Investing in supplement feeding systems



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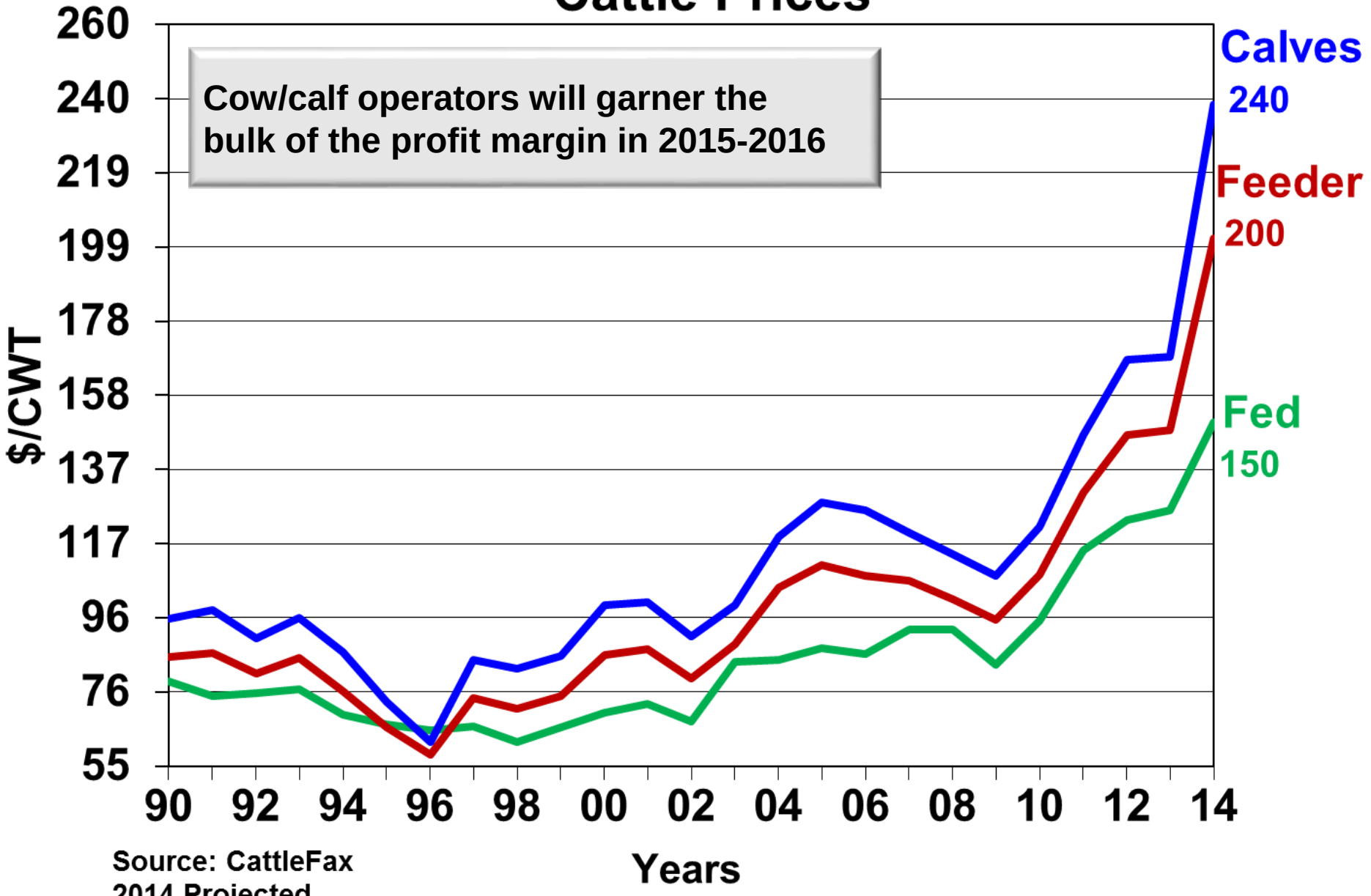
SOUTHERN EXTENSION RISK MANAGEMENT EDUCATION

