## Our Profit is hiding in plain sight

The areas I want to cover
Selection for high butterfat cows (\$100-\$300)
Lower maintenance cost of a cow if the rumen is fully developed as a calf (\$40-\$100/year) Increase in carcass value if you measure, breed and select for high carcass cutout (\$100 or more) (Extra pounds from a bull with a larger H/G)
Calving in sync with Nature (green grass vs hay)
Fetal programming and heifer fertility.

## Inductive versus Deductive thinking

"The intuitive mind is a sacred gift and the rational mind is a faithful servant.

We have created a society that honors the servant and has forgotten the gift."
~Albert Einstein~

## Start observing and thinking

I want you to go home and take a fresh look
Work more with Nature and less with agribusiness
Would you rather fail conventionally or succeed unconventionally
We cannot build a sustainable farm with unsustainable effort.

Understanding nature can't be ignored, replaced or explained technically
This talk is to encourage you to start using your God given Wisdom and Talents!

## The importance of buttertfat

NOT with grain


## The Milch Cow vs EPD's

 "(B)y following the directions of M.Guenon, as laid down in the treatise, anyone can tell with certainty whether a cow is a good milker, or whether a heifer will become one, so that there need be no doubt as to the profit of raising an animal, and no chance of being taken in the purchase of one."

National tribute of the French Government
Paris, September 17, 1848

## Calf Butterfat Statistics (Gearld Fry)

 How many pounds of butter-fat does it take to produce a 450-475\# calfAverage beef cow in America produces 16o\# fat a year

Average weaned calf from her weighs 450475\#

So 160 X $16=2560$ oz divided by 300 days $=$ 8.533 oz fat/day $=450-475$ \# calf or 1.58 \# gain/day

## Calf Butterfat Statistics (educated guess Gearld Fry)

200\# butter-fat X 16 oz = 2\# gain a day
250\# butter-fat X 16 oz = 2.34\# gain a day
300\# butter-fat X 16 oz = 2.6\# gain a day
350\# butter-fat X 16 oz = 2.8\# gain/day
400\# butter-fat X 16 oz = 3\# gain a day

## Calf Butterfat Statistics

4/3/19 Vale Oregon Sale Barn 450 pound steer $\$ 1.80 /$ pound $=\$ 810.00$ 600 pound steer $\$ 1.65 /$ pound $=\$ 990.00$ 750 pound steer $\$ 1.40 /$ pound $=\$ 1050.00$

We can have our own "wild cow milking contest" or we can learn the butterfat indicators to look for as a baby heifer calf and/or on replacement heifer selection day or when buying in animals.



Estrogen shuts off Long bone growth In the front end of A female first

What if that cow has a blind quarter (mgt) or severely tilted udder (genetics)

Reduced BUTTERFAT and milk for the calf Assume a $10 \%$ lower rate of gain as a calf = a \$75.00-\$100.00 lower selling price
Assume 20\% lower rate of gain as a calf = a $\$ 150.00$ - \$200.00 lower selling price
We might have a blind quarter because we selected/bred for a large volume of milk, or overfed during early lactation ... causing mastitis and the resultant blind quarter

## Butterfat in our animals

How much more would fluid milk be worth If the butterfat was $.5 \%$ to $1 \%$ higher?
Customers want
Omega 3 fats
Clean/Organic milk and beef products Epi-genetics to maximize a dairy cow's genetic potential

Mineral Rich Grass
ACV, sea salt, detox conditioner

## Importance of development of Rumen

## Anibal Pordomingo

The senior researcher at the National Institute of Agriculture Research of Argentina (INTA).

Had researched and found that the average beef cow in America only digested 55\% of what she ingested.
THEN he heard Gearld Fry talk. He went back and looked over his data and found that SOME cows digested $70 \%$ of what they ingest. Hmmmmmm...that means some were only digesting $40 \%$ of what they ingest!!!!

Assume the average cow in your area costs $\$ 454.54$ to feed for a year (use your own number).
$100 \%$ efficiency $=\$ 250.00$ of hay/grass to feed $70 \%$ efficiency $=\$ 337.80$ of hay/grass to feed $65 \%$ efficiency $=\$ 384.60$ of hay/grass to feed $60 \%$ efficiency $=\$ 416.00$ of hay/grass to feed $55 \%$ efficiency $=\$ 454.54$ of hay/grass to feed $50 \%$ efficiency $=\$ 500.00$ of hay/grass to feed $40 \%$ efficiency $=\$ 625$. 00 of hay/grass to feed

Times ten years in your herd!!!!!! We either BREED and DEVELOP for body condition or we FEED for body condition!!!
"Some are eating half as much as others" Don Faulkner
If I have thirty-eight 1000 pound cows eating 4\% of their bodyweight, that is 1500 pounds of feed. If I have fifty 1000 pound cows consuming 3\% of their bodyweight, that is 1500 pounds of feed. If I have seventy five 1000 pound cows consuming $2 \%$ of their bodyweight, that is 1500 pounds of feed.

