Cow-calf nutrition during drought

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Feeding for caloric maintenance* and cost
(Hay, $150/ton; Corn silage, $70/ton; Corn grain, $7/bu)

Cattle weight	Acreage required daily (100 head at 50% utilization)	Hay, lb	Hay, $/animal	Corn silage, lb	Corn silage, $/animal	Corn grain, lb	Corn grain, $/animal	Oat grain, lb	Oat grain, $/animal
500	0.48	9	0.94	17	0.50	5	0.58	7	0.62
600	0.55	11	1.08	19	0.58	6	0.66	8	0.72
700	0.62	12	1.21	22	0.65	7	0.74	9	0.80
800	0.69	13	1.34	24	0.72	8	0.82	9	0.89
900	0.75	15	1.46	26	0.78	8	0.89	10	0.97
1000	0.81	16	1.58	28	0.85	9	0.97	11	1.05
1100	0.87	17	1.70	30	0.91	10	1.04	12	1.13
1200	0.93	18	1.82	32	0.97	10	1.11	13	1.20
1300	0.99	19	1.93	34	1.03	11	1.18	14	1.28
1400	1.04	20	2.04	36	1.09	12	1.24	14	1.35
1500	1.10	21	2.15	38	1.15	12	1.31	15	1.42

***Note: feeding young stock these amounts will yield no gain. Protein requirements not considered either.**

Time to drylot?

- Consider renting space in a feedlot
  - Facilities
  - Water
  - TMR mixer
  - Oversight
  - Minimum cost?
    - $2.00 feed
    - $1.00 yardage
- Otherwise,
  - Space and labor
    - 150 to 1,000 ft^2/cow
    - 2 hours daily?
  - Feed storage
    - Prevent waste
  - Feed delivery
    - Access
  - Water supply
    - 25 gal/cow + 10 gal/calf (1,400 gallons/day)
      - 40 cows require 140 minutes to drink

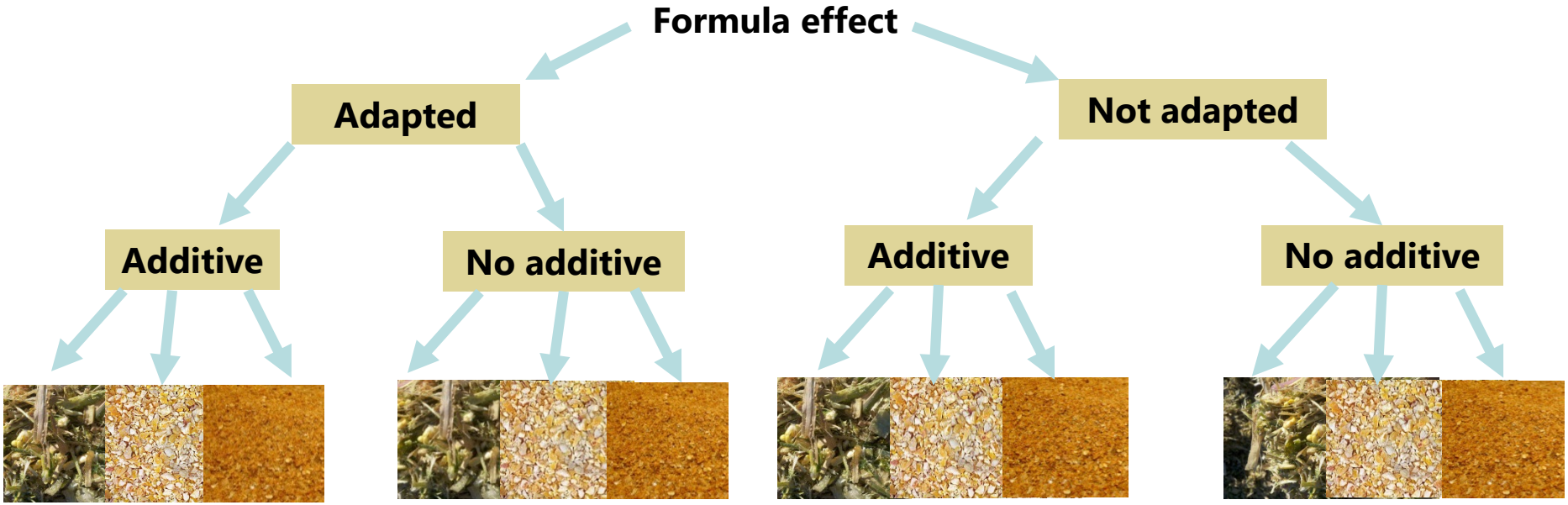
Materials - *Feed Samples*

Exp 1. Forages

- Mature grass hay (MGH)
- Late-bud grass hay (LBGH)
- Fresh range grass (FRG)

