

How early is early Weaning

 Early weaning is typically applied when calves are 45 to 150 days of age. (compared to traditional 180 to 220 days at weaning)

Randy Saner

Beef Extension Educator

randy.saner@unl.edu

https://beef.unl.edu/

Aaron Berger

aberger2@unl.edu

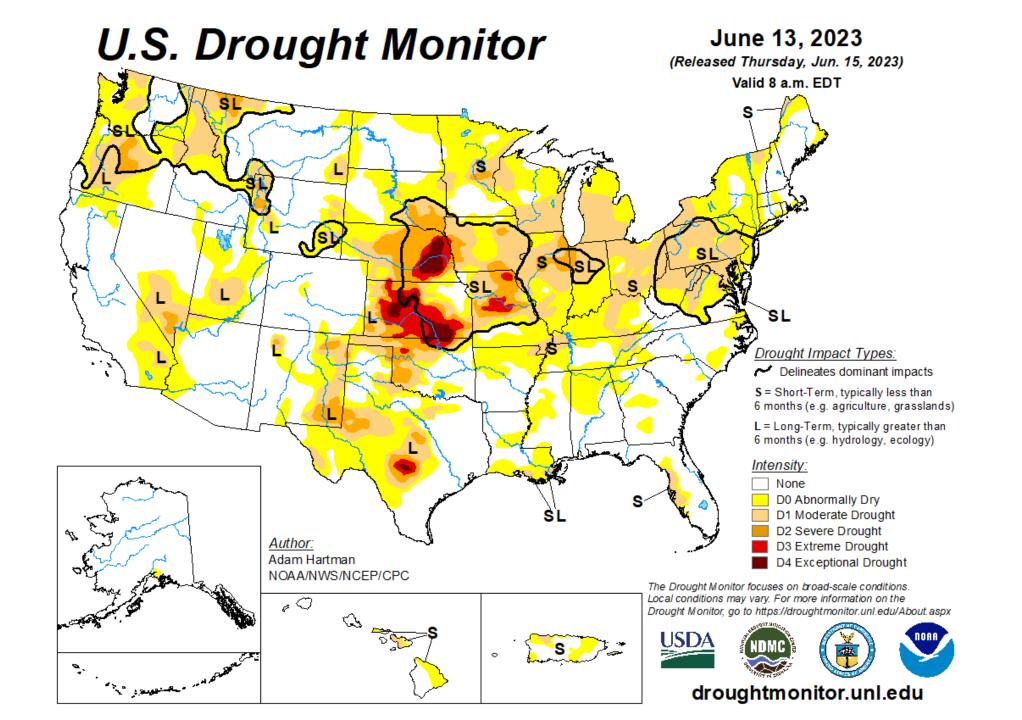
Beef Extension Educator

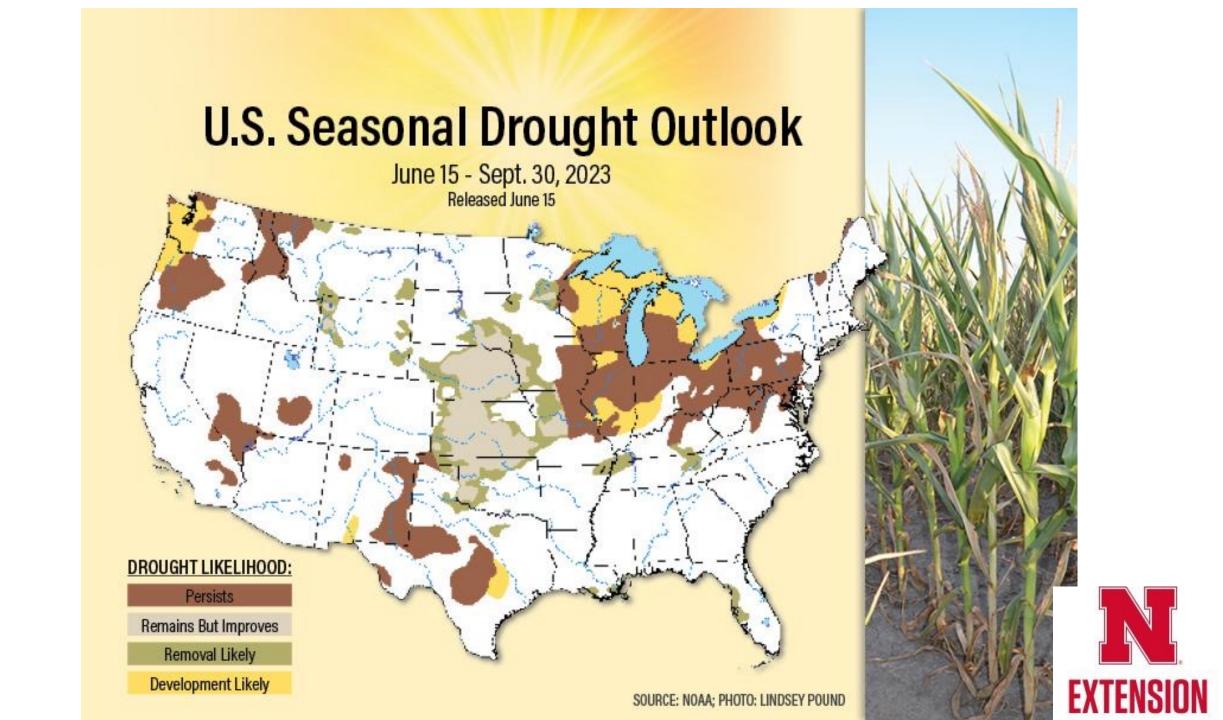
Matt Stockton

matt.stockton@unl.edu

Ag Economics Specialist, Nebraska Extension







Early weaning can improve cow's body condition

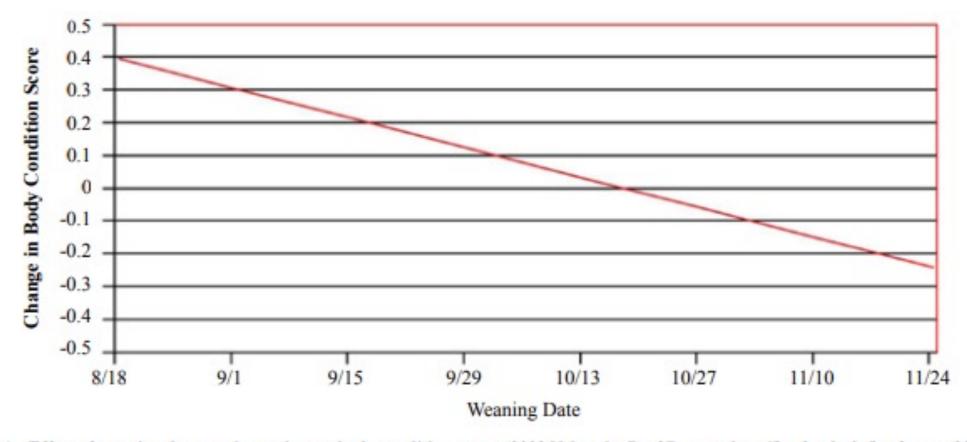


Figure 1. Effect of weaning date on change in cow body condition score. (2002 Nebraska Beef Report, http://beef.unl.edu/beefreports200201.shtml)



Table I. Some typical rations of early weaned calves in drylot1.

Ingredient	Percent		t
Corn, Milo, or Barley (rolled or cracked)	56	60	62
Soybean or Cottonseed Meal	20	12	10
Dehydrated Alfalfa Meal	_	_	10.5
Ground Alfalfa Hay	15	20	10
Molasses	5	5	5
Limestone	3.0	2.0	1.5
Trace Mineral Salt	1.0	1.0	1.0

'Add 2,000 IU of vitamin A and 200 IU of vitamin D per pound of complete feed. If an antibiotic is used, read label directions for amounts and length of feeding time.

Total costs per day

Feed costs \$1.28/day/calf \$1.18/day/calf \$1.26/day/calf

Labor .20/day/calf Yardage .25/day/calf 2 lbs. per day gain

Total costs per day per calf \$1.73/day/calf \$1.63/day/calf \$1.71/day/calf



300 lb calf gaining 2.0 lb/d

3 lb DDGS 7 lb 50:50 blend oat hay/alfalfa Good trace mineral package

Zn and Cu

As is basis

Feed \$1.11 per day per calf Labor .20/day/calf Yardage .25/day/calf Total \$1.56/day/calf



2 lbs. per day gain



Advantages of Early Weaning

- Dams of early weaned calves should be in better condition at calving and cycle earlier during the next breeding season.
- Calves can be fed to grow to their genetic potential.
- Early weaning maybe the key to more efficient feed utilization during times of drought or other periods of feed shortage.
- Early weaned calves are very efficient at converting feed to gain.



Advantages of Early Weaned Calves (Cont.)