UF IFAS UNIVERSITY of FLORIDA

Cattle Prices

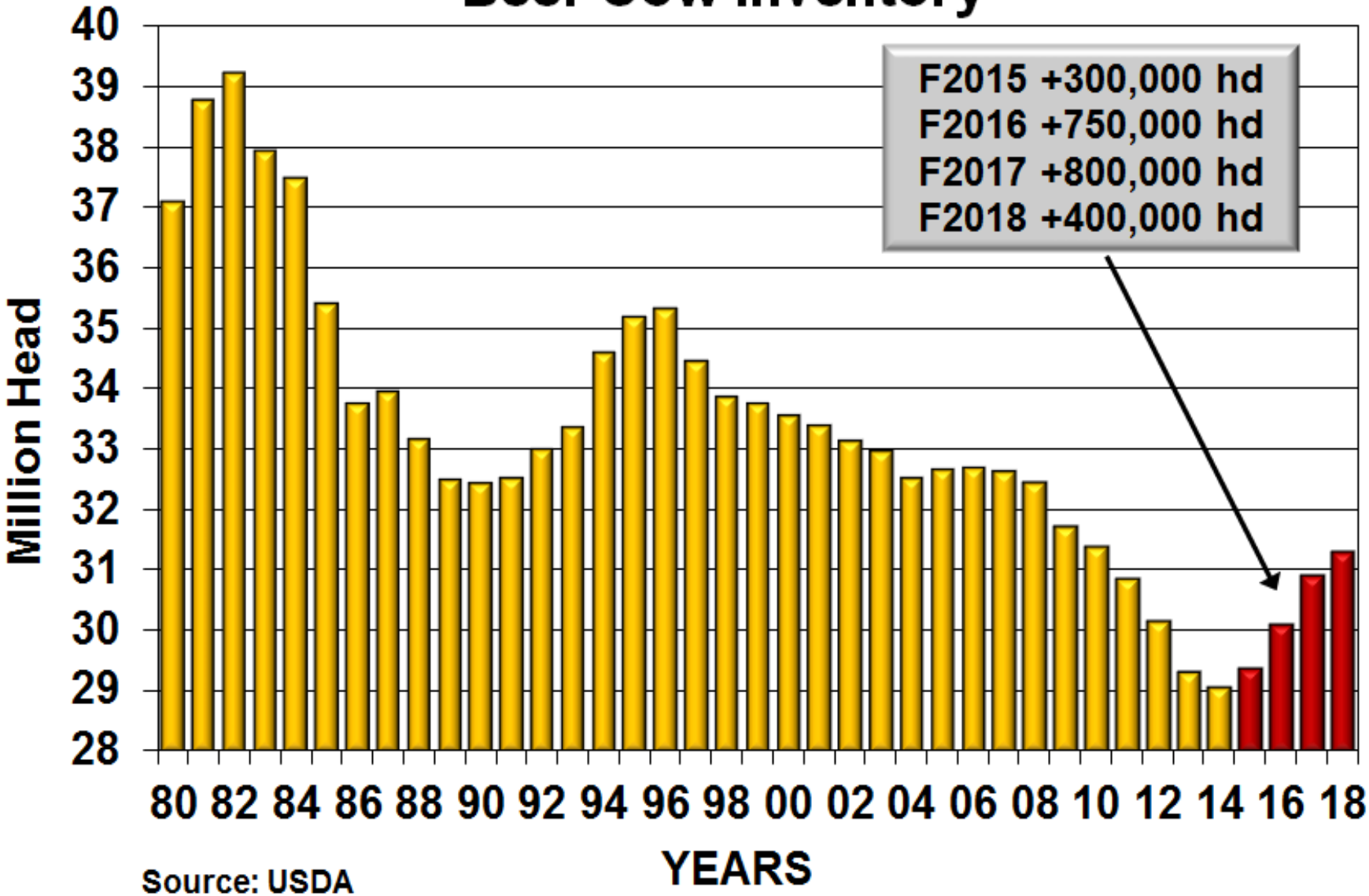


Source: CattleFax
2014 Projected

Source: Randy Blach. 2014 Liquid Feed Symp.

