

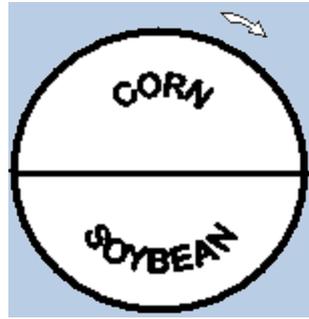
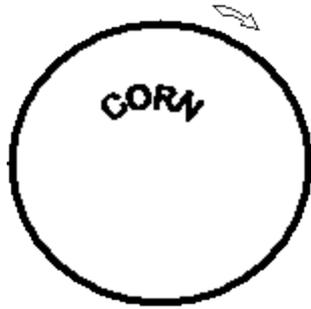
PASTURING HEIFERS ON THE WISCONSIN INTEGRATED CROPPING SYSTEMS TRIAL



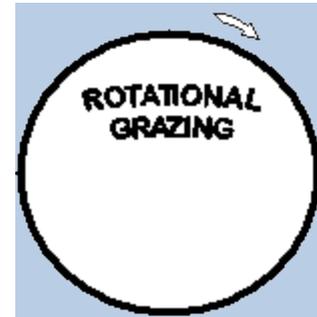
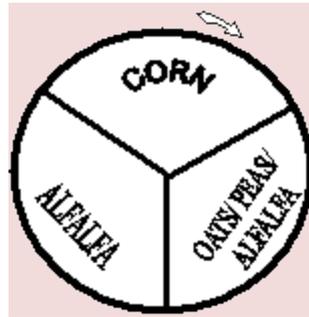
The Wisconsin Integrated Cropping Systems Trial at Arlington, WI



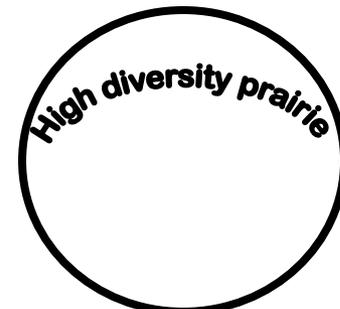
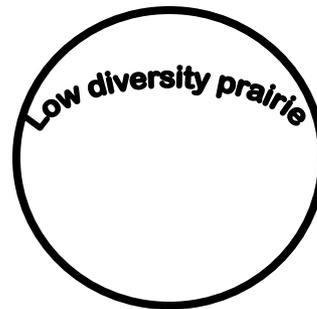
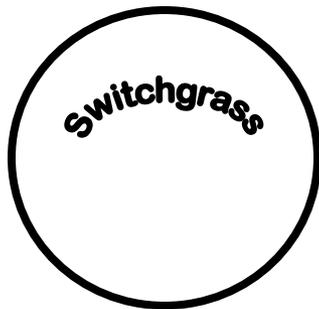
Cash-grain systems