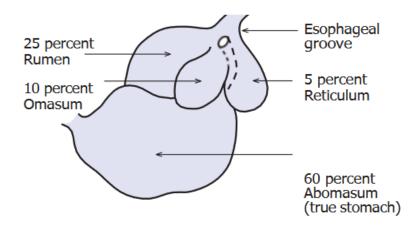
- Early Weaning permits more cows to be carried on a limited forage supply. (increase approximately ½ day of grazing per cow)
- If calves are weaned before or early in the breeding season, pregnancy rates will be greater for thin cows.
- High percentage of early weaned calves have been shown to achieve a USDA Quality Grade of Average Choice or better.
- Fits fall calving herds when grazed resources are limited



Disadvantages of Early Weaning

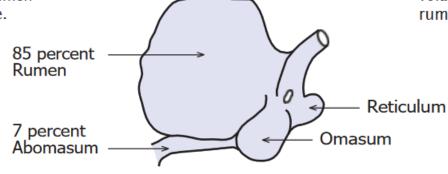
- Excellent calf nutrition and management is required.
- More labor is necessary.
- The facilities and feed must be available for small calves.
- Calves spend a lot of time in a dry lot prior to slaughter.
- If you have developed a cow herd that has above average milk output, the potential increase in weaning weights through milk production is not realized.
- Information on dam performance from production records will be of limited use.

Rumen Development in the Calf



Phase I—Non-ruminant (birth to 21 days of age)

Abomasum is 60 percent of total stomach. The rumen is undeveloped and nonfunctional. Rumen development is stimulated by dry feed intake.



volatile fatty acids. These acids stimulate growth of rumen tissue Reticulum

Phase 3—(More than 84 days of age)

At this stage, the calf can be considered a ruminant.



Reticulum

Omasum

30 percent

Abomasum

60 percent

Phase 2—(22 to 56-84 days of age)

Dry feed intake, especially grain (starter) stimulates growth of the rumen microorganisms which produce

Rumen

How much forage does a nursing calf eat?

	Body Weight, lb	Forage Intake, % BW	Milk Intake, %BW	Forage Intake lb OM/d	Milk Intake lb OM/d
3 month old calf (90 days)	228	1.1	1.1	2.4	2.5
4 month old calf (120 days)	344	1.2	0.73	4.0	2.5
5 month old calf (150 days)	510	1.1	0.30	5.6	1.6

 How you manage the calf depends largely on the age of calf as well as goals for the calf

These are March/April born bottle calves, weaned off the bottle in June. Picture taken July 21, 2021

Picture compliments of Karla Wilke



One month old nursing calves getting a drink in late April when ambient temps are mild

How much more critical is it for an early weaned calf in August to reach the water?

Picture compliments of Karla Wilke



Important Nutrition for the Early Weaned Calf

- Milk provides important highly available nutrients including protein and energy
- Replacing milk with a source of rumen undegradable protein and energy such as distillers grains can help calves continue to gain muscle and bone structure rather than getting fat too quickly



Passage Rate and Digestibility

- Crop residues are often the basis of diets for cows in confinement
- Residues are low quality so digestion and passage through the rumen are slow
- Young calves need highly digestible nutrients so that passage rate is not slow, and intake can be frequent



Providing 12 inches of bunk space per calf will help ensure calves can eat

Plenty of feed available will ensure small frequent meals can be consumed

This may mean sorting calves so that the smallest do not compete with the bigger calves



Management for Prevention

- Proper nutrition before weaning is key to healthy calves
- Allowing calves a clean dry space and plenty of room to spread out is very helpful for preventing illness
- Work with the local veterinarian to develop a vaccination protocol to accommodate early weaning and have a game plan for treating illness if it arises



Marketing

- The early weaned calf is very efficient and can have a favorable cost of gain
- Marketing times, varying from traditional markets should be considered
- Cost of feed vs. the predicted value of the calf need to be carefully evaluated



LRP \geq 599 lbs. Steer Prices for 6/05/23





LRP ≥ 599 lbs. Steer Prices for 6/05/23

Date	0 – 599 lbs.	Premium /cwt	Contract price - premium
09/04/23	\$265.95	\$5.57	\$260.38
10/02/23	\$268.96	\$6.41	\$262.55
10/30/23	\$272.74	\$7.61	\$263.25
12/04/23	\$271.07	\$7.82	\$263.25
01/01/24	\$270.70	\$8.61	\$262.09
01/29/24	\$272.46	\$9.53	\$262.93
03/04/24	\$272.74	\$9.95	\$262.79
04/01/24	\$273.14	\$10.14	\$263.00