CattleFax THE DECIDING FACTOR

Beef Cow Inventory

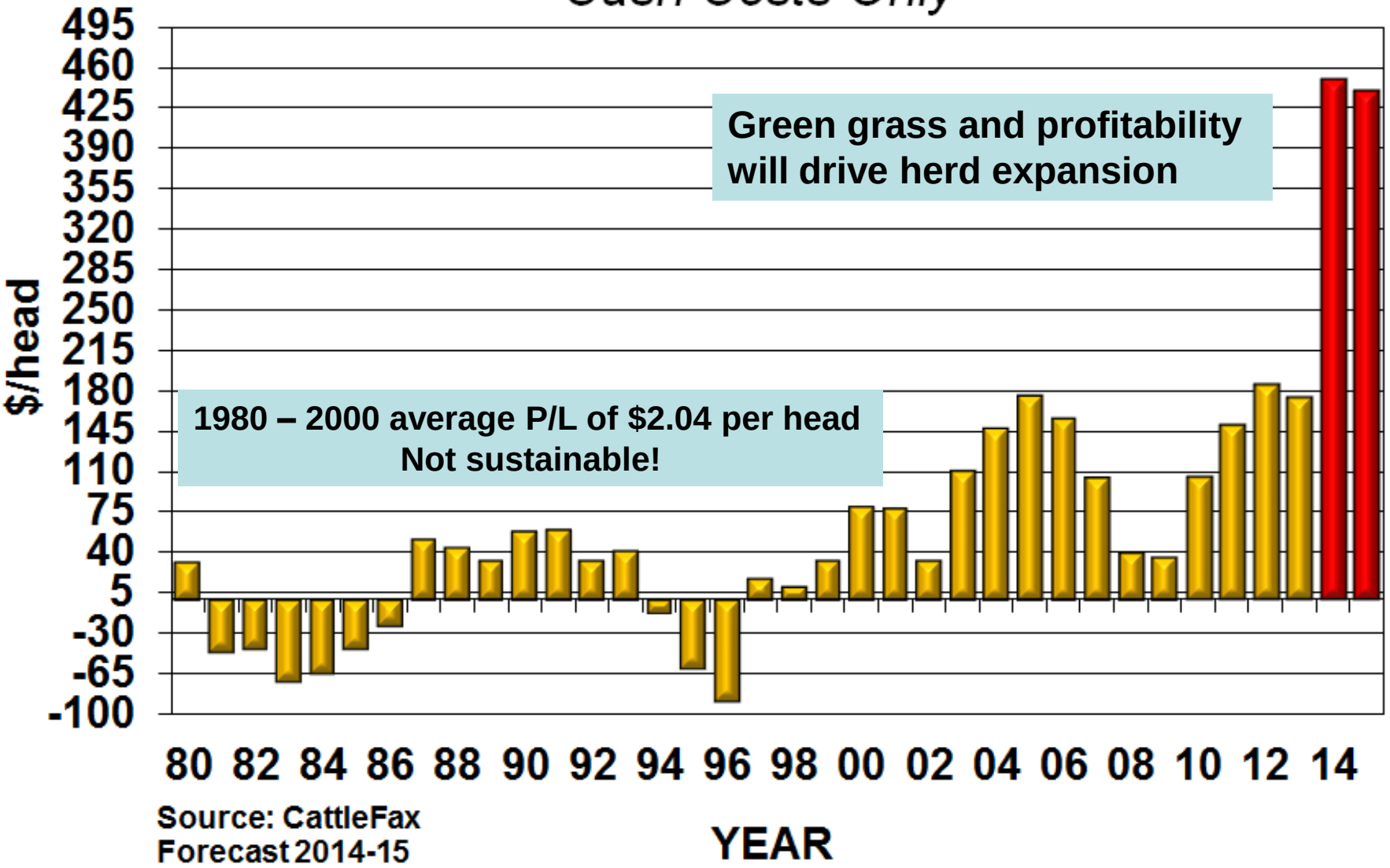


Source: USDA
Projected 2015-2018

CattleFax THE DECIDING FACTOR

Average Cow/Calf Profit (Loss)

Cash Costs Only



Source: CattleFax Forecast 2014-15

Take home message # 1

North Florida (Winter) Feeding Systems

Hay or haylage only

Winter grazing only

Hay or haylage plus free-choice supplementation

Hay or haylage plus strategic supplementation

Storage losses

The bales are net-wrapped, so they should be OK!

Hay storage: an investment worth considering ?

