02	1.77	0.37	1.42	0.59	1.14	0.34	0.88	2.39	6.12
2008	0.73	2.23	0.49	1.78	0.76	1.54	0.43	1.12	0.37	0.45	2.70	6.08
2009	0.57	2.36	0.55	1.60	0.20	1.33	0.32	1.15			2.21	5.27
2010	1.16	2.34	0.84	1.85	0.55	1.57	0.39	1.33	0.34	0.39	3.33	6.17
2011	0.78	2.45	0.52	1.29	0.47	1.68	0.45	1.19			2.80	6.26
2012	0.84	2.33	0.62	1.88	0.38	1.55	0.40	1.27	0.34	0.76	3.36	6.55
2013	0.47	2.27	0.40	1.80	0.44	1.19	0.30	0.99			1.62	5.40
2014	1.09	2.96	0.49	1.99	0.35	1.36	0.59	1.58			3.13	6.28

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MEAN PERCENT OF TOTAL SEASON YIELD BY CUTTING FOR 3-, 4-, AND 5-CUT (4+1) SYSTEMS

	# site yrs.	1st Cut	2nd Cut	3rd Cut	4th Cut	5th Cut
3-cut	12	43	31	26		
4-cut	115	36	25	21	18	
5-cut	20	31	23	18	16	12

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PERCENT OF 1ST PRODUCTION YEAR YIELD FOR 2ND, 3RD, AND 4TH PRODUCTION YEAR STANDS

2nd Production Year Stands (n=40 site years)

Mean	102
Low	69
High	236

3rd Production Year Stands (n=30 site years)

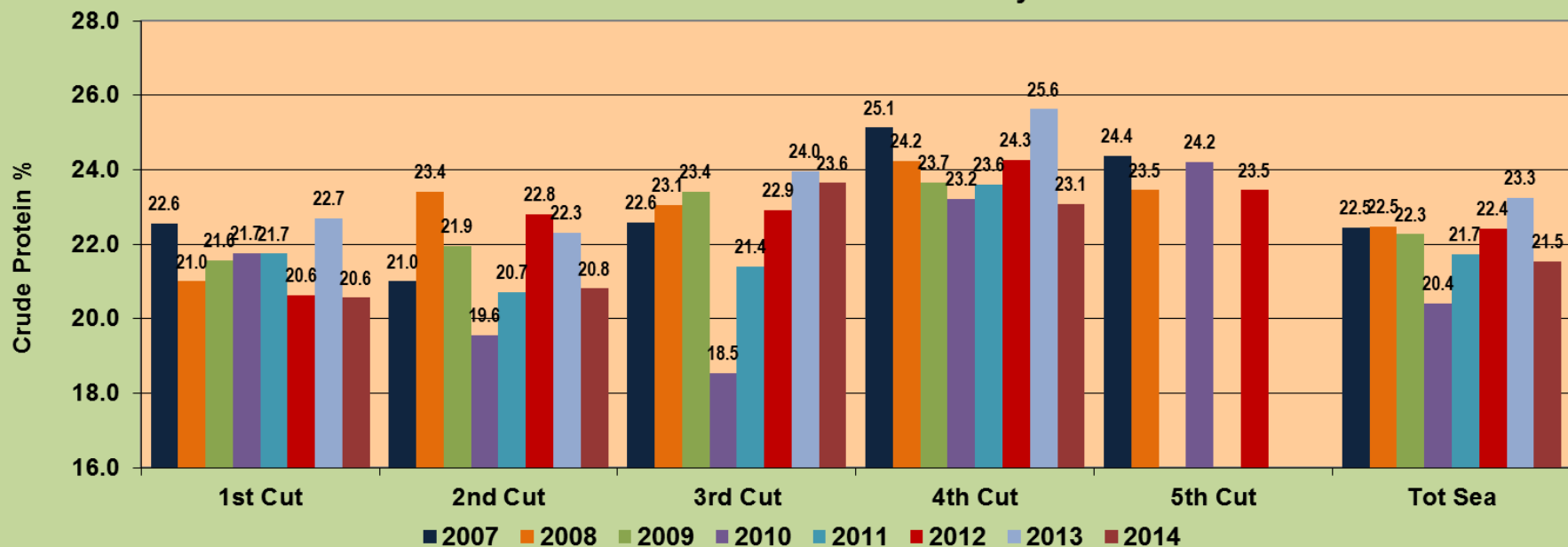
Mean	98
Low	63
High	183

4th Production Year Stands (N=11 site years)

