# BEEF EXTRAVAGANZA 2019

# BALANCING THE BEEF COW DIET

You have been asked to balance the diet for 50 cows with the assistance of a computer program. Nutrient levels of the feeds and brief descriptions of the commercial products are in the tables below. You can select up to seven feedstuffs to work with but your final diet must contain no more than 5 feedstuffs. Points will be given for how closely you meet the expected dry matter intake, crude protein, Net Energy for Gain, calcium and phosphorus requirements of these cows. You will also be judged on how well you control the daily cost associated with your diet, and how feasible your diet is to feed. The station personnel will run the program for you, but you will be required to tell them the ingredients you wish to use and the daily feeding amount of each ingredient you use.

The conditions your diet will be fed under are as follows: You have crossbred late-gestation heifers in a dry lot in December. These heifers came off pasture in BCS 5.5 and should be a BCS 6.5 before calving. During the feeding period, the average temperature is expected to be 35o F; pen conditions will be slightly muddy and the heifers will have a damp hair coat.

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| Feed Nutrient Specifications for Cow Nutrition Problem |
|  | Feed | %DM | %CP | NEm Mcal/lb | NEgMcal/lb | % Ca | %P | #/Unit | $/Unit |
| Forages |  |  |  |  |  |  |  |  |
|  | Alfalfa hay, mid bloom | 86 | 16 | 0.55 | 0.29 | 1.25 | .24 | 2000 | 120 |
|  | Mixed grass/legume hay | 86 | 10 | 0.50 | 0.25 | .8 | 0.25 | 2000 | 100 |
|  | Grass hay, mature | 87 | 6 | 0.47 | 0.22 | 0.25 | .2 | 2000 | 80 |
|  | Corn stalks | 84 | 4.5 | .44 | .19 | .24 | 0.14 | 2000 | 25 |
|  | Corn silage, well-eared | 38 | 7.0 | 0.75 | 0.48 | 0.25 | 0.22 | 2000 | 38 |
| Energy Feeds |  |  |  |  |  |  |  |  |
|  | Shell corn | 86 | 7.5 | 0.96 | 0.66 | 0.03 | 0.30 | 56 | 3.75 |
|  | Ear corn | 86 | 7.0 | 0.84 | 0.55 | 0.07 | 0.27 | 72 | 3.75 |
|  | Corn gluten feed pellets | 90 | 20 | 0.87 | .58 | 0.05 | .75 | 2000 | 200 |
|  | Dried Distillers Grains | 90 | 28 | 0.94 | .64 | 0.08 | 0.95 | 2000 | 175 |
|  | Soy hulls | 90 | 12.2 | .84 | 0.55 | 0.50 | 0.20 | 2000 | 145 |
|  | 14% Range Cube | 89 | 15.9 | 0.77 | 0.49 | 2.8 | 0.8 | 2000 | 245 |

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| Protein Supplements |  |  |  |  |  |  |  |  |
|  | Pasture Enhancer 40 | 65.0 | 61.5 | 0.77 | 0.54 | 0.6 | 1.8 | 2000 | 365 |
|  | SteakMaker Grower 36-0 | 90 | 40 | 0.78 | 0.53 | 5 | .9 | 2000 | 525 |
|  | RangeLand Beef Block 39 | 91.6 | 42.3 | 0.62 | 0.36 | 2.5 | 1.5 | 2000 | 650 |
|  | Ignite 40% Tub | 94.5 | 42.5 | 0.83 | 0.57 | 2.1 | 1.06 | 2000 | 88 |
| Mineral Supplements |  |  |  |  |  |  |  |  |
|  | Wind & Rain Mineral | 97.3 | 0 | 0 | 0 | 14.4 | 8.2 | 2000 | 850 |
|  | CoProduct Mineral | 97.5 | 0 | 0 | 0 | 24.7 | 0.5 | 2000 | 700 |

# COMMERCIAL PRODUCT DESCRIPTIONS

**Rangeland 14% Cube** – a 14% all natural energy cube fed at 2 – 8 pounds/head/day to supply energy and protein. Additional mineral supplementation is required with this product.

**SteakMaker Grower 36-0** – An all-natural (no urea), pelleted supplement fed at .75 – 1.5 lb./head/day to balance protein, minerals and vitamins for feedlot cattle. Can also be used with cows. When fed at recommended levels, no other mineral would be required.

**Pasture Enhancer 40** – A 40% protein liquid supplement that can be provided free choice in a lick tank. Consumption should range between .5 and 3 lbs./head/day. Additional mineral supplementation is required with this product when intake is below 2#.

**RangeLand Beef Block 39** – A 39% protein block fed at .75 – 1.5 lb./head/day to supply protein, minerals and vitamins. When fed at recommended levels, no other mineral would be required.

**Ignite 40% Tub** – A free-choice cooked molasses tub with 40% protein. Expected intake runs .75 lbs/head/day. When fed at recommended levels, no other mineral would be required.

**Wind & Rain Mineral** – A 7% phos, 2:1 mineral designed to be fed at 4 oz./head/day to cows when additional minerals, trace minerals, and vitamins are required.

**CoProduct Mineral** – A high calcium, zero phosphorus mineral designed to be fed at 4 oz./head/day to cows when co-products are fed and additional minerals, trace minerals, and vitamins are required.