"Some folks pay for a barn they have never built"

Effect of hay placement and processing on waste
Univ. of MN data

	Placement		Processing			*P*-values		
Daily hay DM	Pen surface	Structure	Whole	Processed	SE	Placement	Processing	Interaction
Offered, lb/cow	29.3	27.4	29.1	27.7				
Waste, lb/cow	4.4	1.2	3.3	2.3	0.2	< 0.01	0.09	0.79
Waste cow	19.1%	4.6%	13.6%	10.1%	2.2%	<0.01	0.26	0.60
Intake, lb/cow	24.9	26.2	25.8	25.4	1.1	0.33	0.70	0.50
Intake cow BW	1.9%	2.0%	1.9%	1.9%	0.1%	0.33	0.70	0.40

Waste due to hay placement and processing Summary

- **Placing hay in a structure can save 14.5% of hay DMI needs**
  - **A 100-cow herd needing 3,150 lb DM/cow in 120 d can save 45,675 lb DM**
  - **$1,881 annually**
- **Cumulative losses**
  - **Storage = 9%**
  - **No feeder = 14.5%**
  - **Total = 23.5%**

http://advantagefeeders.com.au

Is hay the most expensive feed in the operation?

Feeder Type and Hay Waste

(Buskirk et al., 2003)


(a)


(b)


(c)


(d)

Daily hay DM	Cone (a)	Ring (b)	Trailer (c)	Cradle (d)	SEM
Offered, lb/cow	26.5	26.7	30.6	28.4	0.9
Waste, lb/cow	0.9	1.5	3.5	4.2	0.2
Waste	3%	6%	13%	17%	
Intake, lb/cow	25.4	25.1	27.1	24.3	0.9
Intake/cow BW	1.8%	1.8%	2.0%	1.8%	0.1%

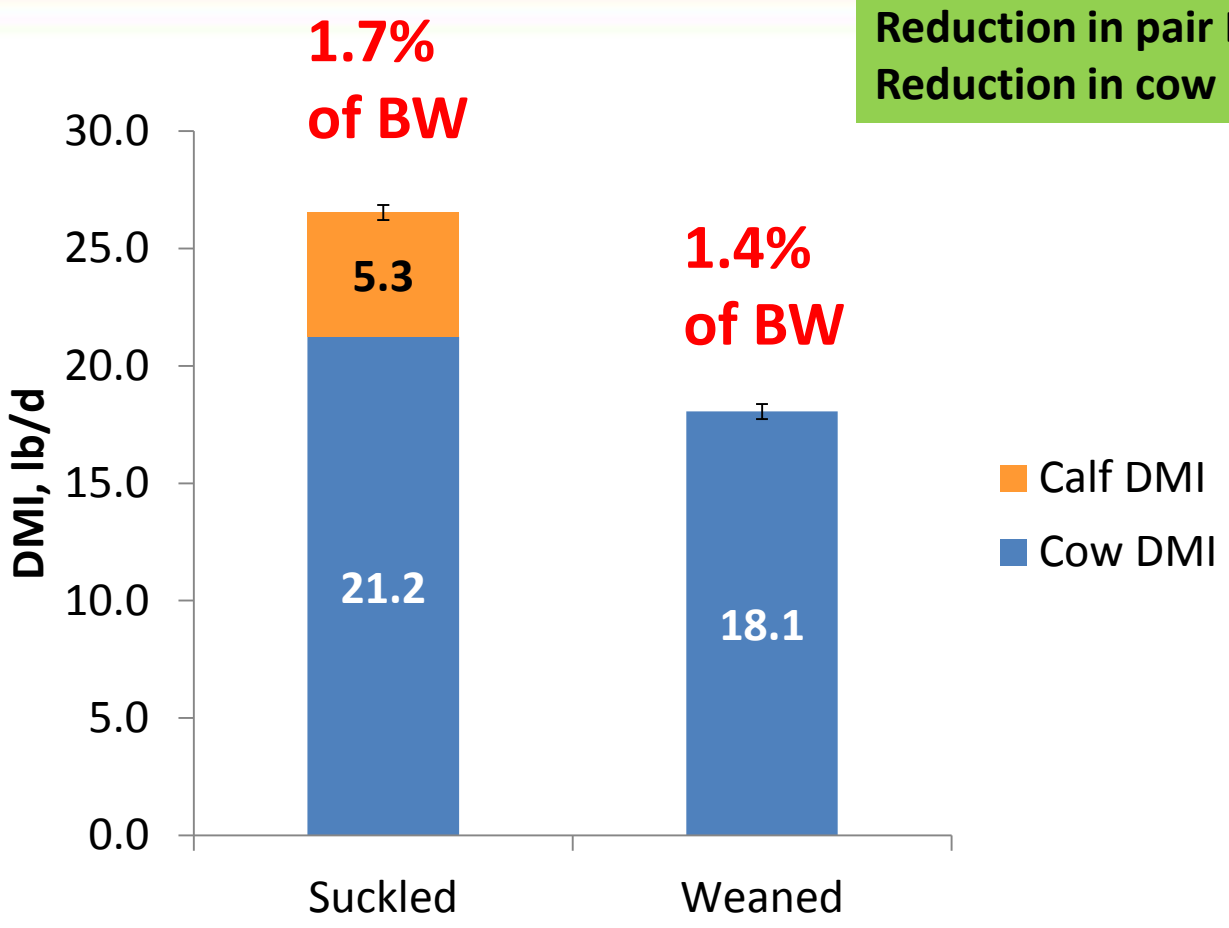
Waste differs: cone < ring < trailer = cradle ($P < 0.05$)