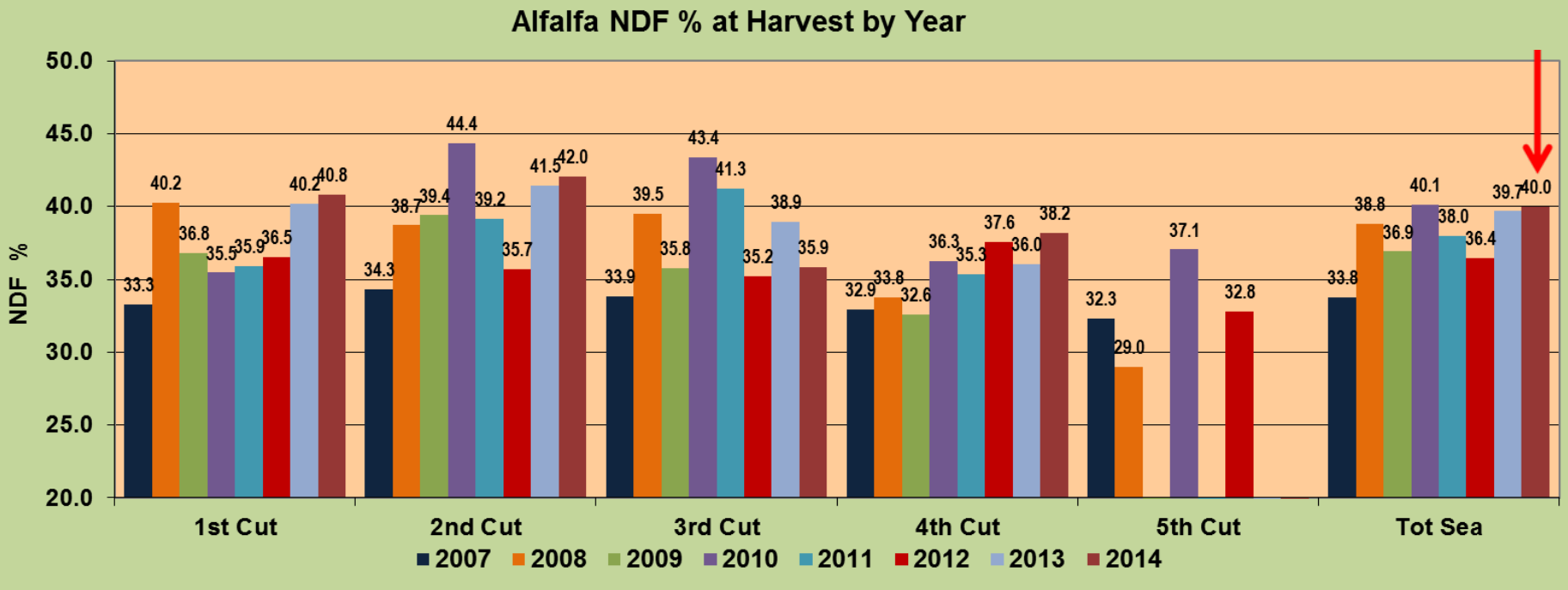
Mean	78
Low	59
High	115

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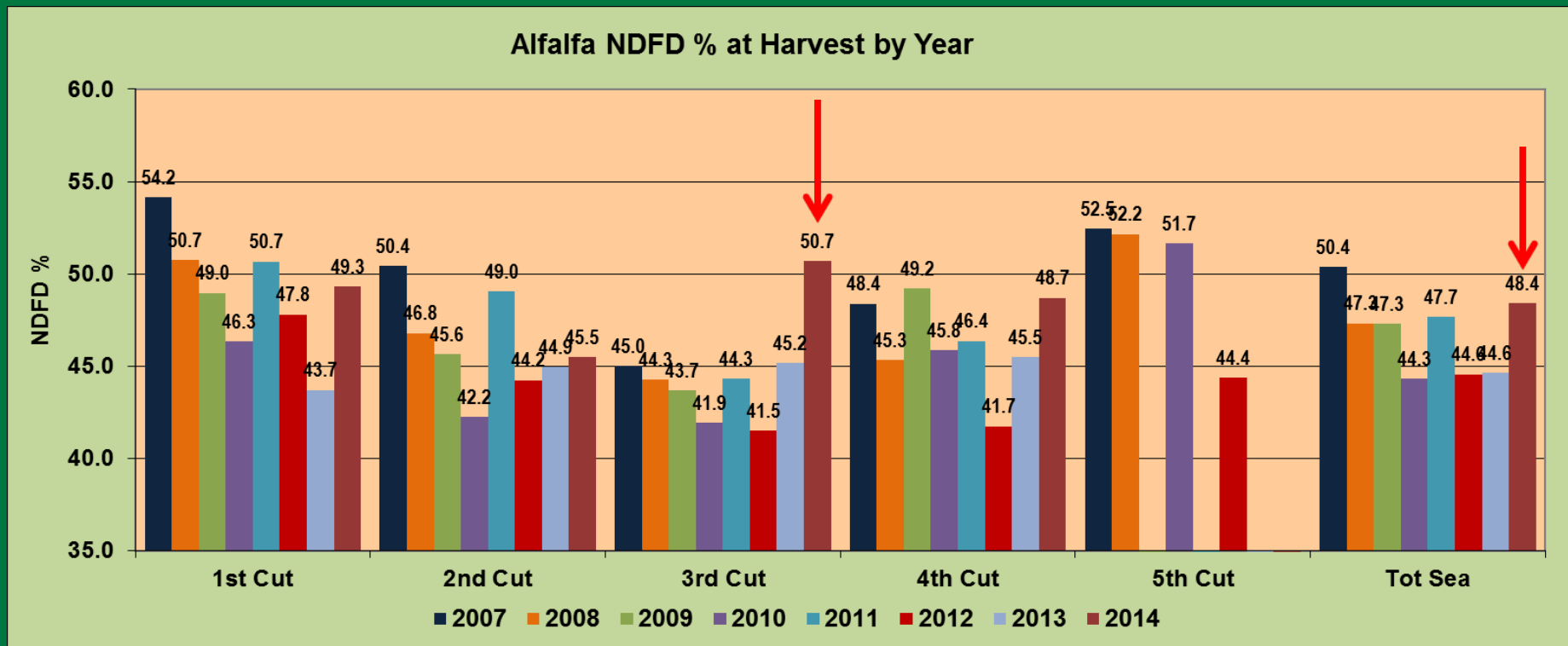
Alfalfa Crude Protein % at Harvest by Year