Dairy (forage-based) systems



Native Systems

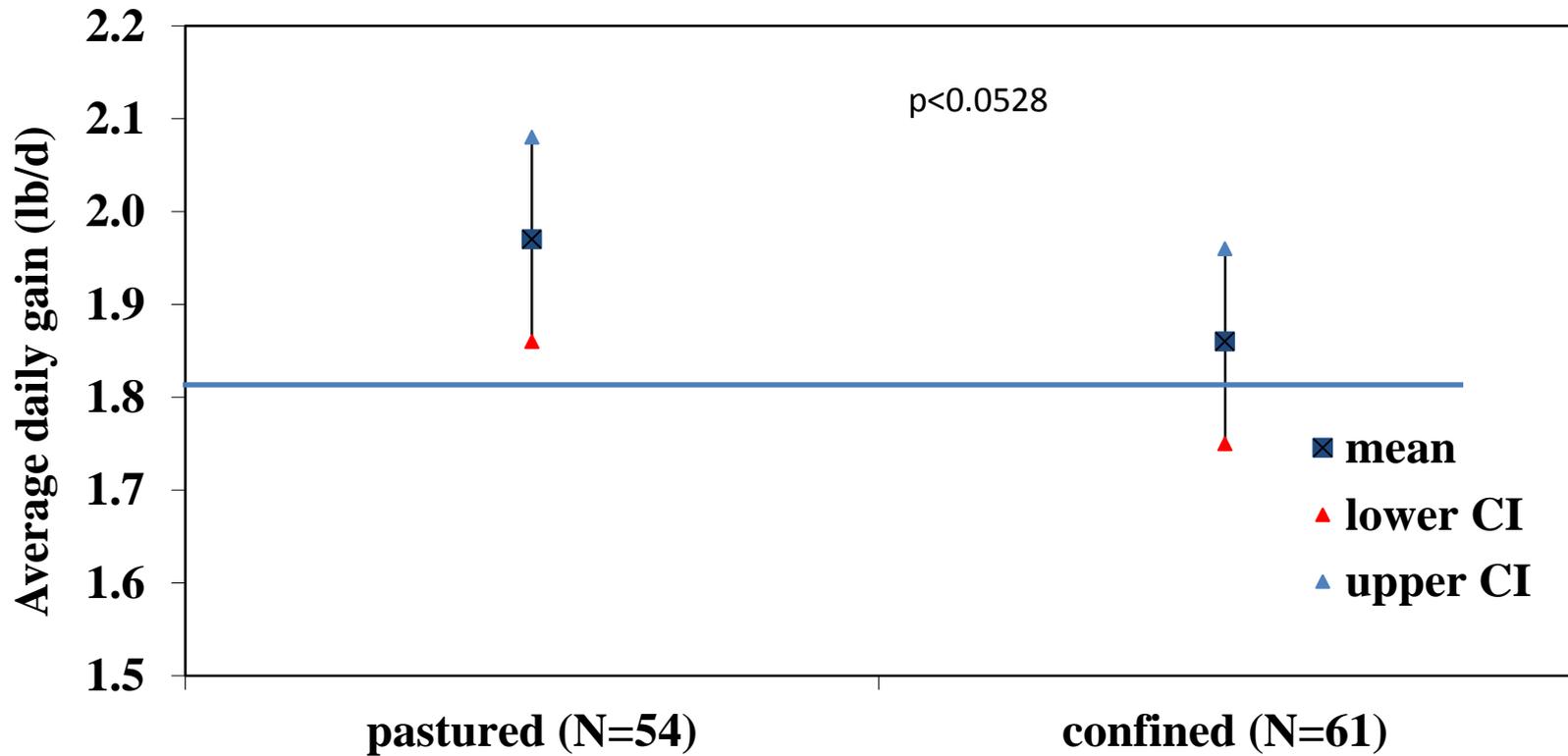


Increasingly perennial

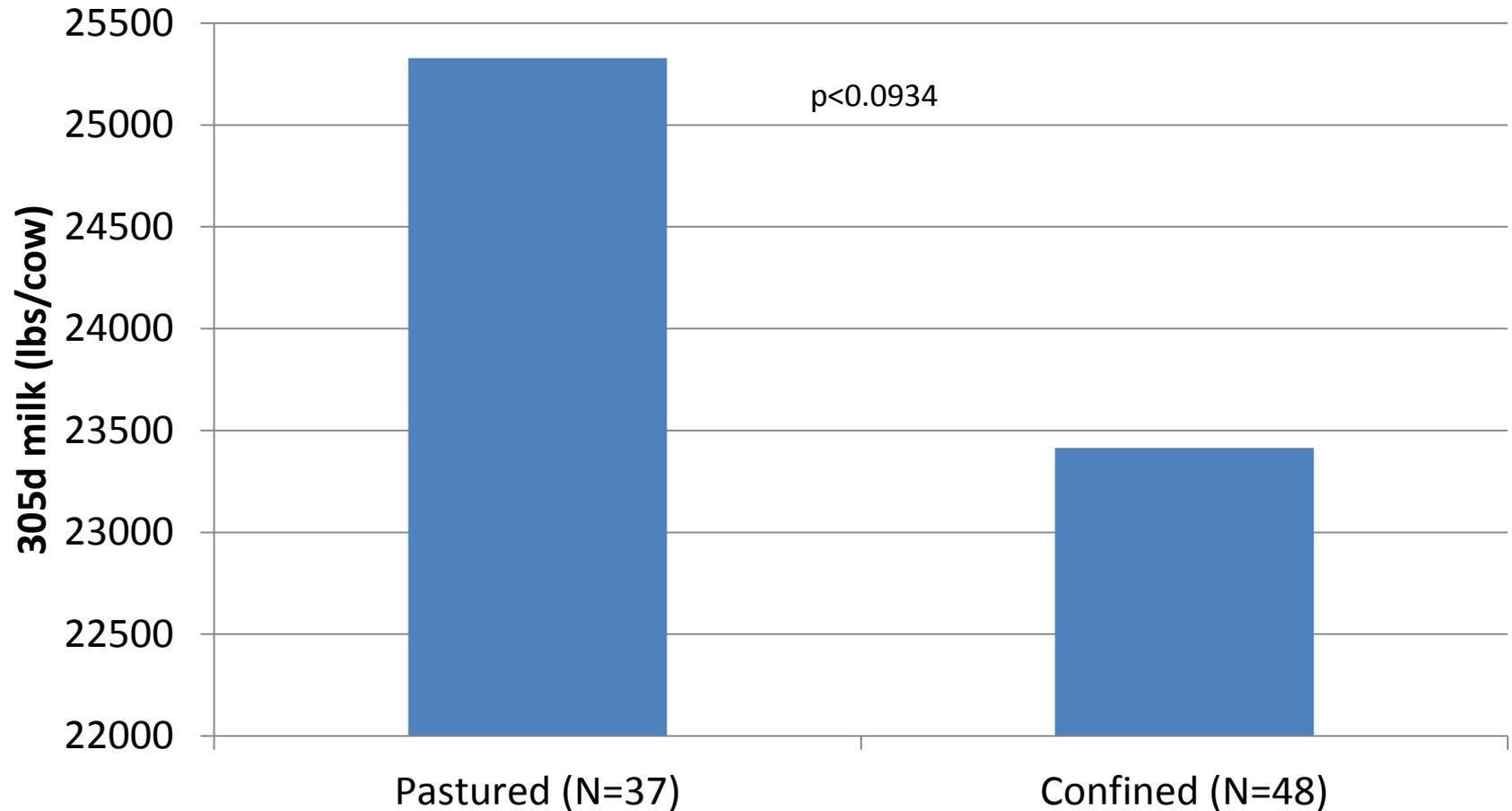
Increasingly diverse



Heifer weight gain with 90% CI (11-yr avg.)



First Lactation Performance (10 yr avg)



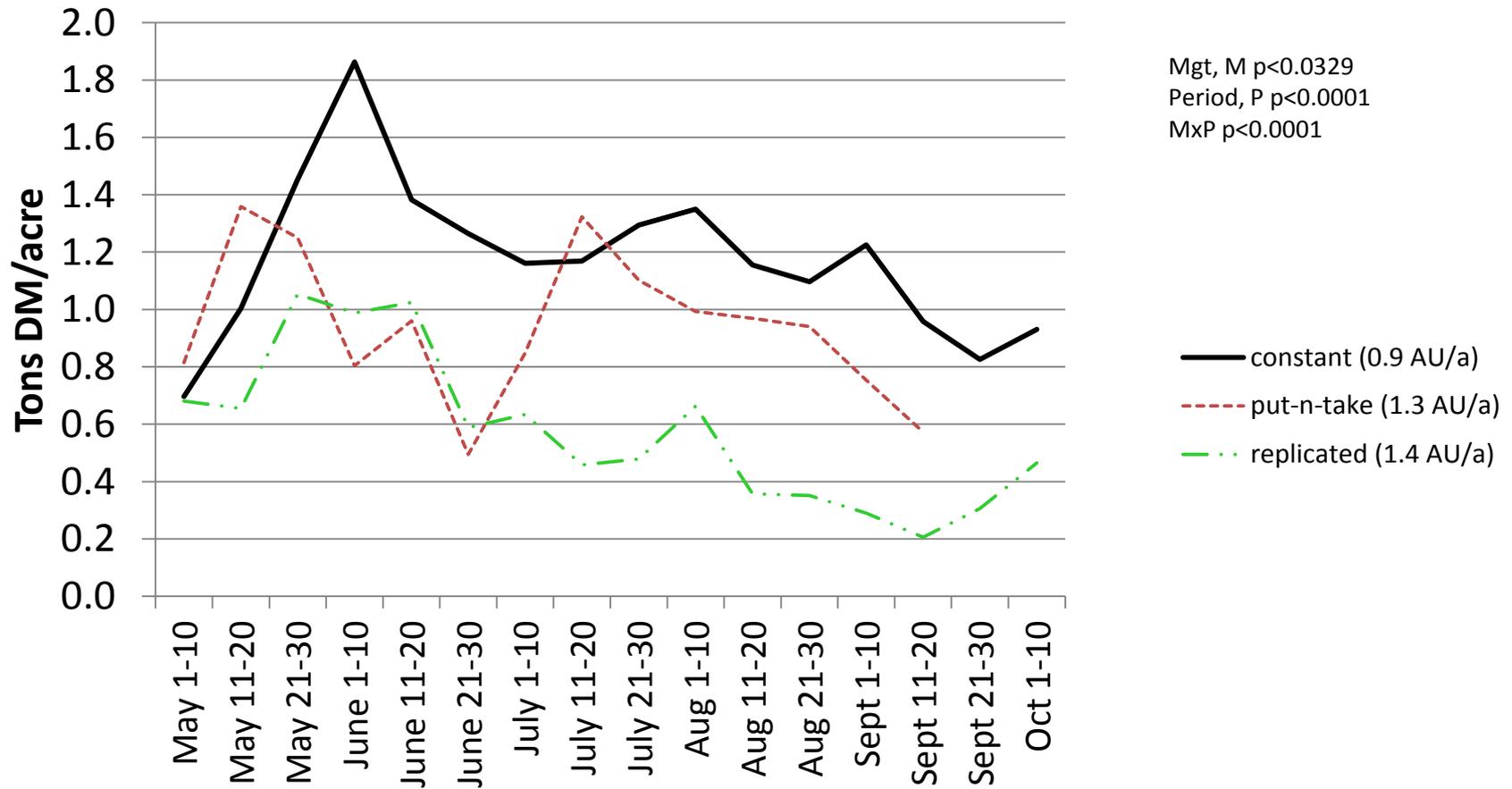
Stocking strategies over time

- 1992-1995 – **‘Replicated’**
 - 2 heifers/plot/yr
 - 4 plots
 - 8 hd on 2.8 a = 1.4 AU/a
- 1996-1999 – **‘Put-and-take’**
 - 12 then 6 heifers/yr
 - Cohort moved through 4 paddocks
 - 1.3 AU/a
- 2000-present – **‘Constant’**
 - 5 heifers/yr
 - Moved as a cohort through 4 paddocks
 - 0.9 AU/a

The Wisconsin Integrated Cropping Systems Trial



Effect of management strategy on pasture productivity



Effect of pasture management strategy on current heifer productivity (vs. confined group)

