

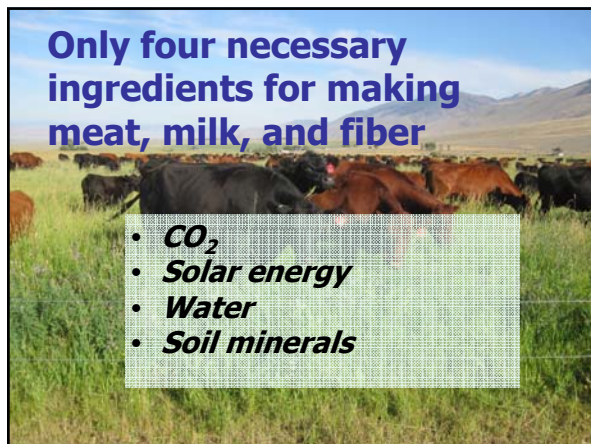
## Ranching without Iron and Oil: Why grazing is a better way

Jim Gerrish  
American Grazing Lands Services  
Patterson, Idaho



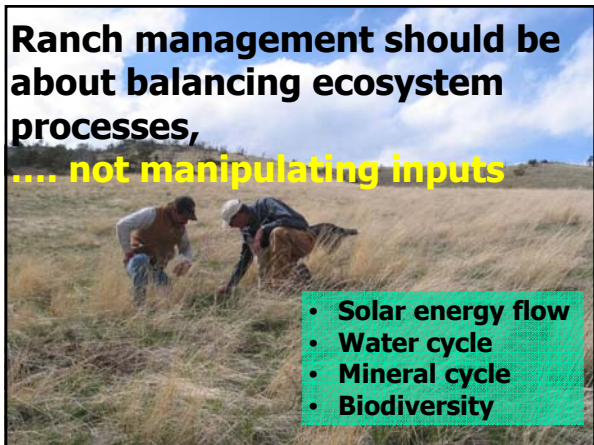
## Only four necessary ingredients for making meat, milk, and fiber

- $CO_2$
- *Solar energy*
- *Water*
- *Soil minerals*



## Ranch management should be about balancing ecosystem processes, .... not manipulating inputs

- Solar energy flow
- Water cycle
- Mineral cycle
- Biodiversity



## Basic ingredients for making meat, milk, or fiber:

*Solar energy*



## When you buy an acre of land, you buy 43,560 sq ft of solar panel



## *How good is your solar panel ?*









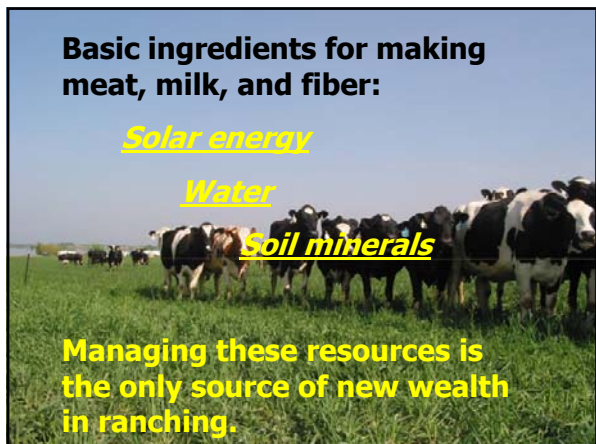
**Basic ingredients for making  
meat, milk, and fiber:**

Solar energy

Water

Soil minerals

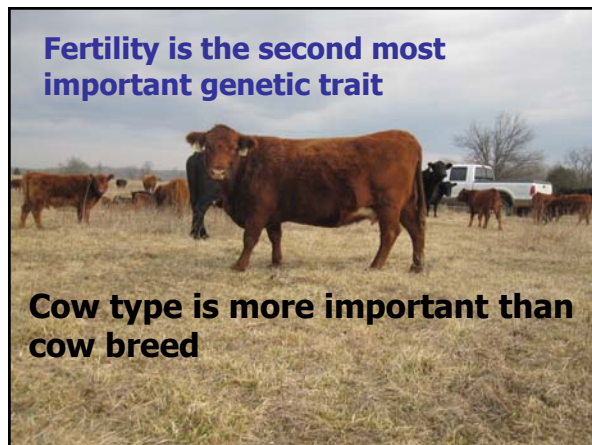
**Managing these resources is  
the only source of new wealth  
in ranching.**



***The right animal to be the factory !***



**Environmental adaptation is the single  
most important genetic trait in livestock**



**Fertility is the second most  
important genetic trait**

**Cow type is more important than  
cow breed**



**What is the right type?**

- Moderate framed
- Easy fleshing
- Capable of living on your resources
- They can come in any color



**Having a whole herd of the  
right kind is even better !**

Average genetics with superior grass management  
vs.  
Superior genetics with average grass management



## Why Management-intensive Grazing?

- Cows “intensively graze” by nature, only people can “intensively manage”



Management is what is intensified....  
**NOT** grazing

Why **MiG** ?