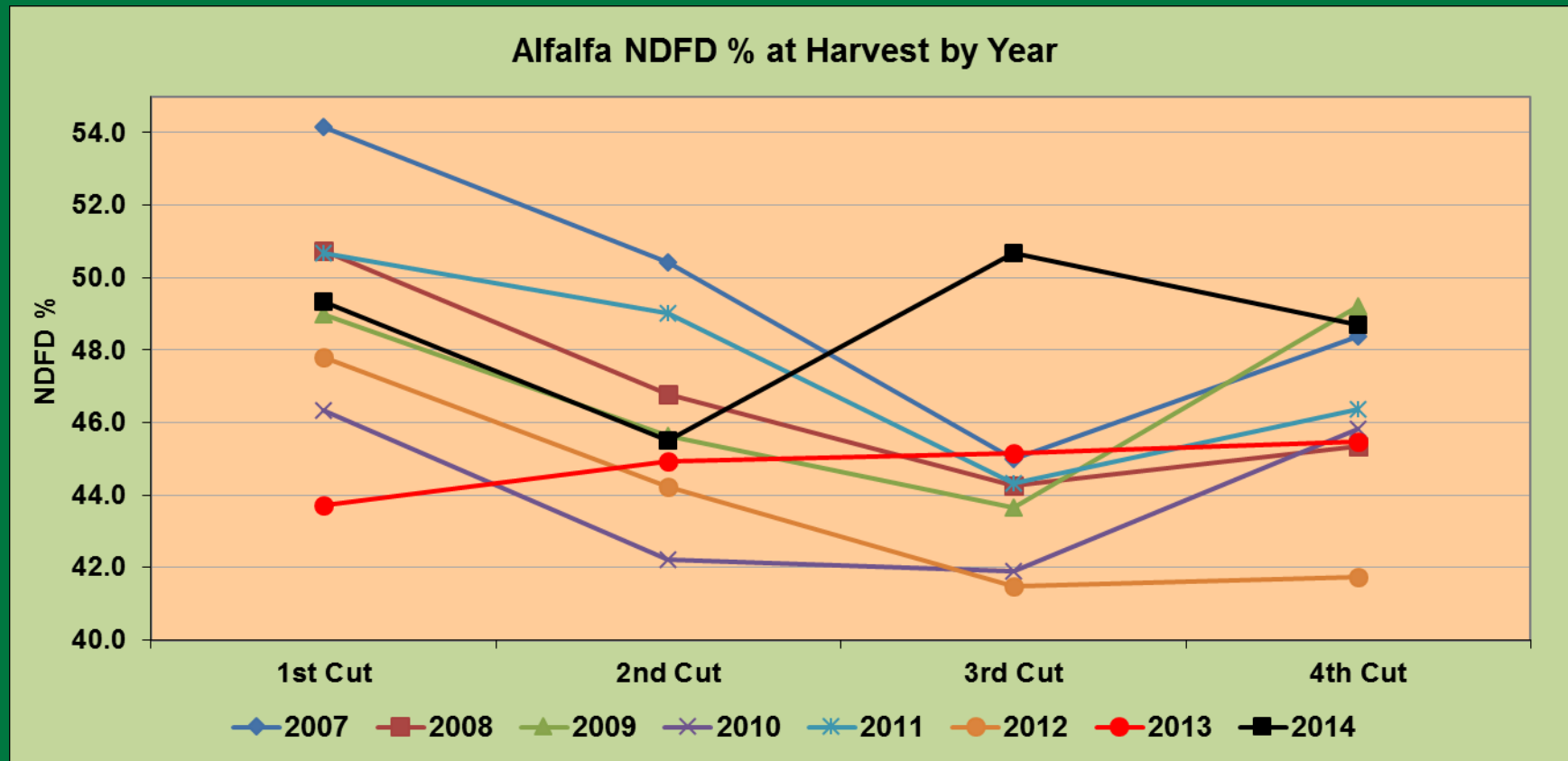
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