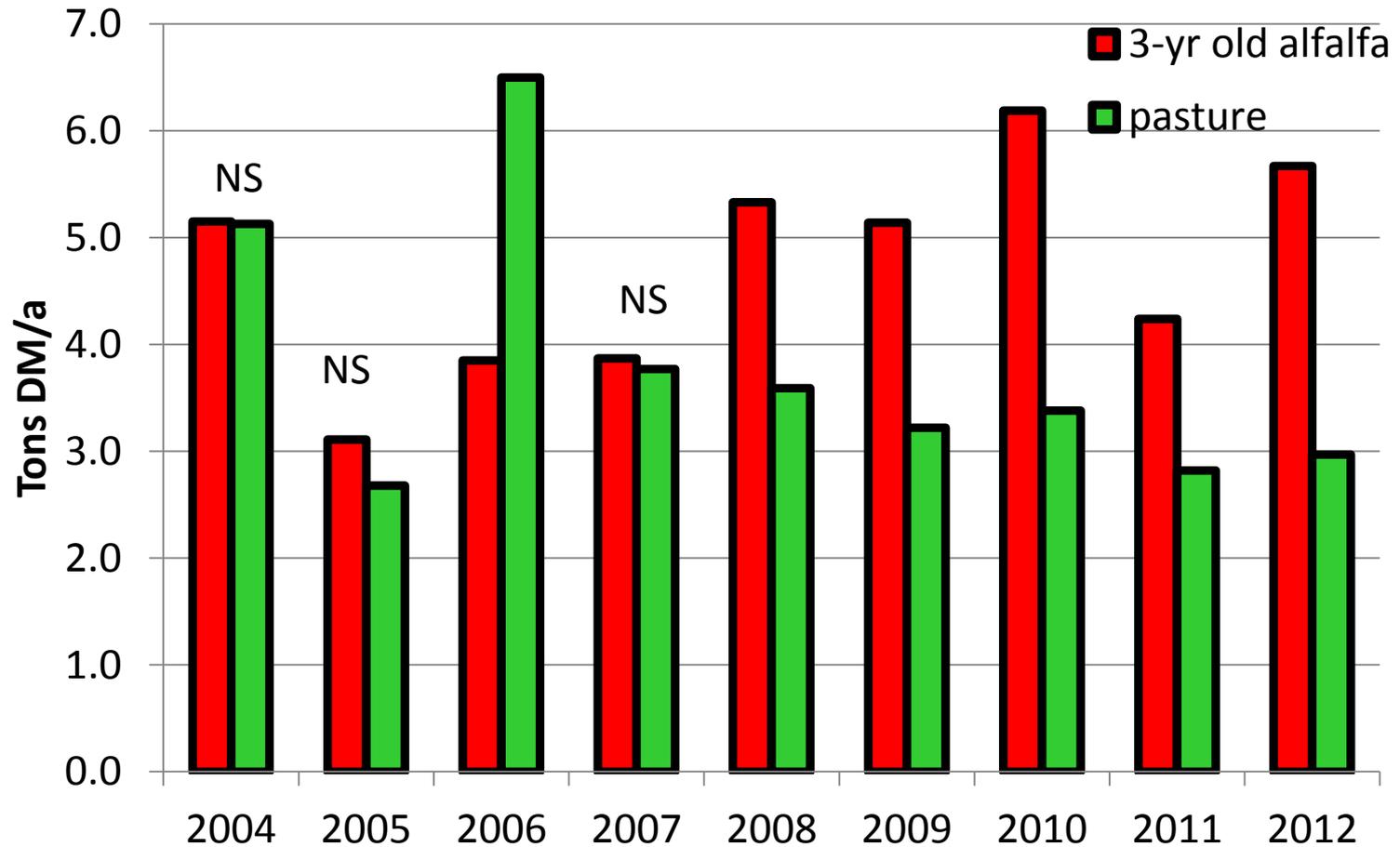
	Constant (0.9 AU/a)	Put-n-take (1.3 AU/a)	Replicated (1.4 AU/a)
ADG (lb/hd/day)	2.01 (1.87)	1.75 (2.22)	1.29 (1.78)
Initial BW (lbs/hd)	487 (489)	483 (456)	464 (465)
Final BW (lbs/hd)	818 (797)	719 (751)	614 (657)

Effect of pasture management strategy on future heifer productivity (vs. confined group)

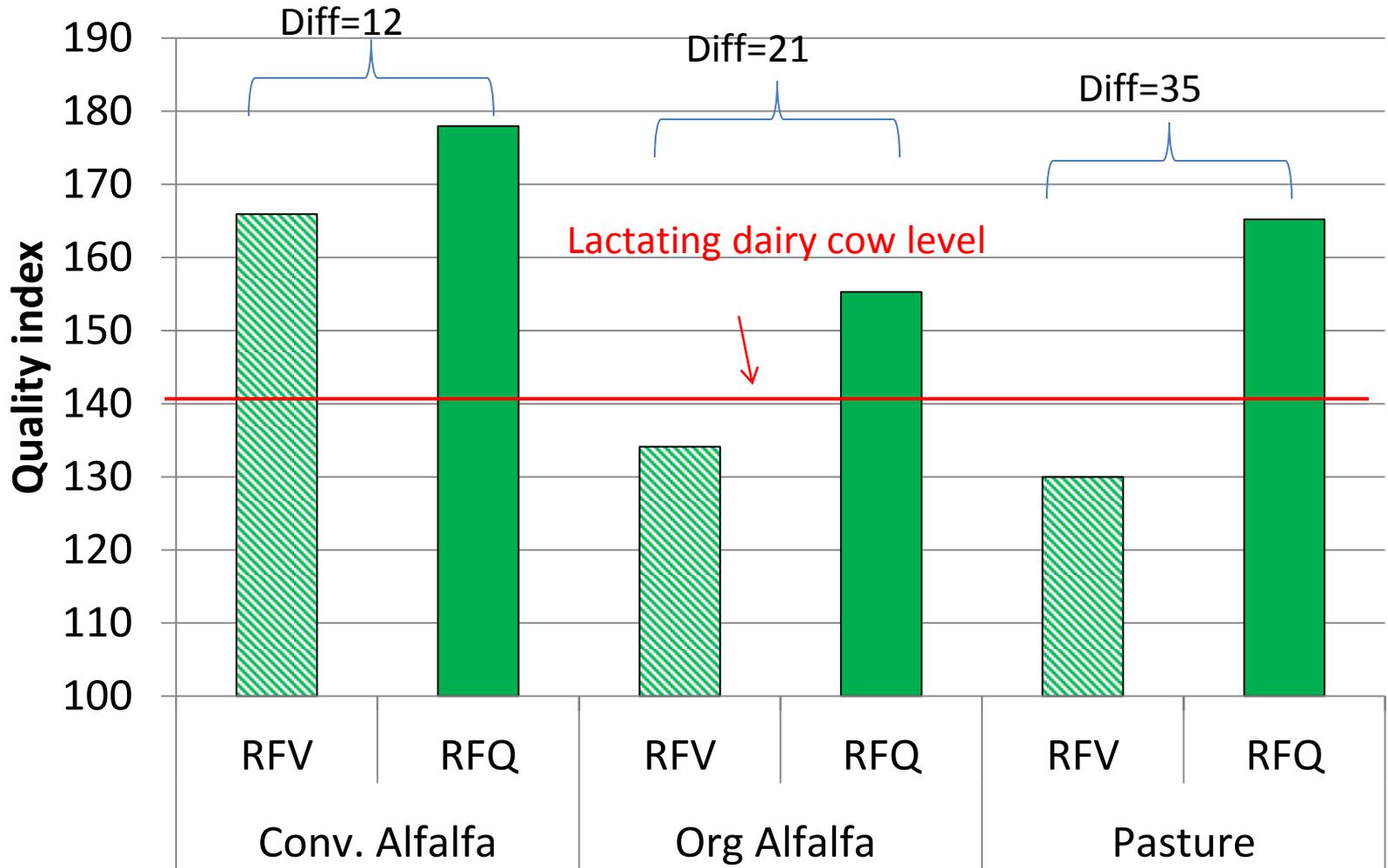
	Constant (0.9 AU/a)	Put-n-take (1.3 AU/a)	Replicated (1.4 AU/a)
ME milk, lbs/cow	25,416	24,057	21,615
(diff.)	(+2000 lbs)	(-1261 lbs)	(-1515 lbs)