**Management-intensive Grazing**



### Typical cow-calf operation:

- Annual hay or pasture seeded
- Hay and Pasture fertilized
- Hay harvested
- Hay fed
- Calves shipped
- Manure hauled



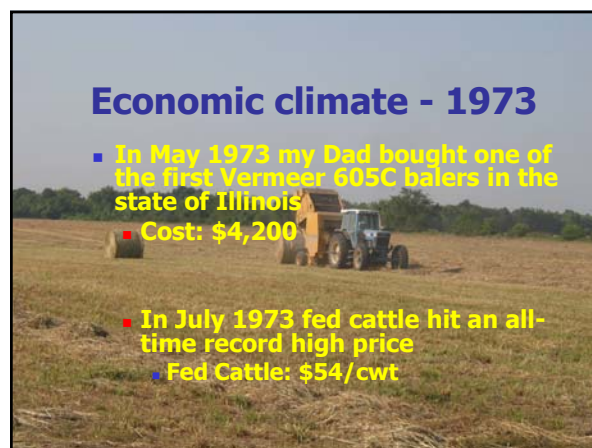
**Winter feed costs are the single largest cost in most livestock operations**



**Most farmers and ranchers have no idea what it really costs to get here !**

| HAY PRODUCTION COSTS:       |         |                |        |                    |           |
|-----------------------------|---------|----------------|--------|--------------------|-----------|
| Acres of hay                | 100     | acres          |        |                    |           |
| Expected yield:             | 2       | Ton/acre       |        |                    |           |
| Number of harvests          | 1       |                |        |                    |           |
| Weight of bales:            | 1200    | lb/bale        |        |                    |           |
| Total hay produced          | 200     | tons           |        |                    |           |
| Bales / acre                | 3       |                |        |                    |           |
|                             |         |                |        |                    | Cost/acre |
| Land rental or standard fee |         |                |        |                    | \$60.00   |
| Hay field establishment     |         |                |        |                    | \$16.98   |
| Maintenance fertilizer      |         |                |        |                    | \$16.27   |
|                             | COST/LB | REMOVAL        | APPLY? |                    |           |
| N                           | \$0.55  | 50             | 0.5    | \$13.75            |           |
| P                           | \$0.42  | 12             | 0.5    | \$2.52             |           |
| K                           | \$0.45  | 45             | 0      | \$0.00             |           |
| Spreading cost              | \$6.00  |                | 0      | \$0.00             | <-----    |
|                             |         | cost/operation |        | use this operation |           |
| Mowing or Swathing          | \$12.00 | /A             |        | 1                  | \$12.00   |
| Raking                      | \$5.00  | /A             |        | 1                  | \$5.00    |
| Small square bale           | \$0.60  | /bale          |        | 0                  | \$0.00    |
| Small square bale handling  | \$0.60  | /bale          |        | 0                  | \$0.00    |
| Large round bale            | \$9.00  | /bale          |        | 1                  | \$30.00   |





## Economic climate - 2011

- Fed cattle hit an all-time record high price at an astounding \$1.24/cwt

- A new Vermeer 605M large round baler cost about \$40,000 depending on features



## Changing economies

| Input                    | 1973           | 2011             | % increase  |
|--------------------------|----------------|------------------|-------------|
| Large Round Hay Baler    | \$4,200        | \$40,000         | 950%        |
| Diesel Fuel              | \$0.17 / gal   | \$3.40 / gal     | 2000%       |
| Farm labor               | \$1.50 / hr    | \$10-15 / hr     | 800 – 1000% |
| Nitrogen fertilizer      | \$ 0.09 / lb   | \$ 0.48 / lb     | 450%        |
| Income                   | 1973           | 2011             | % increase  |
| Custom charge for baling | \$ 6.00 / bale | \$ 9 – 12 / bale | 50-100%     |
| Fed cattle record highs  | \$54 / cwt     | \$124 / cwt      | 230%        |

### Conventional finishing system:

- Feed is produced
- Feed is processed
- Feed is hauled
- Cattle are hauled
- Manure is hauled
- Cattle are hauled again