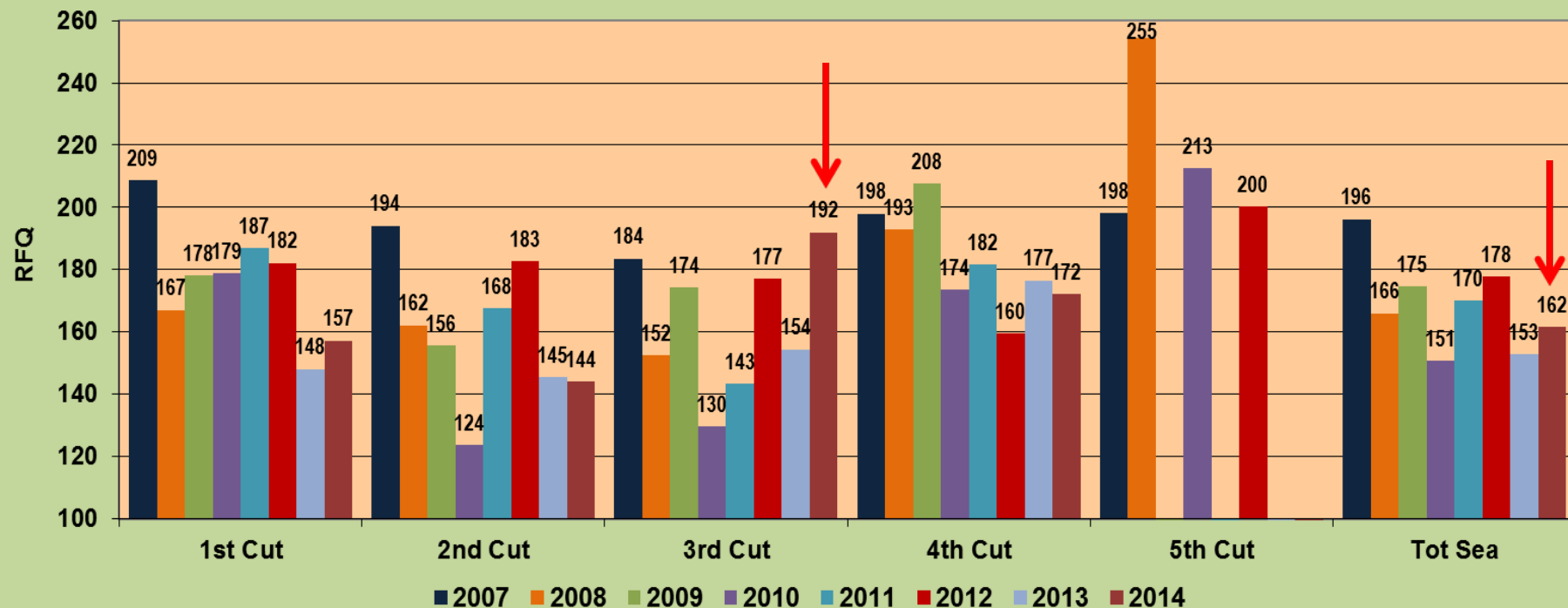