NC WI Grazing Network Winter Meeting -
March 2013

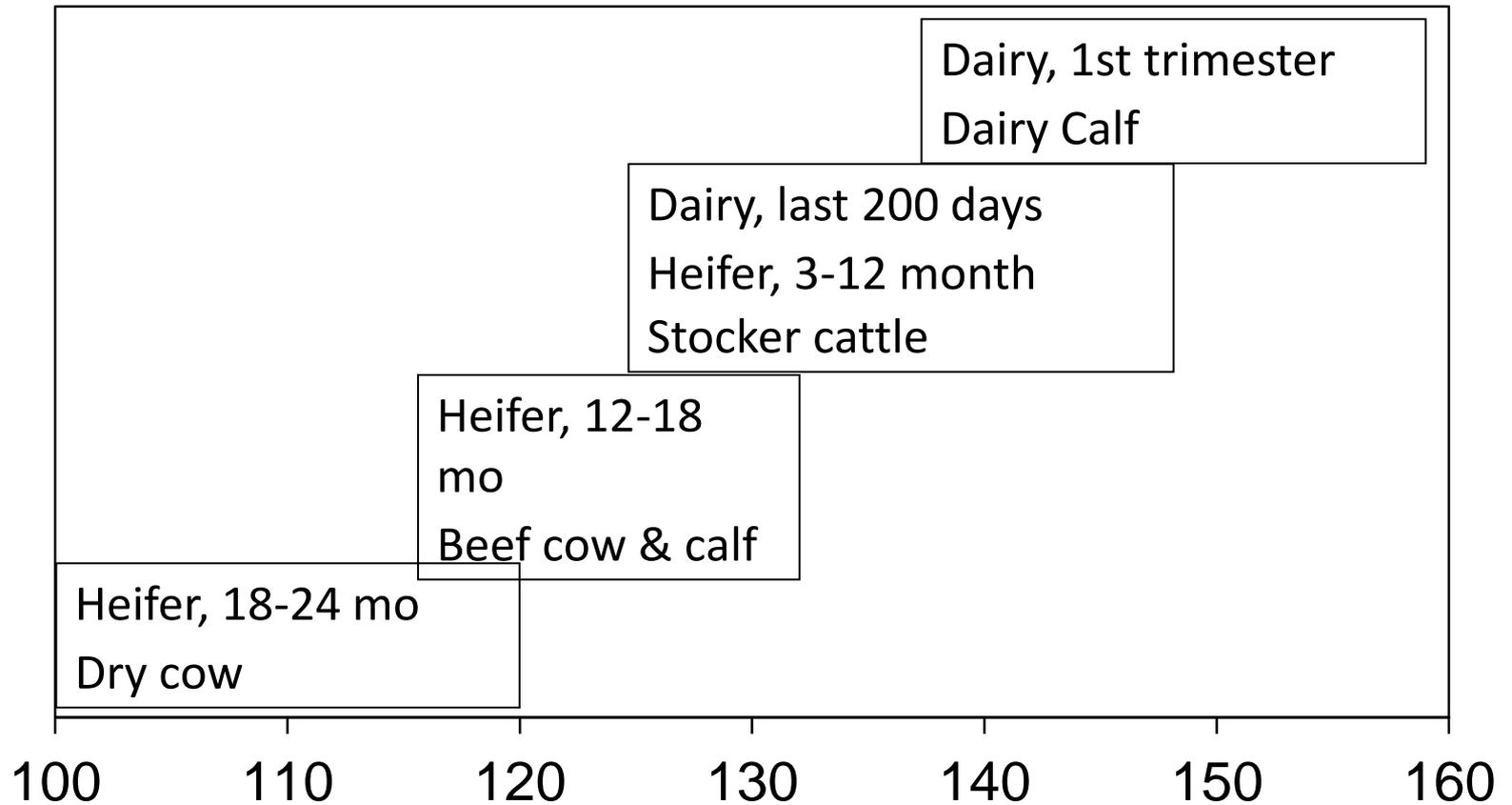
Yield comparison in pasture vs. 3-yr old alfalfa



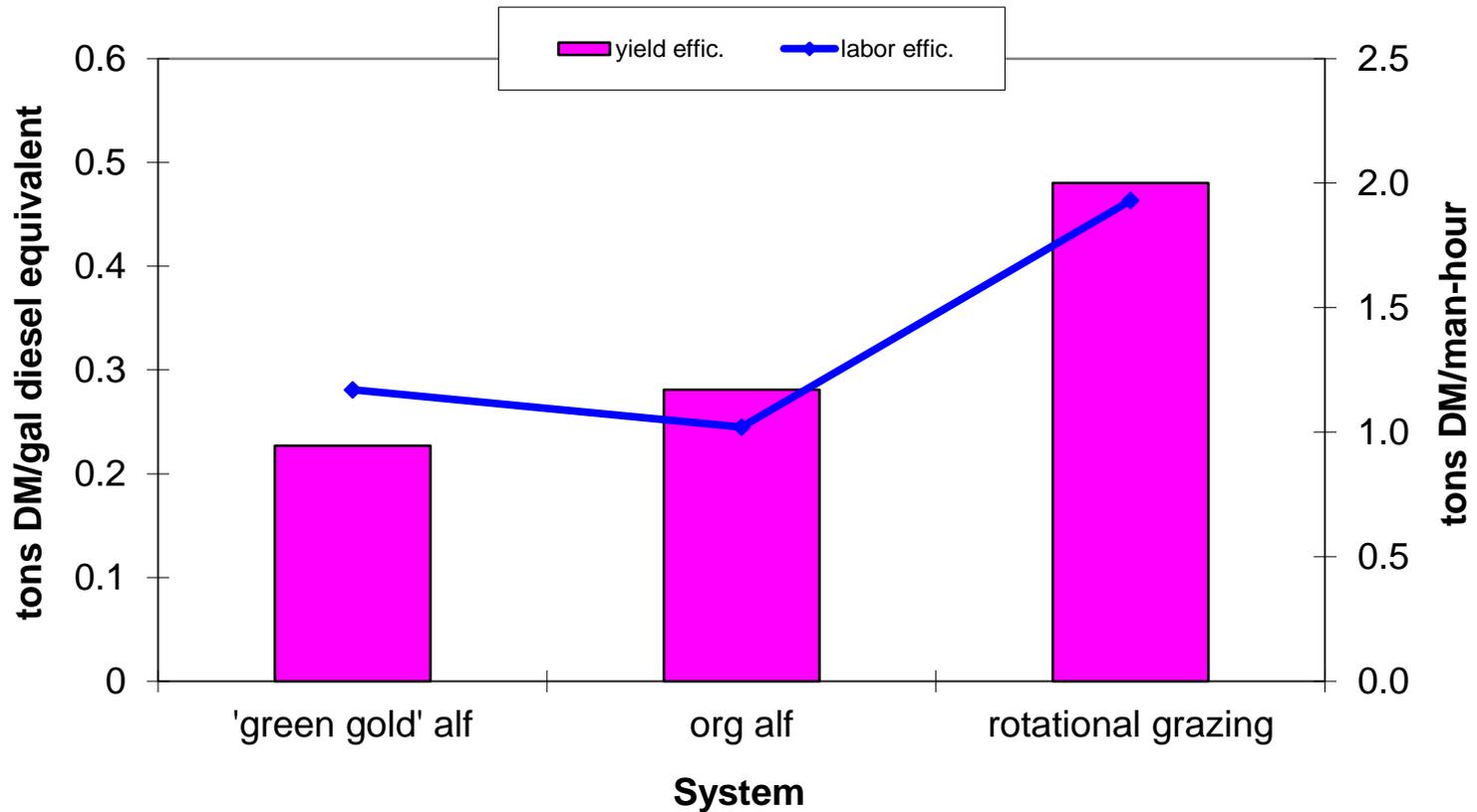
RFV vs. RFQ on WICST forage systems (8-yr seasonal average)