*Maybe this is a better vision for finishing beef*

*Pasture-finished beef as an alternative to feedlots*

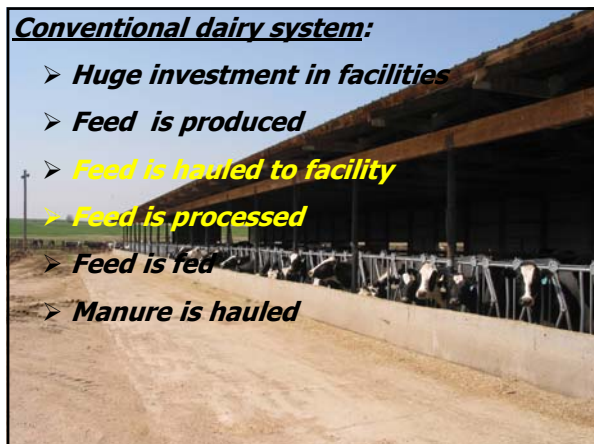
*La Cense Montana Ranch finishes 500 -1000 head on pasture every year*

- > 55% USDA Choice
- All under 20 months
- ≈ 70% cost of feedlot
- Sells for premium price



**Conventional dairy system:**

- Huge investment in facilities
- Feed is produced
- Feed is hauled to facility
- Feed is processed
- Feed is fed
- Manure is hauled



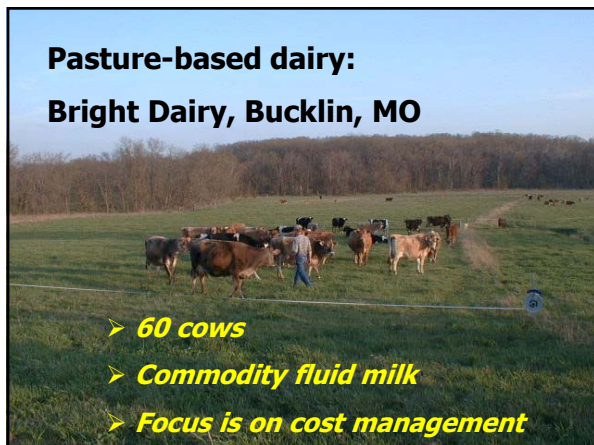
*Maybe this is a better vision of milk production*

- Reduced feed costs
- Increased cow longevity
- Increased profit per cow



**Pasture-based dairy:  
Bright Dairy, Bucklin, MO**

- 60 cows
- Commodity fluid milk
- Focus is on cost management



**Pasture-based dairy:  
Nature's Harmony Dairy, Twin Falls, ID**

- 800 cows
- Horizon Organic producer
- Focus is premium price



*Grazing can even provide a better life for chickens*



*Why does grazing offer us a more sustainable future?*

- Better for the land



**The love of tillage is the root of all evil**

- *Overcapitalization in equipment*
- *Oxidation of organic matter*
- *Destruction of soil tilth*
- *Soil erosion*
- *Consumption of fossil fuels*



**Tired of tillage ?**

*Consider direct pasture seeding....*

- *Much lower cost than full tillage*
- *Can be rented in most locations*
- *Good reliability (with proper operation)*



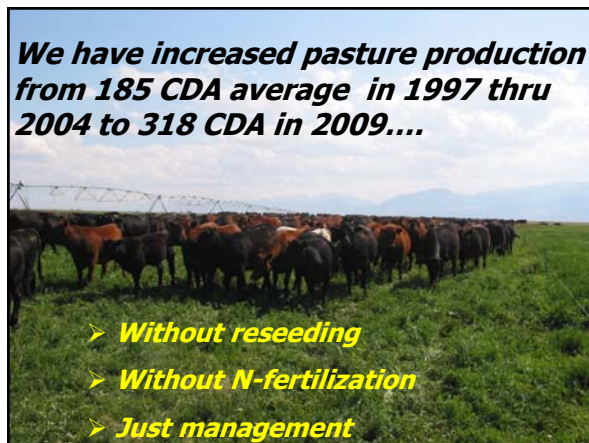
- *These pastures have experienced no mechanical activities....*
- *.... for the last 20 years*



*In 2004 production was 185 CDA*

*In 2009 production was 318 CDA*

*We have increased pasture production from 185 CDA average in 1997 thru 2004 to 318 CDA in 2009....*