Waste % differs for cone and ring vs trailer and cradle ($P < 0.05$)

NFREC data on hay intake by cows

T85 hay fed over 56 d at the FEF

Reduction in pair DMI by weaning = 32%
Reduction in cow DMI by weaning = 15%



Suckled vs. weaned Cow DMI, $P < 0.01$

Hay waste and feeder type Summary

- **Expected loss using ring or cone type feeder = 5%**
- **Loss with cradle or trailer type feeder = 15%**
- **Simply using a ring or cone feeder = 10% savings**
- **Using wrong feeder feed loss = 10% vs using no feeder = 14.5%**

Logistics of hay storage and handling

A little cowboy math

Half of the hay barn cost on a per cow basis already paid by waste savings!

- **Simple depreciation**
  - $45,000 hay barn for 100 cows
  - 1,200 square feet (30’ x 40’)
    - Fully depreciated for 20 yr
      - $2,250/yr
      - $22.50/cow/yr
      - 3,150 lb DM/cow in 120 d
      - $0.18/day/cow ($22.5/120 d)
    - In 2013, feed cost was $167.42
      - Depreciation cost = 13% of feed cost
  - Barn will be there for more than 20 yr
- **Variable loss**
  - 100 cows, 3,150 lb DM
  - Storage loss = 9%
    - 28,350 lb hay DM/feeding season
    - $1,167.35/year or $11.67/cow/yr
  - Loss will continue for more than 20 yr