Forage Quality Needs of Animals



Energy efficiency in forage systems

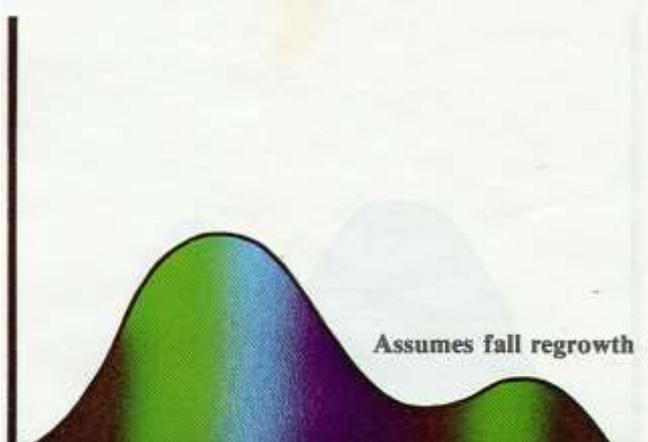


Grazing Prairie?

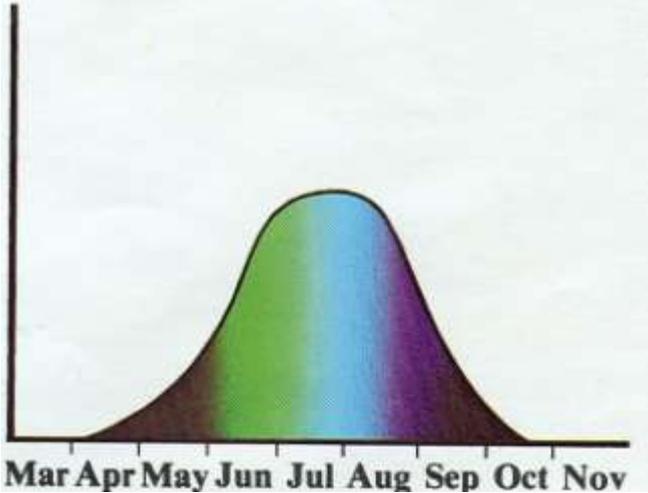
- Slow regrowth of cool-season pasture during summer months ('summer slump') – need to feed hay
- Prairies are comprised of warm-season grasses (big bluestem, indiangrass, switchgrass) that can fill the pasture gap during the hot, dry summer
- Good feed value if grazed in vegetative stage
- Mix of grasses and forbs for high selection
- What is impact of grazing on prairie regrowth?