## WHICH COW DO YOU WANT?

## Nutritional Requirements for Development

Grow frame (bones)
Build muscle mass (carcass cut-out)
Build and place fat cells in developing heifers
Butterfat is a bypass protein (does not have to be ruminated)
Only cows that have the genetics for butter-fat can fully develop the rumen on calves weaned at 10 months and give the best return on the grass you grow
Abundant/clean/mineral-rich Nutrition = Genetic Expression


Well developed rumen

## Developing that Rumen


"A leap-of-faith"
"Arizona Strip Grazing"

## What does that look like on my farm

40-45\% utilization
Cow weighs 150-200 pounds less in the spring She can not support a calf at her side over winter
$5-10-15 \%$ open cows to be culled every year Has the "Revers wedge" look

65-70\% Utilization
Weigh 100 pounds less in spring average Supports a calf at her side all winter Higher percentage of cows breeds back every year. Big belly

# Developing Dairy heifers on Grass 

It costs $\$ 780$ to develop on grass to first lactation
It costs $\$ 1300$ to develop on a TMR
On the other end Heifers developed on grass produced', an average of 2000 more pounds of - milk a year

Both groups were producing that fritk ón a TMR

## Structural correctness



## Near Perfect Form

## Utilization of Grass

## High Muscle Mass

## High Reproductive Performance



# What defines a Fertile BullShoulders and Testacles 

Highly fertile bulls get 80\% of cows pregnant first 21 days of breeding season Highly fertile bulls impregnate $50-60$ cows in 45 days Grain-raised bulls have more abnormal sperm cells than Forage-raised bulls resulting in early term loss of pregnancy (Dr. Richard Saacke) The Glandular function of that the sire (from your best cows) will be passed to his offspring. HUGE added value to the ranch!!!

# At 6 months this calf weighed $72 \%$ of mother, weaned at 9.5 months and 6 weeks later she had her next calf. 



## Find a superior bull to start

Nourish him well (epi-genetics ... more later) Choose superior females from your herd Choose males who equal or exceed dad to go back into the herd.
For rapid improvement, breed "the best to the best, regardless of relationship" Robert Bakewell circa 1760 This "ties up" those positive genes in their offspring.
Guard against any and all negative traits.

## Heart Girth vs. Top line (terminal animal)

For every ${ }^{\prime \prime}$ the top line is larger than heart girth ... you loose 37 pounds of red meat
For every inch the heart girth is larger than the top line ... you gain 37 pounds of red meat Comparing two fat steers, one a minus 2 " and the other plus 2" $^{\prime \prime}$
Both animals weighed within 20 pounds of each other live.
25 years ago...there was $\$ 400.00$ more product on the 2" plus table.
And each 2" plus girth - one less pound of grain for each pound of gain

Dr. Michael McDonald

## Extra value from each additional inch of Heart girth in the bull

Assume a 4" plus H/G in the bull over your cows

Calves should be 2" larger H/G than last year (an average between the bull and your cows)
Breeding 30 cows for 4 years (tootsie roll bull could breed 50-60)
Assume 110 weaned calves
You keep 20 replacements over this time (you should keep more of this easy keeping type and perhaps a bull or two)

That leaves us 90 calves to finish on grass
@ 74 extra pounds/finished animal because of the $2^{\prime \prime}$ additional H/G
74 pounds of red meat on each $X 90$ head $=$ 6,660 extra pounds
6,660 pounds $X \$ 6.00 /$ pound $=\$ 39,960$ extra meat to sell.

Looks to me like each extra inch of heart girth from a bull is worth about $\$ 10,000$ in a grass finishing operation.

## Linear measurement score

## Meat-to-bone ratios

2.0 approximately a $55 \%$ ratio $=385 \#=\$ 2310$ Longest time to finish
2.5 approximately a 59\% ratio $=413 \#=\$ 2478$
3.0 approximately a $63 \%$ ratio $=441 \#=\$ 2646$
3.5 approximately a $67 \%$ ratio $=469 \#=\$ 2814$
4.0 approximately a $71 \%$ ratio $=497 \#=\$ 2982$
4.5 approximately a $75 \%$ ratio $=525 \#=\$ 3150$ Shortest time to finish