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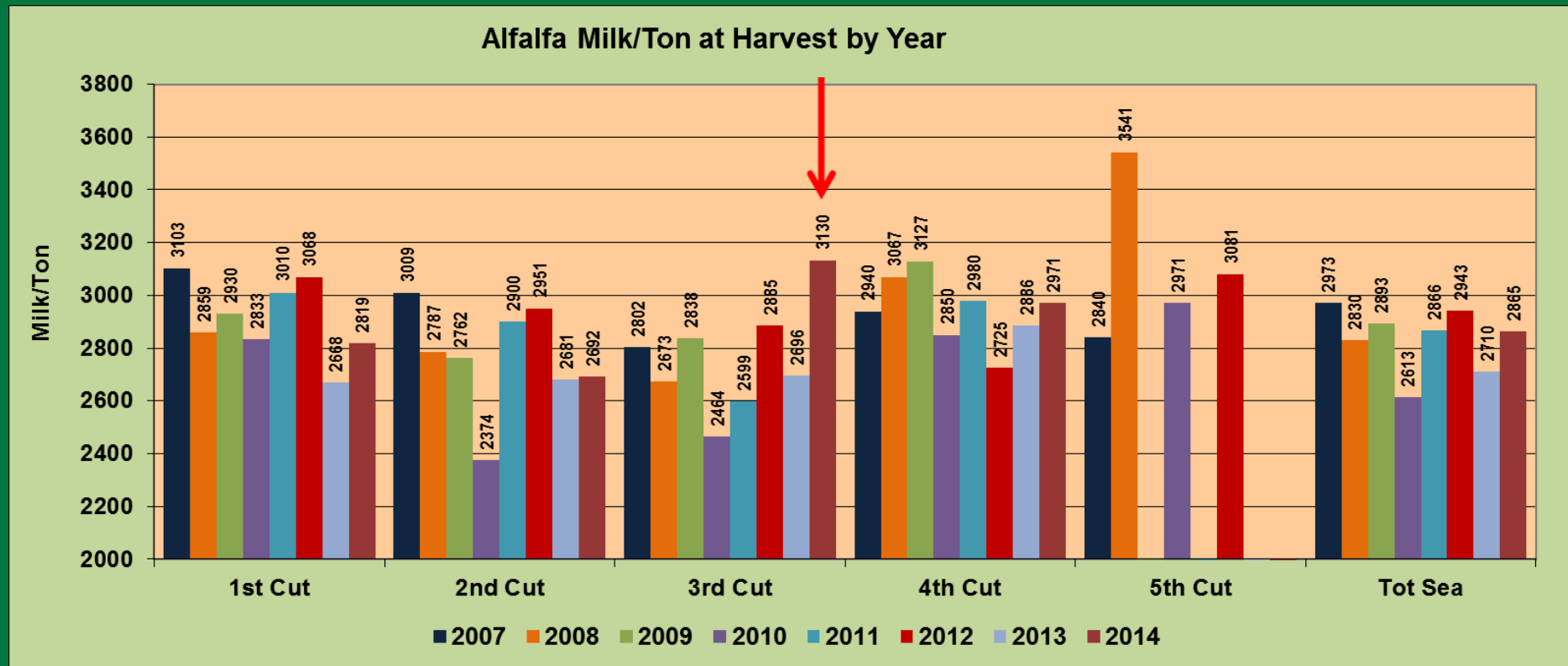