Typical seasonal forage grass distribution

Cool-season grass

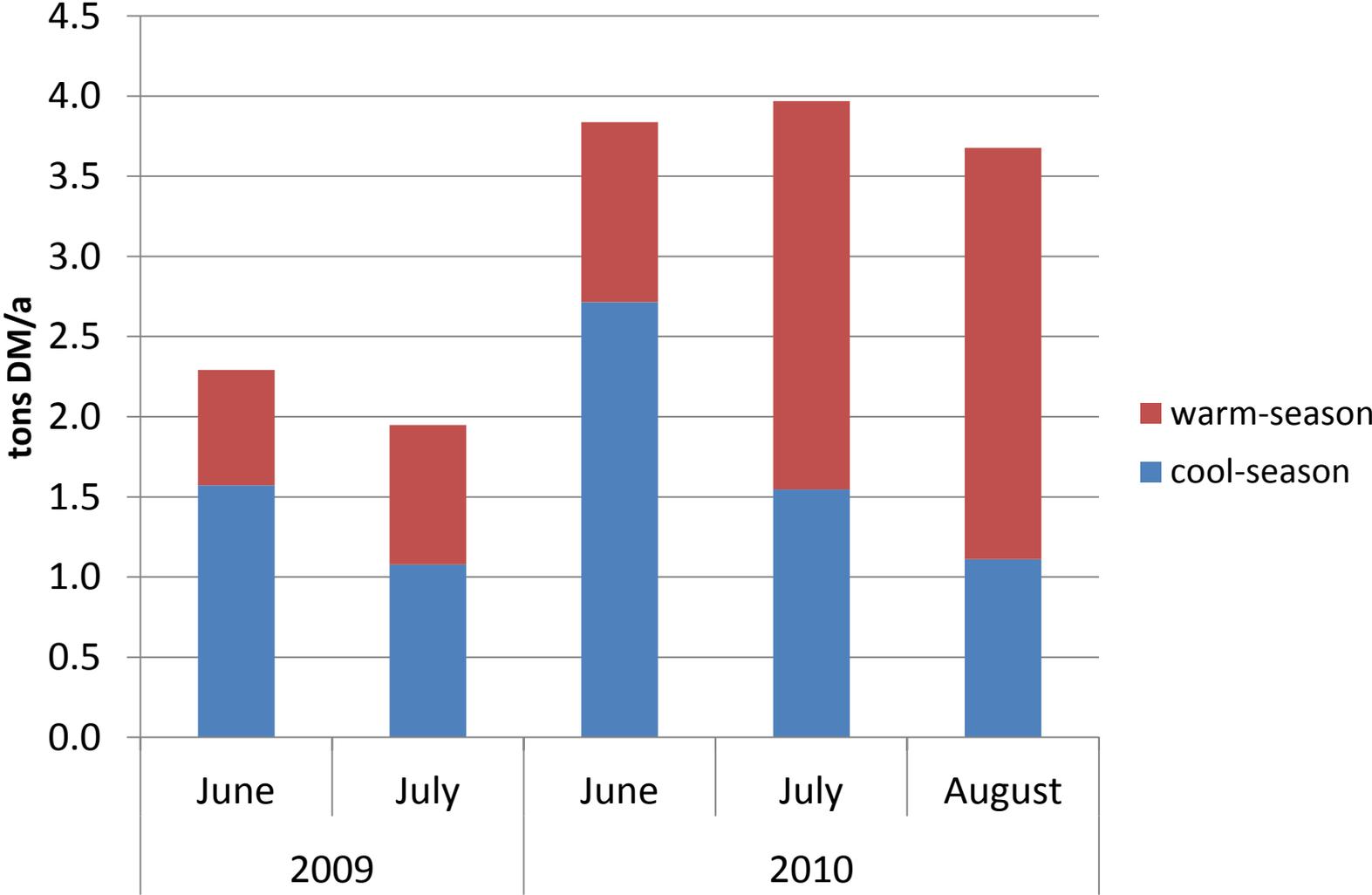


Warm-season grass

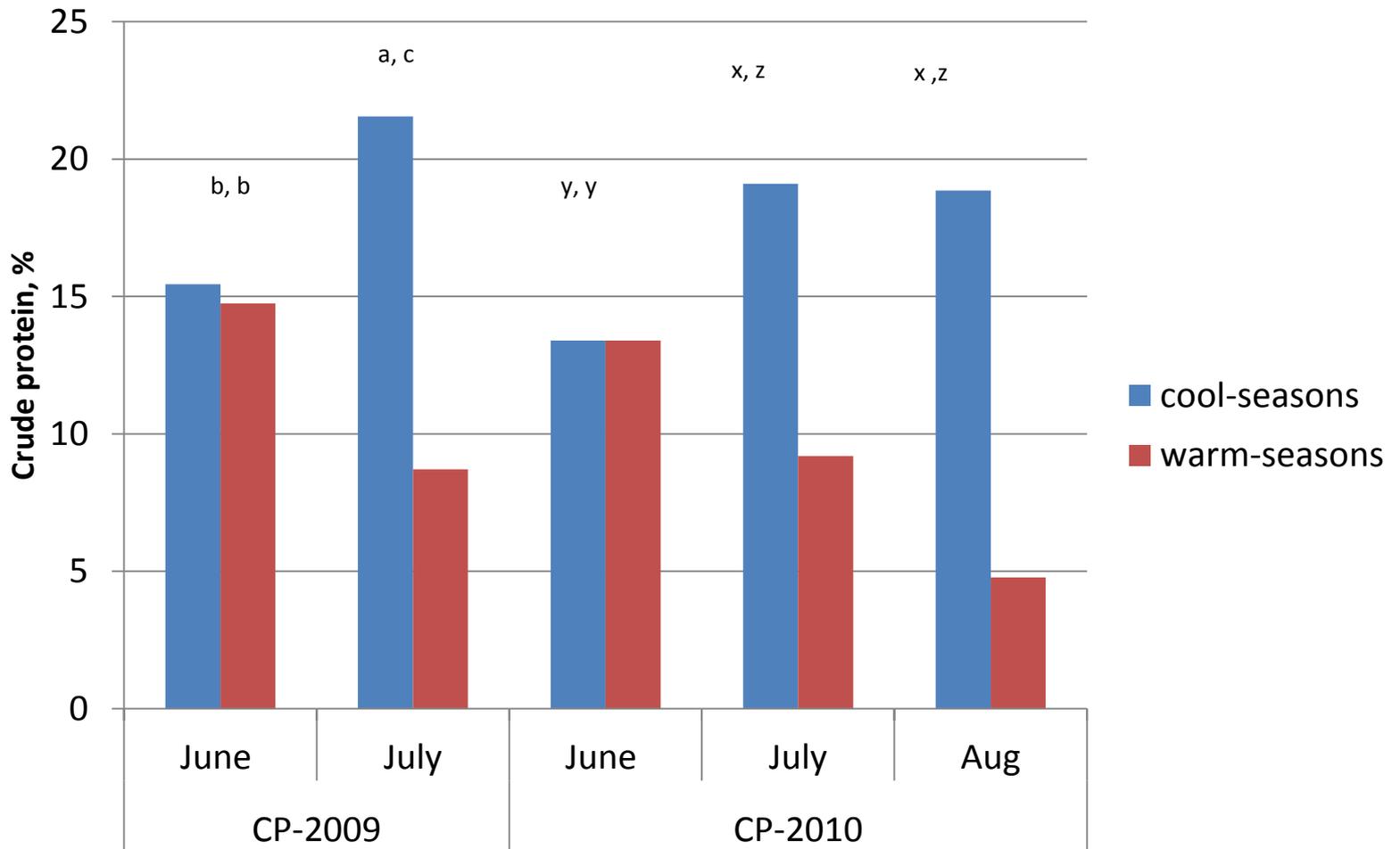