- *Without reseeding*
- *Without N-fertilization*
- *Just management*

*We used N fertilizer only 3 times in 23 years on our Missouri farm*



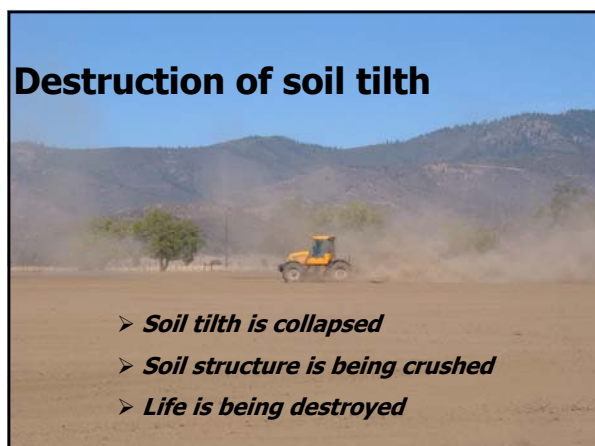
- *Legumes*
- *Organic matter*
- *Effective nutrient cycle*

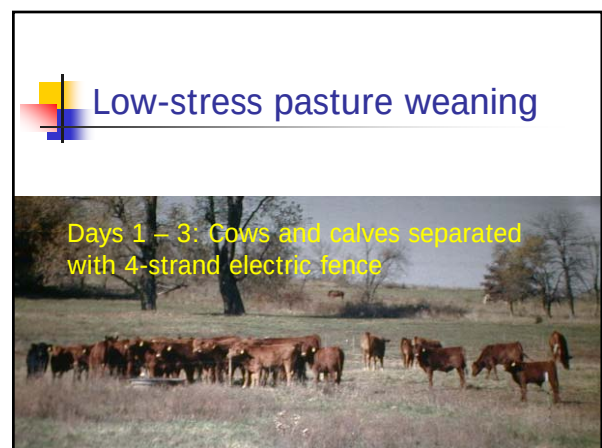
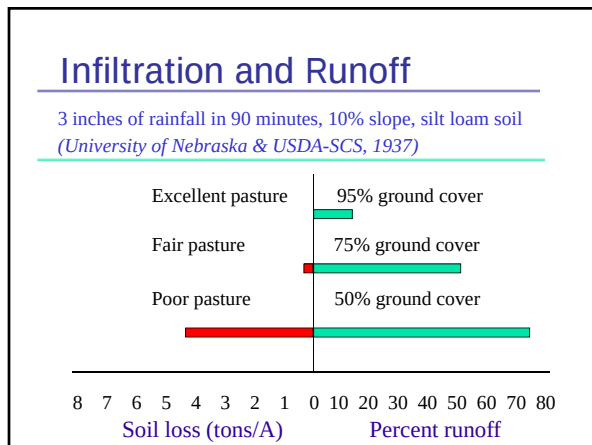
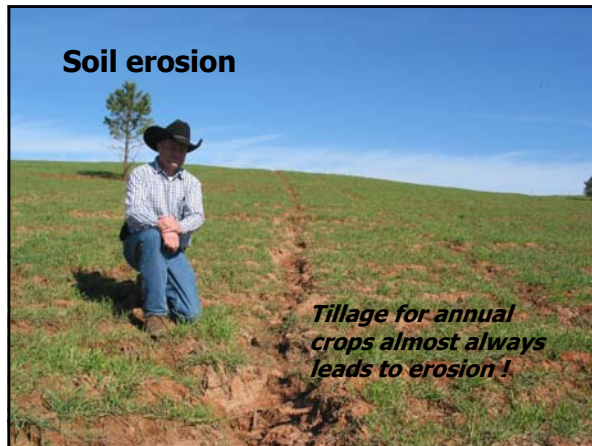
**Under capitalization in equipment?**

- *This is the extent of our equipment use*







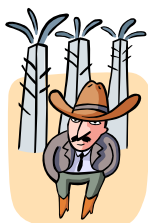






## Challenges to the Feedlot Finishing System

➤ High cost of production



*"Boys, there's three ways to lose money around here...  
Women's the funnest,  
Gamblin's the quickest,  
Feedin' cattle's the surest ! "*



### Our goals for pasture finishing:

- Never confined from open spaces
- No bite of grain in its lifetime
- Harvested at 18 – 20 months
- USDA grade high select-low choice
- A pleasurable eating experience
- Profitable for the producer