LRP ≥ 599 lbs. Heifer Prices for 6/05/23

Date	0-599 lbs.	Premium/CWT	Contract price - premium
09/04/23	\$241.78	\$5.06	\$236.72
10/02/23	\$244.51	\$5.83	\$238.68
10/30/23	\$247.44	\$6.91	\$240.53
12/04/23	\$246.43	\$7.11	\$239.32
01/01/24	\$246.09	\$7.41	\$238.63
01/29/24	\$247.69	\$8.67	\$239.02
03/04/24	\$247.95	\$9.05	\$238.90
04/01/24	\$248.31	\$9.22	\$239.09



LRP 600-899 lbs. Steer Prices for 6/05/23

Date	0 – 599 lbs.	Premium /cwt	Contract price - premium
09/04/23	\$241.78	\$5.06	\$236.72
10/02/23	\$244.51	\$5.83	\$238.68
10/30/23	\$247.44	\$6.91	\$240.53
12/04/23	\$246.43	\$7.11	\$239.32
01/01/24	\$246.09	\$7.41	\$238.68
01/29/24	\$247.69	\$8.67	\$239.02
03/04/24	\$247.95	\$9.05	\$238.90
04/01/24	\$248.31	\$9.22	\$239.09



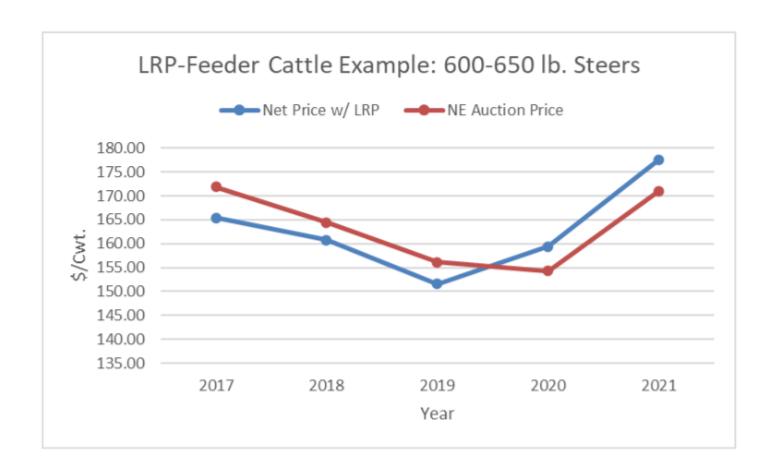
LRP 600-899 lbs. Heifer Prices for 6/05/23

Date	0-599 lbs.	Premium/cwt	Contract Price - premium
09/04/23	\$217.60	\$4.56	\$213.04
10/02/23	\$220.06	\$5.25	\$214.81
10/30/23	\$222.70	\$6.22	\$216.48
12/04/23	\$221.79	\$6.40	\$215.39
01/01/24	\$221.48	\$6.67	\$214.81
01/29/24	\$222.92	\$7.80	\$215.12
03/04/24	\$223.15	\$8.14	\$215.01
04/01/24	\$223.48	\$8.30	\$215.18



Livestock Risk Protection (LRP) Insurance

LRP – Feeder Cattle Example: mid-Aug. to mid-Nov. (Steers Weight 2, 6-650 pound auction price)



#1 goal: Minimize Stress

- Low stress handling and weaning options
- Nutritional management
- Processing calves castration, dehorning
- Parasite control internal and external
- Environmental stress dust, heat, mud
- Health Plans vaccination and treatment plans



Preweaning Vaccine Protocols

Core Vaccines: (AABP Vaccination Guidelines, 2021)

Infectious Bovine Rhinotracheitis virus (IBRV)

Bovine Viral Diarrhea Virus (BVDV-Type 1 & 2)

Parainfluenza Virus (PI3)

Bovine Respiratory Syncytial Virus (BRSV)

Clostridial Vaccines "7-way"



For more information

- https://beef.unl.edu
- https://beef.unl.edu/beefwatch/2021/managing-early-weanedcalves.edu/cattleproduction/earlyweaning
- https://beef.unl.edu/beefreports/symp-2007-11-xx.shtml
- https://extensionpublications.unl.edu/assets/pdf/g2047.pdf

Thanks for your time!

- Contributing Authors
- Karla Wilke, Cow-calf, stocker management, Extension Specialist, Panhandle Research & Extension Center
- Randy Saner, Beef Systems Extension Educator
- Matt Stockton, Ag Economics Extension Specialist, West Central Research & Extension Center
- Aaron Berger, Beef Systems Extension Educator
- Jay Parsons, Extension Risk Management Specialist, University of Nebraska Lincoln
- Dr. Lindsay Waechter-Mead, Beef Systems Extension Educator