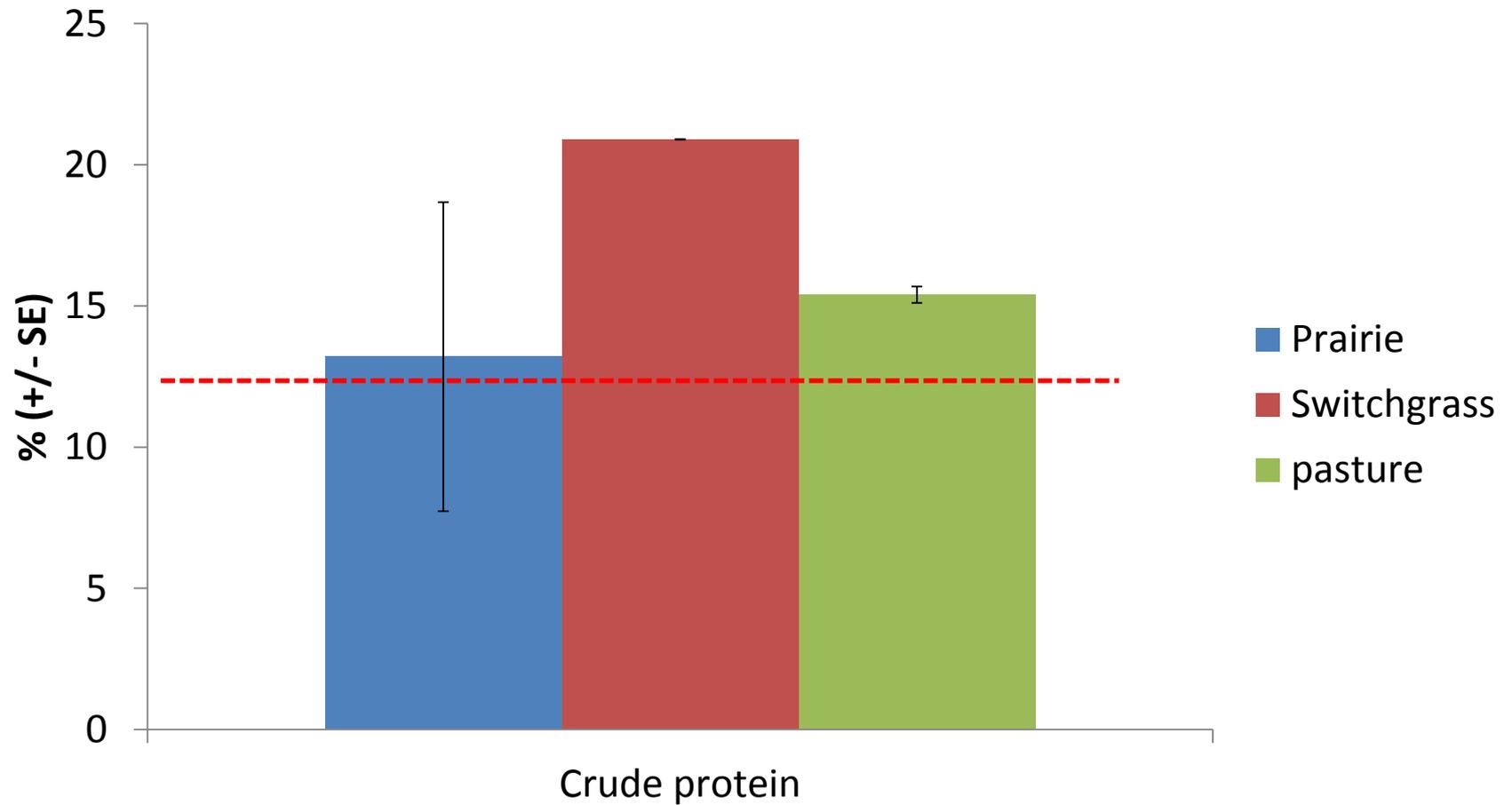
Summer Forage Availability for Grazing



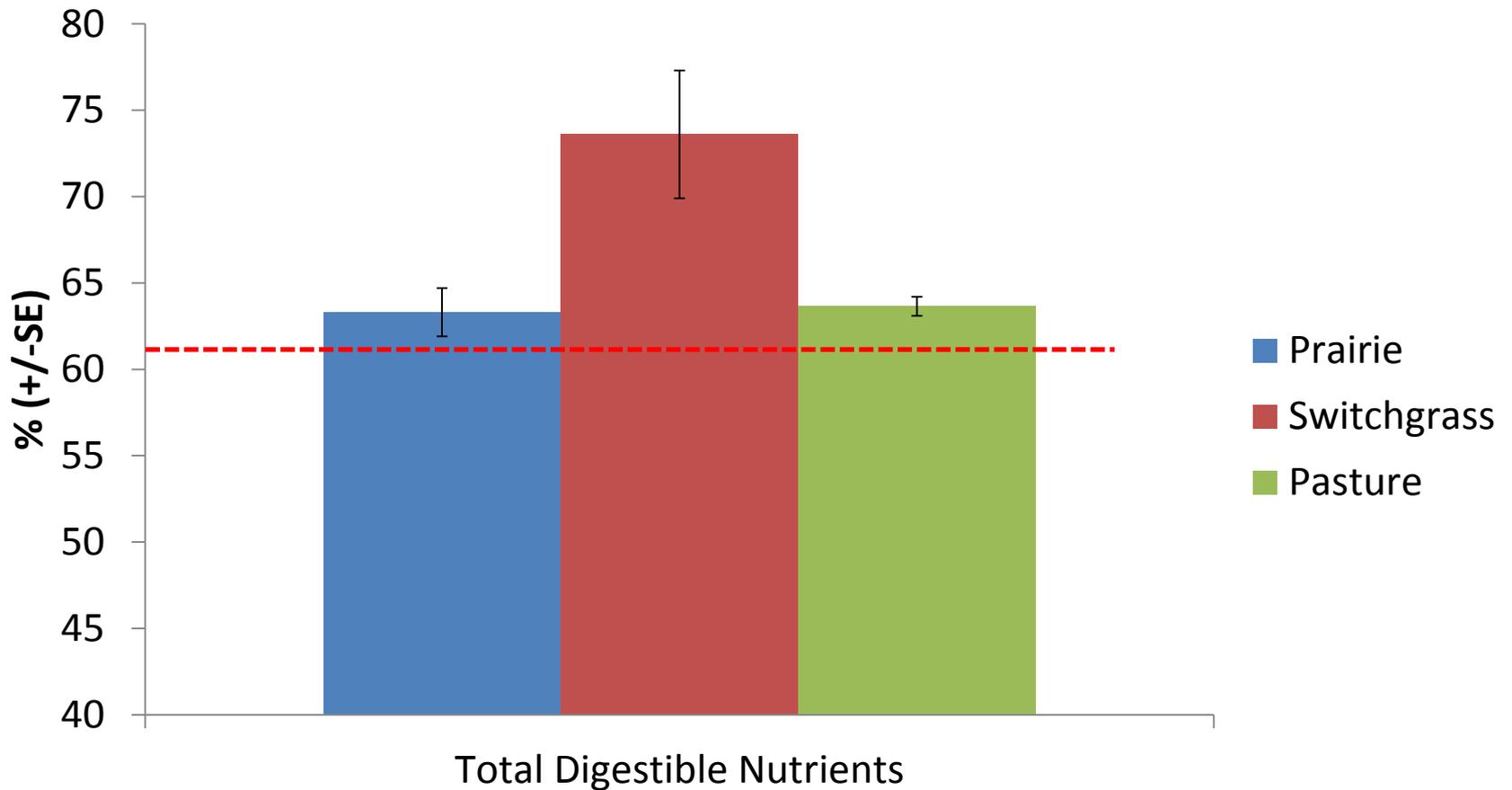
Crude protein% of pasture and prairie grasses