***We can finish 2 to 2 ½ hd/acre annually....***

***.... in a land that can't grow corn***

***.... with a fraction of the inputs***

### Pasture requirements for finishing:

- 1 3/4 – 2 ton forage for 120 days @ 2.5 lb yields 300 lb finished beef
- Retail value on direct market \$2-3/lb liveweight
- 6-8 ton/acre pasture yield can gross \$2,000 to \$3,600/acre
- Wholesale value of \$1,000 - \$1,500 / acre

### Annual costs/acre for grazing irrigated pasture as we do it

|                          |      |
|--------------------------|------|
| ■ Tillage                | \$0  |
| ■ Seeding                | \$0  |
| ■ Machinery operation    | \$0  |
| ■ Equipment depreciation | \$2  |
| ■ Fertilizer             | \$8  |
| ■ Labor                  | \$10 |
| ■ Irrigation             | \$30 |

### Annualized Capital costs for grazing irrigated pasture as we do it

|                      |               |
|----------------------|---------------|
| ■ Pivot equipment    | \$108 (10 yr) |
| ■ Stock water system | \$ 18 ( 5 yr) |
| ■ Fence system       | \$ 8 ( 5 yr)  |

### Production per acre for three beef enterprises with 4.5 ton/acre dry matter yield

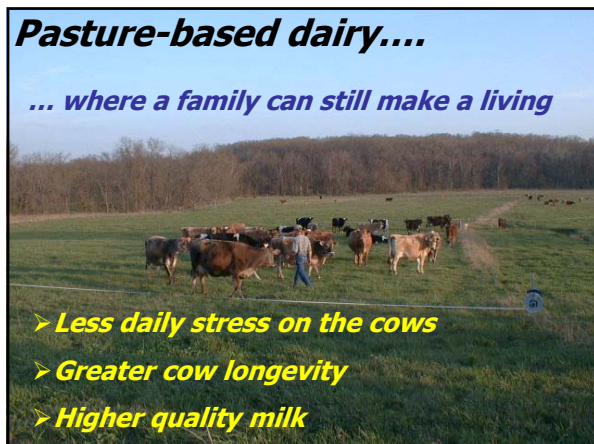
| <u>Enterprise</u>                  | <u>lb/acre</u> | <u>value</u> |
|------------------------------------|----------------|--------------|
| ■ Cow-calf                         | 400 (\$1.61)   | \$ 646       |
| ■ Stocker (custom)                 | 900 (\$0.45)   | \$ 405       |
| ■ Stocker (owned)                  | 900 (\$0.94)   | \$ 846       |
| ■ Pasture-finished (wholesale)     | 750 (\$1.45)   | \$1088       |
| ■ Pasture-finished (direct market) | 750 (\$2.75)   | \$2062       |



## **Pasture-based dairy....**

*... where a family can still make a living*

- **Less daily stress on the cows**
- **Greater cow longevity**
- **Higher quality milk**



Just commercial cattlemen....

- **More productive pasture**
- **Better quality pasture**



***In Missouri we ran fall-calving cows all winter on nothing but stockpiled tall fescue + legume pastures***

- **92% conception rate in 45 days**
- **500 lb calves on April 1**
- **For less than 50¢/pair/day**



Winter annual forage can be carried forward into winter in many environments

... Sept thru Dec 2004, this field<sup>\*</sup> produced 292 cow-days/acre @ 39¢ per day

<sup>\*</sup> Barley, Oats, & Winter Peas



**The same ranch had a hay feeding cost on other cows of \$1.33 per day in 2004**

***In winter 2007-8 the cost was \$2.10/cow/day***



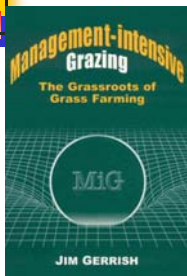
**Joe Miller, Salmon, ID went from feeding 2 ½ ton of hay/cow every winter to feeding none**

***The first thing he changed was his MIND***

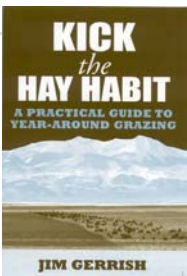




**Books by Jim Gerrish**

The cover of the book 'Management-intensive Grazing' is green with a grid pattern. It features the title in yellow and white, the subtitle 'The Grassroots of Grass Farming' in white, and a circular logo with 'MIG' inside. The author's name 'JIM GERRISH' is at the bottom.

**\$30**

The cover of the book 'Kick the Hay Habit' is brown with a landscape image. It features the title in large white letters, the subtitle 'A PRACTICAL GUIDE TO YEAR-AROUND GRAZING' in smaller white letters, and the author's name 'JIM GERRISH' at the bottom.

**\$27**

**Both for \$55**

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