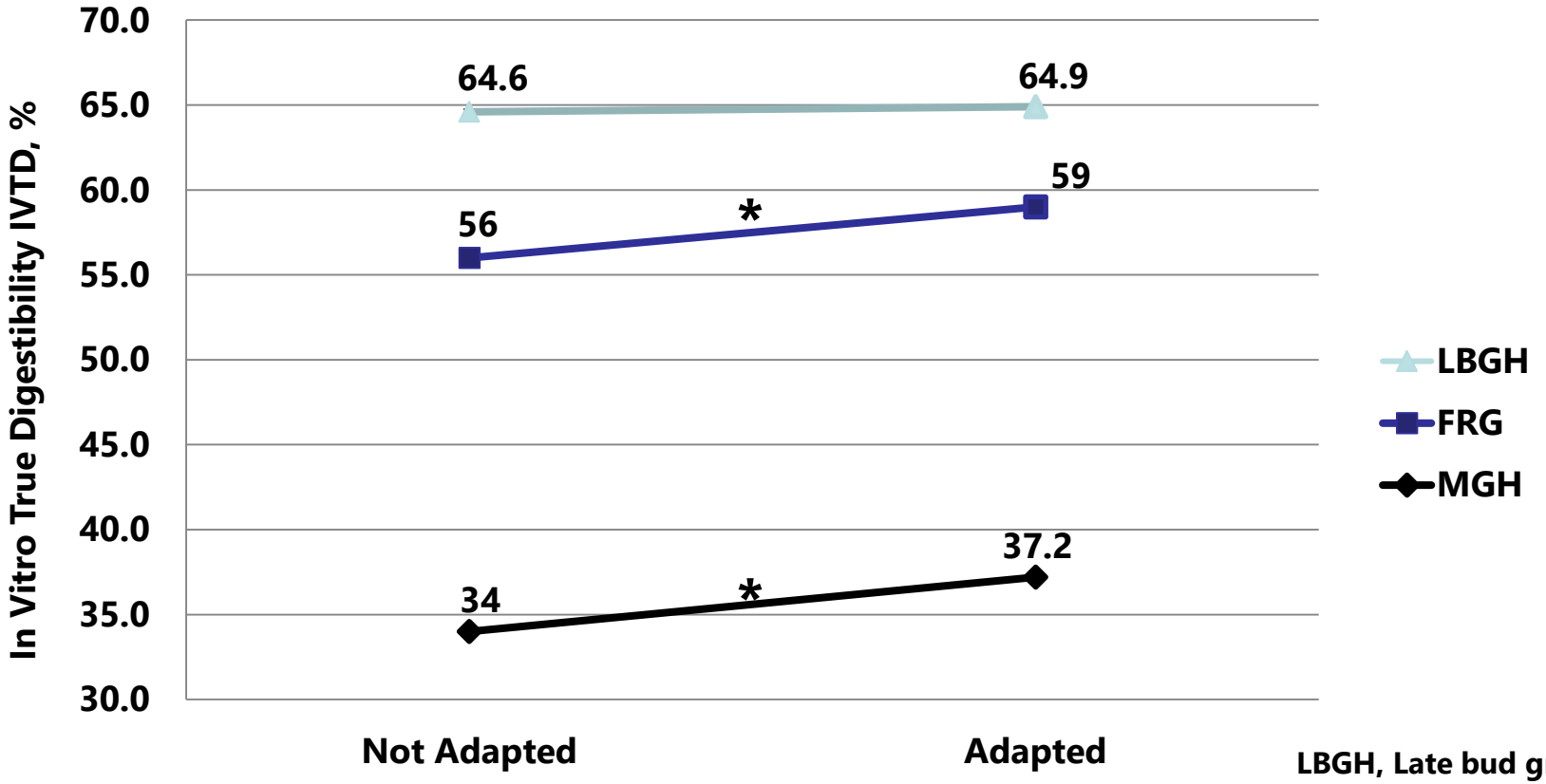
Exp 2. Concentrates

- Corn silage (CS)
- Dry rolled corn (DRC)
- DDGS



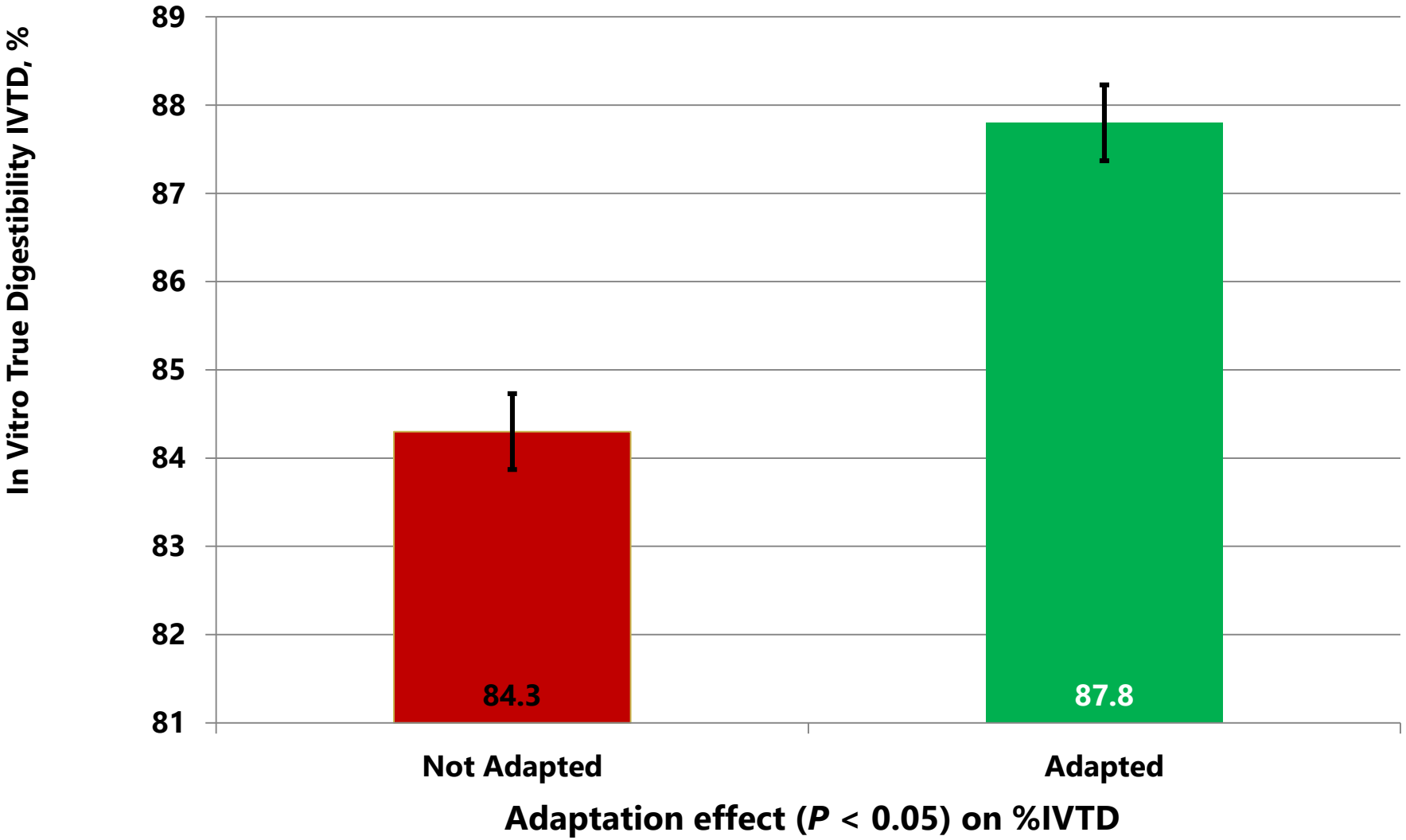
Exp 1. Formula effects on forage

Adaptation X forage interaction* ($P < 0.05$) on % IVTD



LBGH, Late bud grass hay
FRG, Fresh range grass
MGH, Mature grass hay

Exp 2. Formula effects on concentrate



Exp 2. Formula effects on concentrate

Concentrate	TDN †, %	Not adapted, IVTD %	Adapted, IVTD %
Corn	90.0	94.5	97.7
Corn silage	70.0	69.5	72.8
DDGS	88.0	89.1	92.9

†NRC, 1996

Hay savings, hay TDN @ 52%

Cow BW, lb	Cow maintenance, Mcal	Maintenance, lb	In vitro effect, lb	Hay savings, lb
1200	8.7	18.5	16.8	1.7
1250	8.9	19.1	17.3	1.7
1300	9.2	19.6	17.9	1.8
1350	9.5	20.2	18.4	1.8
1400	9.7	20.8	18.9	1.9
1450	10.0	21.3	19.4	1.9
1500	10.3	21.9	19.9	2.0
1550	10.5	22.4	20.4	2.0
1600	10.8	23.0	20.9	2.1

In addition, assume an energy deficit to meet with corn at 4 Mcal

- **Substituting hay with corn (88% TDN), 7.7 lb/day**
- **Substituting hay with corn (91% TDN), 7.2 lb/day**