DiCostanzo and Jaderborg, 2015

Take home message # 2

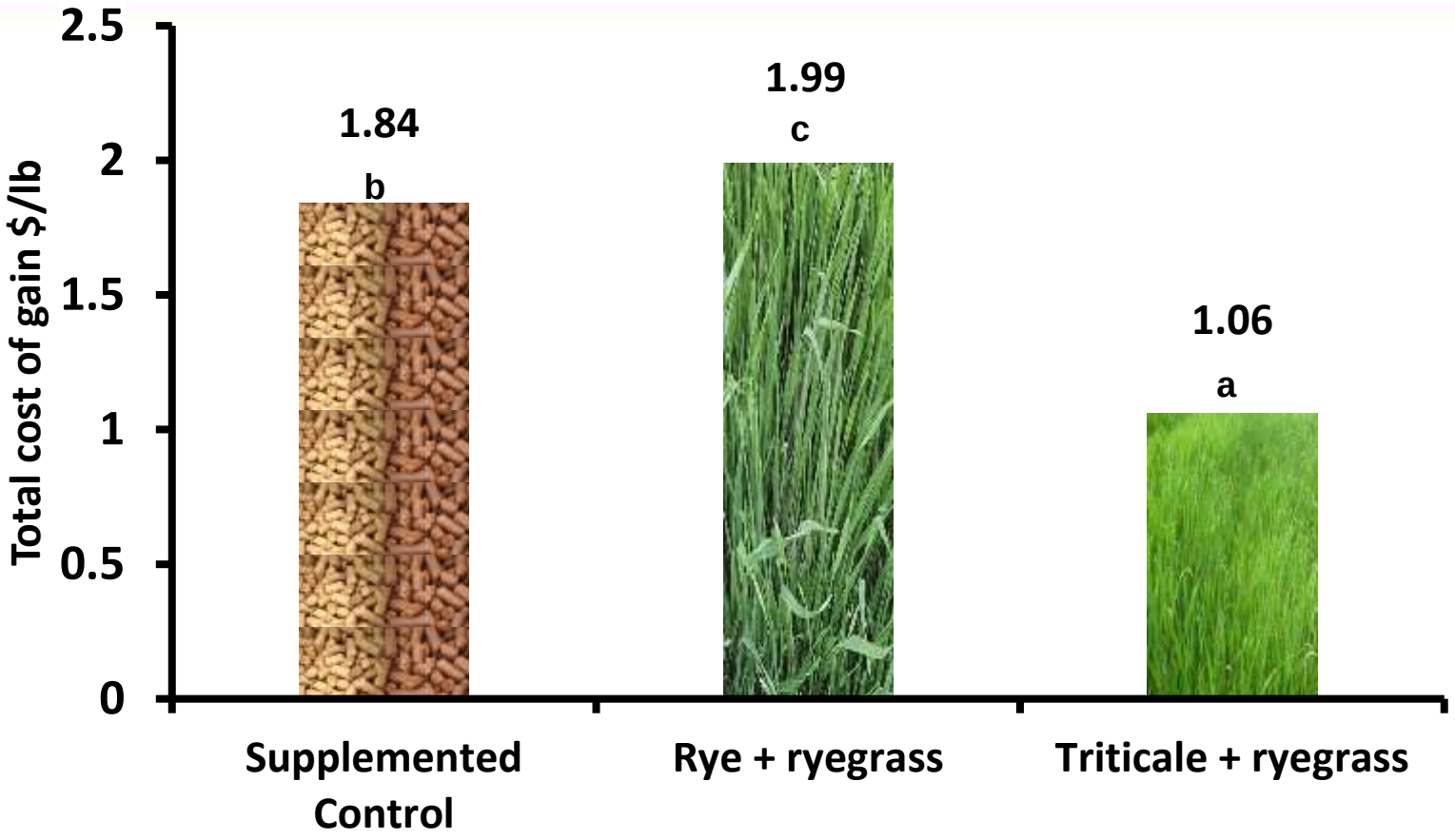
If nothing else, consider investing in hay feeding structures

Commodity barn to take advantage of price seasonality in feeds?