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Alfalfa RFQ at Harvest by Year



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- 2014 SUMMARY

- ANOTHER WET, COOL YEAR BUT OVERALL BETTER THAN 2013.
- LARGEST INFLUX OF NEW FIELDS (15) ADDED IN A GIVEN YEAR AND TOTAL FIELDS (24) FOR A GIVEN YEAR.
- LARGE VARIATION IN TOTAL-SEASON YIELDS (3 OVER 6 TON/A).
- PROJECT YEAR RECORDS SET:
 - ‡ LATEST AVERAGE THIRD AND FOURTH-CUT DATES
 - ‡ HIGHEST (TIE) AVERAGE FOURTH-CUT DRY MATTER YIELD.
 - ‡ HIGHEST AVERAGE FIRST-CUT NDF%
 - ‡ THIRD-CUT: HIGHEST NDFD% (BY A LOT), RFQ, AND MILK/TON.
- 2ND AND 3RD PRODUCTION YEAR YIELDS NEARLY EQUAL TO 1ST PRODUCTION YEAR. PRODUCTION FALLS ABOUT 25% IN 4TH PRODUCTION YEAR.
- TO DATE, 71% OF FIELDS (SITE-YEARS) HAVE YIELDED LESS THAN 5.0 TONS D.M. PER ACRE. PLENTY OF ROOM FOR IMPROVEMENT.

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**NOW RECRUITING
FOR 2015
PARTICIPANTS!**

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- **ACKNOWLEDGEMENTS**

- MIKE BERTRAM – COLUMBIA CO.
- AERICA BJURSTROM – KEWAUNEE CO.
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-AND THE FORAGE PRODUCERS WHO TOOK THE TIME AND EFFORT TO MAKE IT HAPPEN.

A complete summary of this project is located on the Team Forage website:

<http://fyi.uwex.edu/forage/alfalfa/>

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QUESTIONS?



Mike Rankin

Crops and Soils Agent

UW-Extension, Fond du Lac Co.

920-929-3175



Fond du Lac County

michael.rankin@uwex.edu

Fond du Lac Co. Agronomy: <http://fyi.uwex.edu/fdlcrops/>

Around the Corn Blog: <http://fyi.uwex.edu/aroundthecorn/>

twitter: @M_Rankin