Assuming direct marketed animal
@ \$6.00/pound ~~700 pound carcass

# When to calve ... a beef thing 

"Our calves were small compared to the calves produced from the conventional calving season and would have brought us \$50-100 less than if we were fall calving. But we lowered production costs by nearly \$300/cow by eliminating the hay feeding and cow depreciation.
(By calving-out ōf sēāso $\bar{n} \overline{w e} \overline{c o u l d ~ u s e ~ o t h e r ~ p e o p l e ' s ~}$ laté calving and open cows they were culling as our , replacements). Not making a profit would have beeǹ,
like trying to fall out of a boat and not hit

## 'water."

## Late calvers don't work



## Calving when grass is green

Spring grass is high in Potassium.
Potassium is antifreeze for the grass
Potassium helps prevent dystocia
Manganese is vital for fertility
Bulls go in when NATIVE grasses are producing seed heads
Manganese is in seeds (watermelon and grapes?)
Grazing ENERGY vs. Protein will result in more pregnancies

# Cows/heifers must be "ON-THE-GAIN" or "GRAZING ENERGY" to breed back 

- Taken from Factors Affecting Calf Crop

| LEvEL OF FEED |  | No. OF HEIFERS | DAILY <br> INTAKE OF |  | Heifers SHOWING HEAT AFTER CALVING BY: |  |  | No. OF HEIFERS BECOMING PREGNANT |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | DIG. | 60 | 90 | 120 |  |
| ENERGY | Protein |  | TDN | PROTEIN | DAYS | DAYS | DAYS |  |
|  |  |  |  | lb . | lb . | no. | no. | no. |  |
| High | High | 10 | 15.6 | 2.06 | 8 | 9 | 9 | 10 |
| High | Medium | 10 | 14.8 | 1.18 | 5 | 8 | 9 | 9 |
| High | Low | 10 | 11.4 | 0.40 | 3 | 6 | 9 | 10 |
| Medium | High | 11 | 9.4 | 1.92 | 7 | 8 | 10 | 11 |
| Medium | Medium | 11 | 10.4 | 1.38 | 5 | 10 | 10 | 10 |
| Medium | Low | 12 | 9.1 | . 50 | 5 | 6 | 7 | 10 |
| Low | High | 8 | 5.6 | 1.86 | 0 | 0 | 0 | 0 |
| Low | Medium | 10 | 5.8 | 1.20 | 0 | 0 | 0 | 1 |
| Low | Low | 12 | 5.6 | . 46 | 1 | 1 | 2 | 4 |

- Ian Mitchell-Innes ... "wiping the dust off"

Percent cows showing heat by: Group I Group II Group III Group IV

| June 1, 1962 | 23 | 15 | 85 | 75 |
| :--- | :--- | :--- | ---: | ---: |
| July 1, 1962 | 75 | 69 | 100 | 75 |
| August 1, 1962 | 92 | 92 | 100 | 100 |

For definition of Groups, see Table 30.

| Group | Group no. | No. Cows pregnant |  |  |  | $\begin{aligned} & \text { SETTLED } \\ & \text { FIRST } \\ & \text { SERVICE } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | No. CTATING cows | $\begin{gathered} \hline \text { 22ND DAY } \\ \text { OF } \\ \text { BREEDING } \\ \text { SEASON } \end{gathered}$ | $\begin{aligned} & \text { 43RD DAY } \\ & \text { OF } \\ & \text { BREEDING } \\ & \text { SEASON } \end{aligned}$ | $\begin{gathered} \text { 100TH DAY } \\ \text { OF } \\ \text { BREEDING } \\ \text { SEASON } \end{gathered}$ |  |
| Pasture only | I | 13 | 1 | 1 | 7 | $\begin{aligned} & \% \\ & 45 \end{aligned}$ |
| Dry lot (equal gains to pasture) | II | 12 | 0 | 0 | 6 | 36 |
| Dry lot (N.R.C. recommendations) | s) III | 13 | 0 | 5 | 11 | 62 |
| Pasture (supplemented) | IV | 11 | 5 | 6 | 9 | 73 |

For definition of Groups, see Table 30.

"Is this stool taken?'

According to a study that was done several years ago in Wyoming, the weaning weight difference between calves born in February and calves born in June was only 43 pounds.

What do you think it costs to produce those extra 43 pounds during the winter?

We are feeding a cow that is... Is trying to lactate
Using stored forage that is lower quality than your spring grass And costs more to put into a bale.