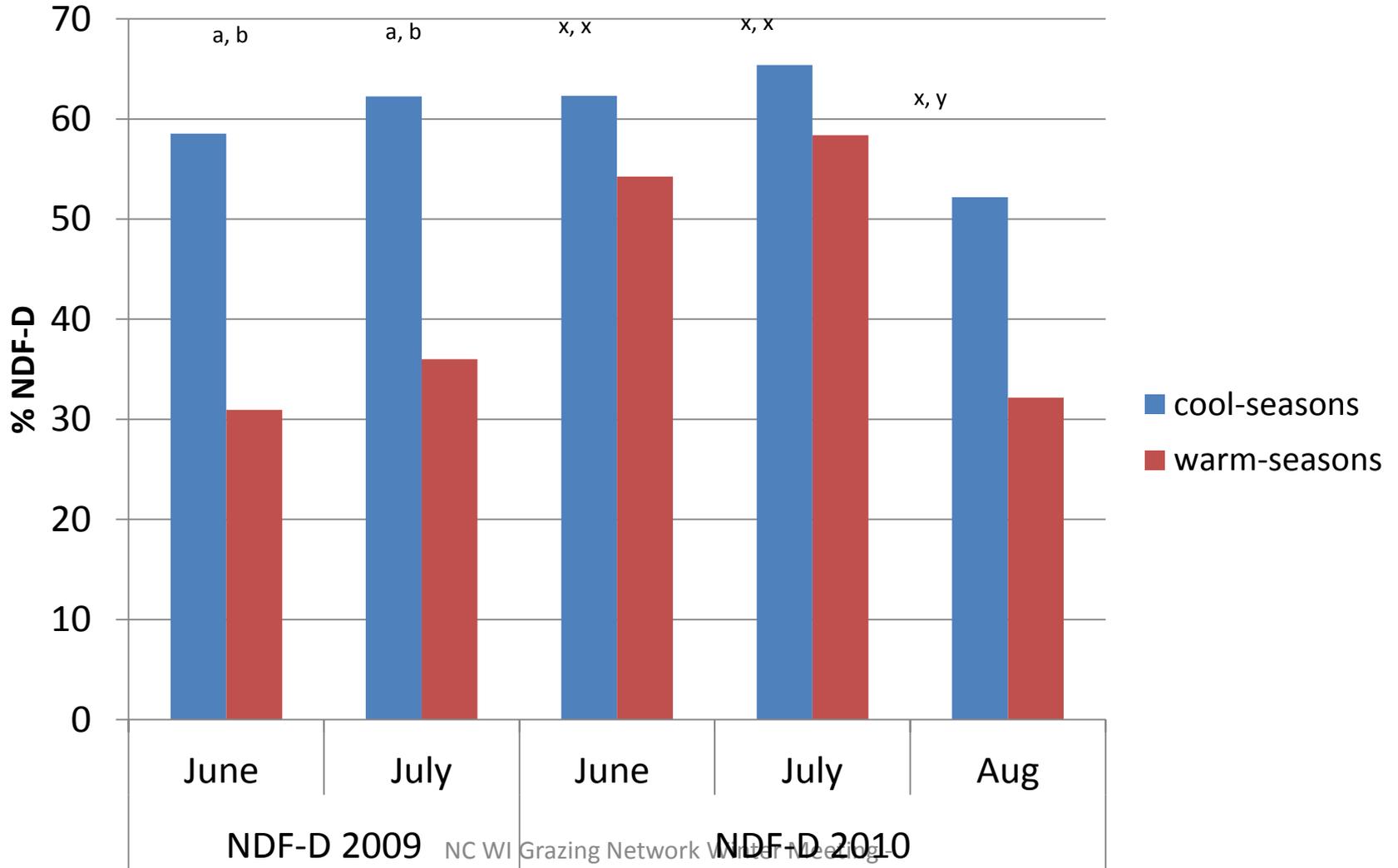
Forage quality in early June -Protein



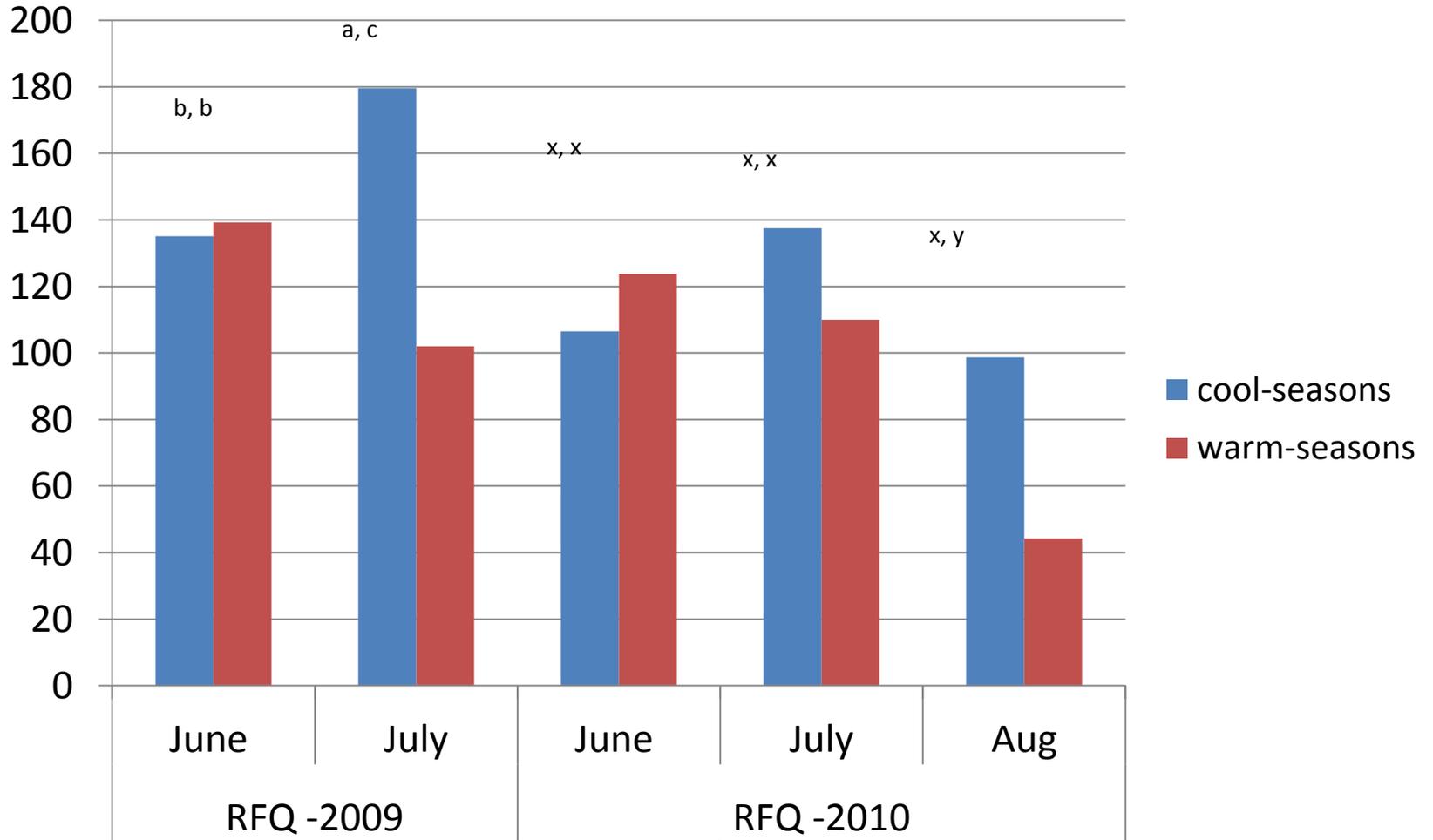
Forage quality in early June -TDN



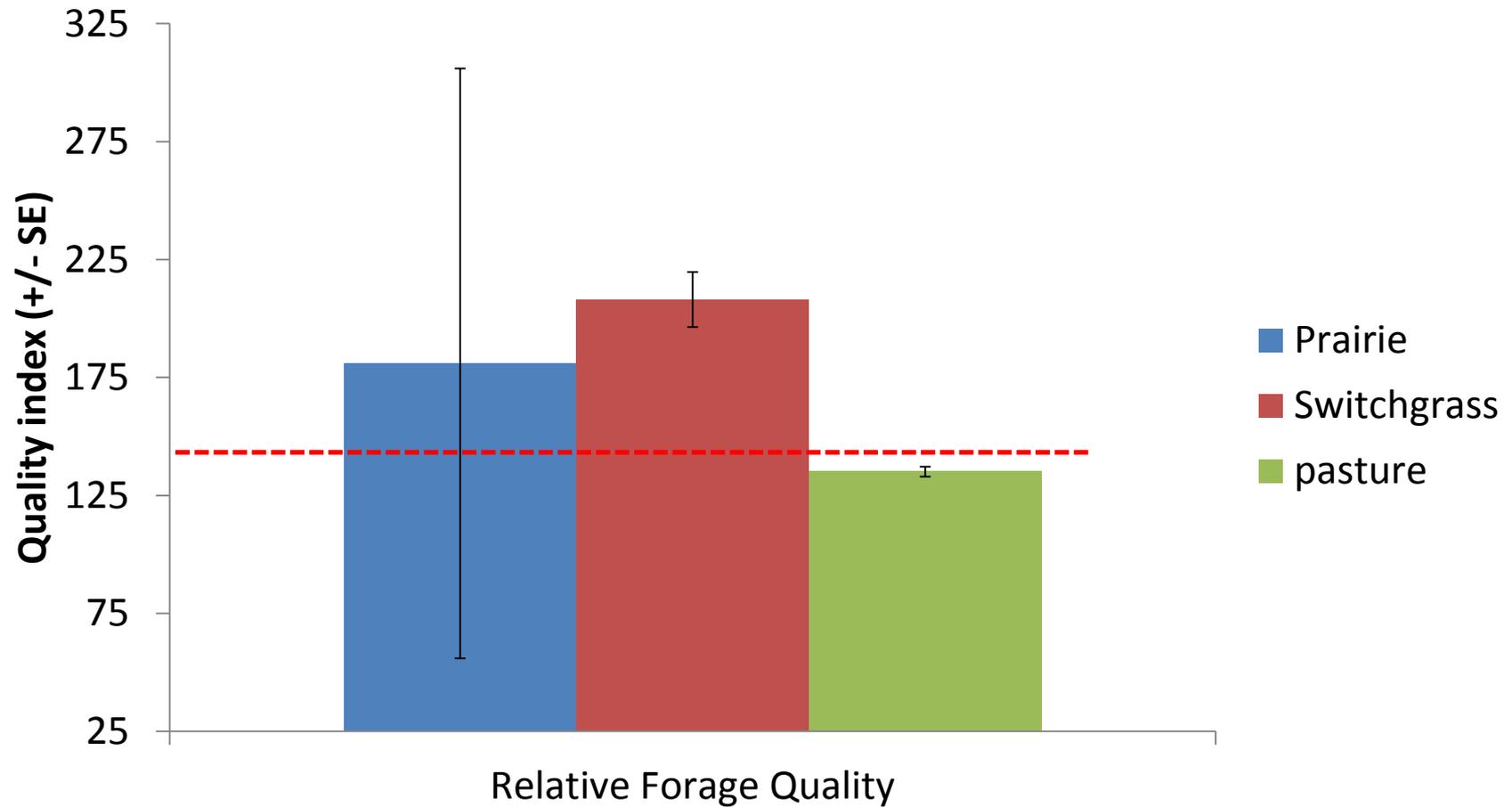
NDF-D of pasture and prairie grasses



RFQ



Forage quality in early June -RFQ



Summary

- Stocking strategy impacts animals and pasture in current season and beyond
- Pastured heifers more productive than those raised in confinement
- Pasture yields more variable than alfalfa
 - Pasture avg. 3 ton DM/a (range 2.7 to 6.5 ton DM/a)
 - Crop insurance? risky
 - Add portable irrigation? costly
 - Add deeper rooted legumes? prairie grasses?

Summary (cont'd)

- Warm season grasses can improve total forage availability
- More delicate to manage (leave higher residual i.e. 6"; graze regrowth when 15" tall)
- Warm season grasses have very good nutritive value while in vegetative growth stage
- Nutritive value falls quickly once grasses start to head out