

Cowculator - Applications to Range Beef Cow Nutrition

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Cowculator: What it is

- **Beef cow ration evaluation software**
- **Forage use calculator**
- **Limited feed library**

Cowculator: What it is not

- **Feedlot, growing or heifer development**
- **Least cost formulation**
- **Mineral nutrition evaluator
(beyond Ca and P)**

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COWCULATOR ***v1.0***

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Target Users



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- **Extension personnel**
- **Veterinarians**
- **Feed industry (sales)**
- **Knowledgeable producers**



Priorities

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- **Must be easy to use**
- **Accurate as possible**
- **Provide guidance for forage intake**
- **Tie nutrient intake to change in body condition**
- **Provide mechanism to integrate nutrition and forage management**

Requirements Energy

**Did not use maintenance
adjustments for:**

- **Previous temperature**
- **Cold stress**
- **Heat stress**
- **Activity on pasture**

**Energy balance model
evaluates energy needs based
on body condition**

Must have good estimate of weight at BCS = 5, open or early pregnancy



What would she weigh at BCS = 5?



Weight Change per Unit BCS

OSU Cowculator

- **Body condition score scale = 1 to 9**
- **Each unit of body condition is associated with about 80 lb of body weight change**
- **Example:**
 - **A cow that weighs 1,100 lb in BCS 5 at weaning should weigh 1,020 at BCS 4 and 1,180 lb at BCS 6**

So...

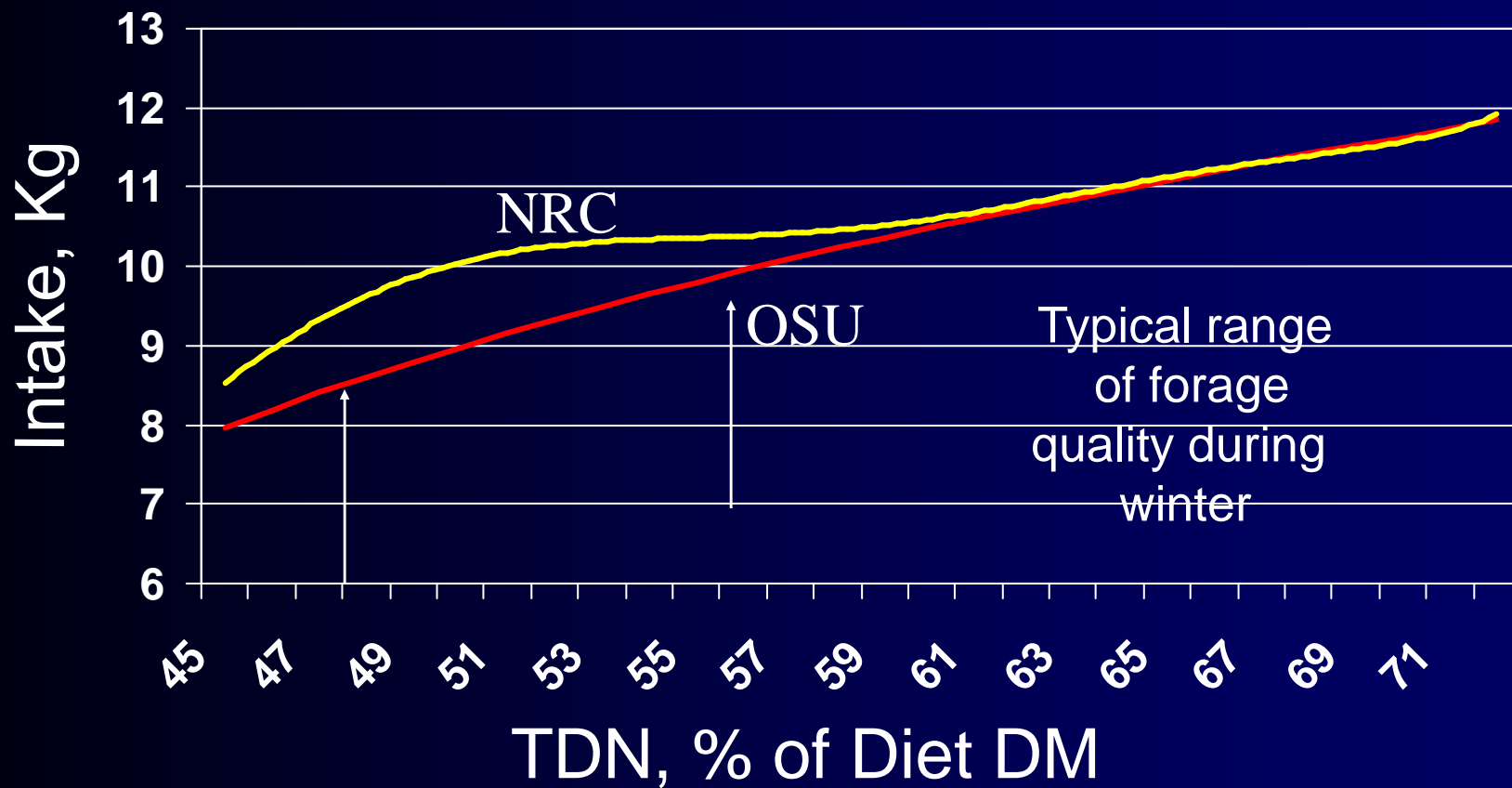
**How do you calculate energy
needs based on body
condition goal?**

Predicting Body Composition



Estimating Dry Matter Intake

Predicting Intake of Gestating Beef Cows





Support

Webb Site (see below)

Otherwise, very little

ansi.okstate.edu

Click on Extension, then Computer Software

Distribution and Cost

- No cost
- Available on the internet only

Ration Evaluation Demonstration Using OSU Cowculator

Objectives:

- Demonstrate the importance of stage of production as it relates to nutrient requirements
- “Balance” a ration using hay and supplement
- Compare supplement sources
- Determine economic value of 2 different hay sources

OSUNRC2006

- **Compare and contrast OSUNRC to Cowculator**
- **Balance a growing animal's diet using OSUNRC**