Corn prices vs. gluten feed and soy hulls

Winter grazing in North FL

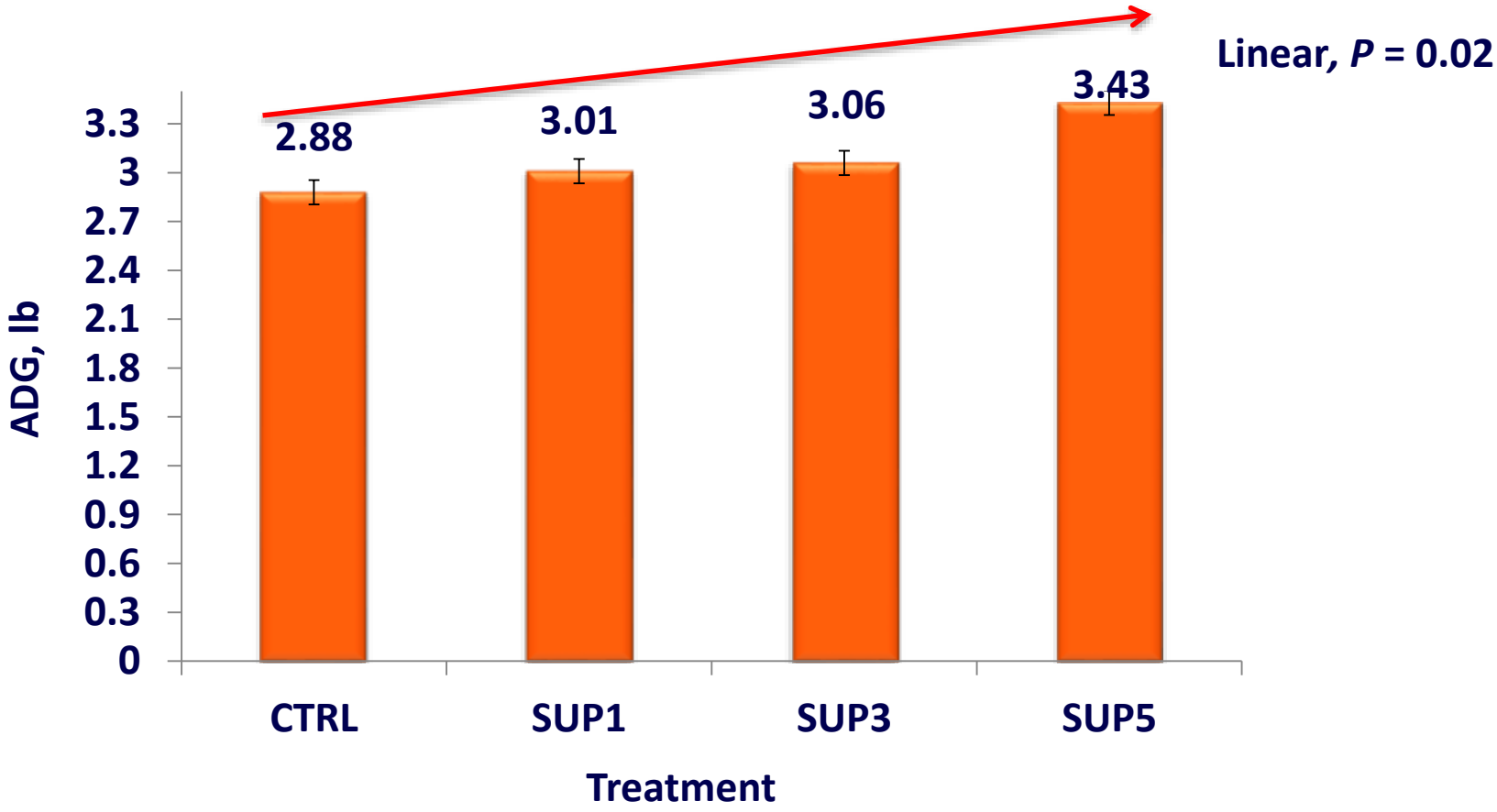
NFREC data



[a,b,c]Means without common superscripts differ ($P < 0.05$)

Feed as an investment

T85 hay ad lib + a 50:50 glycerol:molasses liquid feed



Ciriaco et al, 2014 – NFREC data

Economics of supplementation

Glycerol:molasses blends example

@ $220/ton of glyc:mol blend and $100/ton of hay, 12 lb of hay DMI (AF)/d

☞ cost of supplementation for 5 lb/d = $0.55/d

CTL treatment FCOG = 0.60/2.88 = $0.21/lb

5 lb/d treatment FCOG = 1.15/3.43 = $0.33/lb

In 90 d = $10.8/hd added feed costs

Added wt gain in 90 d = 49.5 lb/hd

49.5 lb x $2.20/lb = $109/hd extra

Take home message # 3

When it comes to winter supplementation…

Always have a plan!

Conclusions

- **U.S. beef herd in phase of reconstruction**
- **No better time than this to look at feed as an investment and not just as a cost**
- **Waste can turn hay into the most expensive feed**
- **Zero waste in hay feeding is impossible**
  - ✓ **9% hay waste during storage (more in FL?)**
  - ✓ **5 to 19% during feeding, depending on feeder type**
- **Winter grazing systems are an attractive option for NW Florida**

Take home message

Cost effective options exist to reduce waste in feeding systems. There is no better time than now to consider those investments because as we rebuild the herd, cattle prices will drop.

Always plan ahead! not doing anything is already a plan.

Southeast Cattle Advisor

www.secattleadvisor.com

For up to date information on:

- **Beef cattle outlooks**
- **Marketing**
- **Production information**

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I leave you with something to chew on for a while…

Questions?