With May/June calving individual weaning weights are lower ...however

Less sickness and death loss calving in sync. ~3\% You get a higher percentage to breed back on time every year = more calves ~ 5\%
With the two factors alone, they are actually weaning MORE TOTAL POUNDS
The calves are worth MORE PER POUND.
Dick Diven ... Low Cost Cow/calf
100 head @ 557 pounds 55,700 @ \$1.62=\$90,234 92 head@600 $=55,200$ pounds $\$ 1.55=\$ 85,560$

## Waddington's Epigenetic Landscape



Inter-uterine Environment At the point of conception and during gestation

Mineral-Rich Toxin-Free What do we feed,


## Fetal Programming

Nutrient restriction reduces adipogenesis, decreasing marbling in offspring

Nutrient restriction reduces muscle fiber hypertrophy, decreasing birth weight


Nutrient restriction reduces myogenesis, decreasing muscle fiber number and muscle mass in offspring


Muscle fiber hypertrophy
Secondary myogenesis

Primary myogenesis

Adipogenesis


Fetal Programming Effect

## Early <br> gestation



Basically, a major economic advantage a year and a half after being born, although no differences were apparent when they were newborn calves!

## Grazing ... Dr. Lee Manske

When $25 \%$ of the grass tiller leaf area is removed during the first grazing period, $140 \%$ of the leaf weight removed is replaced by the compensatory growth processes.
When $50 \%$ of the grass tillers leaf area is removed during the first grazing period, only $70 \%$ of the leaf weight removed grows back.
When $25 \%$ of the grass tillers leaf area is removed during the first grazing period, the quantity of secondary tillers increases $40 \%$ during that same growing season and increases $64 \%$ to $173 \%$ during the second growing season.
Ian Mitchell-Innes has the same idea. "Wiping the dust off the solar collector"

## What do those numbers mean

40\% increase in grass growth this year!!! versus $30 \%$ lower grass growth this year.
$64 \%-173 \%$ increase in growth next year!!! versus $63 \%$ to $144 \%$ decrease in growth next year This will allow for growth from weaning to finish with the produced meat reaching the highest quality grade and yield grade of the animals genetic potential at around 18 to 24 months of age with the costs per pound of weight gain at less than that of grain-fed beef.
The amount of Biology in the soil will increase or decrease based on which grazing practice we choose.

## Mineral poor grass and hay

How much more grass and hay does a cow eat when it is lacking minerals and digestibility (lignified). What stage of growth is the feed

As forages increase in maturity, there is an increase in lignin content. Lignin is not digested by the rumen microbes.

Raw Apple Cider vinegar enzymes help the cow digest more of the feed placed in front of her.
Horizon Organic in Twin Falls Idaho used ACV and increased their butterfat .04\%. Digestible fiber is what most effects butterfat production.

## THE SIGNIFICANT PROBLEMS WE HAVE CANNOT BE SOLVED AT THE SAME LEVEL OF THINKING WITH WHICH WE CREATED THEM. <br> We need to use our "Organic Mind" to Solve the problems our "Mechanical wwwatlote-coyote Mind" has created

# Change our focus from production to PROFIT by mimicking nature 

What would happen if instead of fighting nature, we worked with nature ... if we tried to help nature do what comes naturally?
Nature selects animals to fit the environment and so should we.

Nature fits the reproductivecycle of her animals to match the forrage cycle. So should we. ---- The cow that calves when the Potassium content is high in spring grass is more likely to rebreed when the Manganese level is high in her diet

## Things to take home

Today is the best time to see the cows that are the most adapted on your farm
Think about these areas and how they apply to your dairy or beef herd
Perhaps you will see different challenges and opportunities on your farm
If I came to your farm I would only see a "snap-shot" of what is going on...however, the visit will help you break through not being able to see what you have been looking at.
Your eyes, brain and wisdom are what are going to enable to you to make changes that will profit your farm and your family

## All calves were left on their

 mothers for $\mathbf{1 0 . 5}$ MonthsI used the "Quiet Wean" nose tongs and left them with their mothers for one week after placement Transitioned with the "grass fats" group from the "better hay" and AVC Products to spring grass once the spring grass reached an 8 " height.
3 Steer calves were less than 17 months of age. Bred to superior bull 685, 698, 775 (avg. 719 hanging weight)
2 Heifer calves were less than 16 months of age, out of "Mr. Clean" 661, 688 (avg 669 hanging weight)

Selecting high butterfat cows (\$100-\$300) The difference in keeping cost of a cow if the rumen is fully developed (\$80-180) The difference in direct market carcass value if you linear measure, (\$200 ++) Calving in sync with Nature (smaller calf with lower costs that sells for more per \#)
How we graze effects total grass production ( $40 \%$ more grass vs $30 \%$ less total grass production)

## Opportunity

Is like a train arriving at the station Some people get off Other people get on
The train leaves the station

And THAT opportunity is no longer available

## Tailor Made Cattle:

## Have tape...Will Travel



## Steve Campbell

 2365 Echo Avenue Parma, Idaho 83660 Office: 208-674-2467 Cell: 208-315-4726 Email: trianglec3@gmail.com Web: tailormadecattle.com