

## BRIEF THOUGHTS ON COVERS

HELPING AGRICULTURE AND NATURAL RESOURCE  
INDUSTRIES IN MICHIGAN THE NATION AND WORLD  
THROUGH RESEARCH THAT IMPROVES QUALITY OF  
LIFE, ENHANCES PROFITABILITY AND PROMOTES  
ENVIRONMENTAL STEWARDSHIP



# TRIPLE BOTTOM LINE

- PRODUCTIVE AND PROFITABLE
- ENVIRONMENTALLY REGENERATIVE
- SOCIALLY BENEFICIAL

# OUR TEAM (LAKE CITY)

## FARM

- DOUG CARMICHAEL, FARM MANAGER
- EVAN ELDER AND TY HUGHSTON

## EXTENSION COLLEAGUES

- JERRY LINDQUIST KEVIN GOULD
- KABLE THURLOW JEANNINE SCHWEIHOFFER

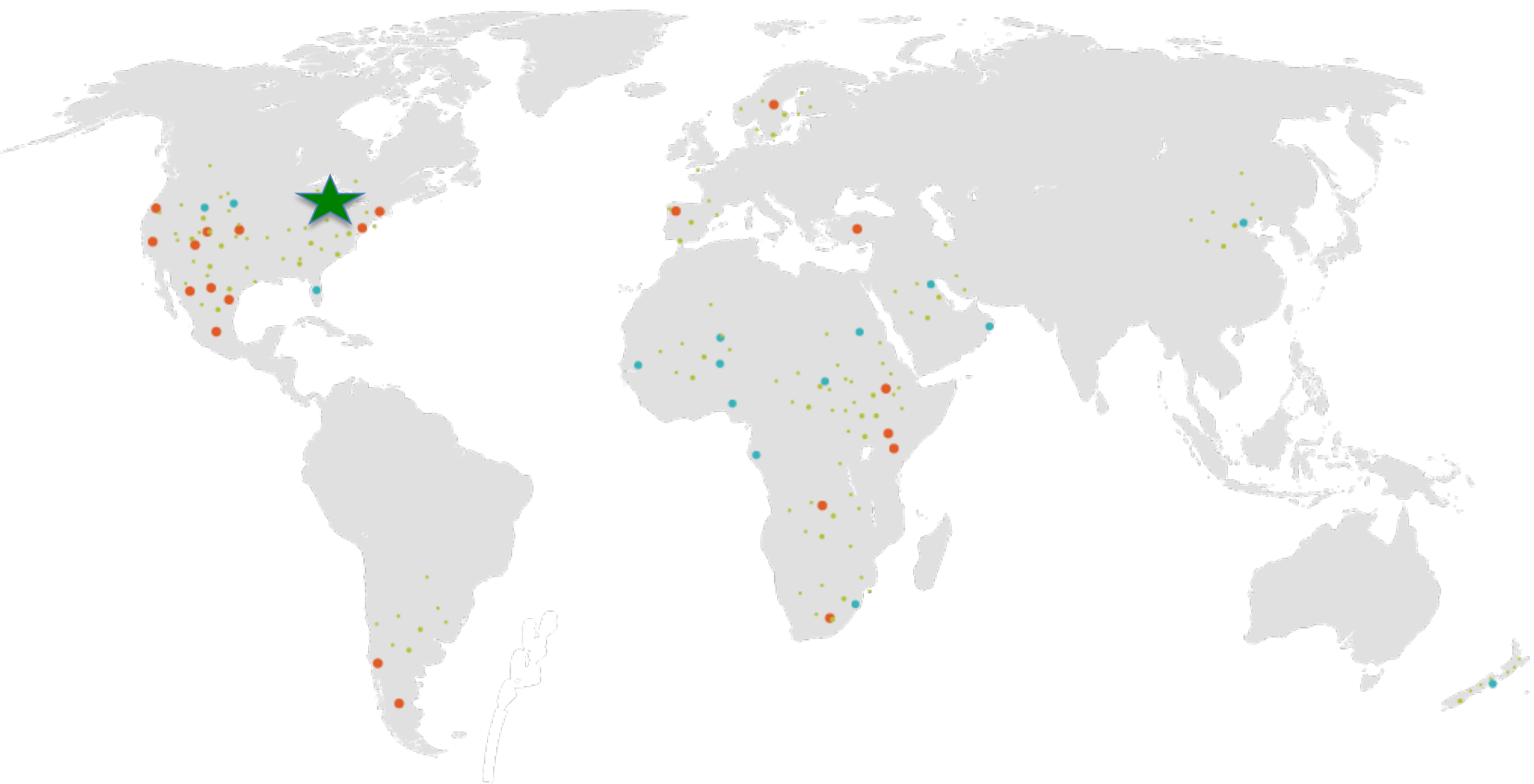
## RESEARCH TEAM

- RACHEL MARTIN, PH.D. CANDIDATE
- PAIGE STANLEY M.S. CANDIDATE
- SARA BRONKEMA M.S. CANDIDATE
- DR. SUTIE XU, POST DOCTORAL RESEARCH

## COLLEAGUES

- MATT RAVEN, KIM CASSIDA, LISA TIEMANN

# SAVORY NETWORK



# ON AVERAGE WHAT THE CATTLE LOOK LIKE

- 1250 AVERAGE WEIGHT COWS
- 1200 AVERAGE LW OF STEERS
- 19 MONTH AVERAGE SLAUGHTER
- 650 LB CARCASS WEIGHT
- AVERAGE QG: SLIGHT 80

Table. 2. Grass Finishing Budget for 2016

Production Costs Per Head-GF 2016	(\$ Cost/year
Calf Costs <sup>1</sup>	945
Labor Costs	-
Hay Period <sup>2</sup>	12
Pasture Period <sup>3</sup>	41
Land Costs	
Pasture Rent (1 steer/1.5 ac)	105
Fence, Electric and Water <sup>4</sup>	9
Feed	
Alfalfa Hay <sup>5</sup>	282
Alfalfa Hay <sup>6</sup>	12
Mineral Cost	11
Health <sup>7</sup>	5
Machinery <sup>8</sup>	20
Misc/Supplies <sup>9</sup>	15
Operating Cost	1457
Interest <sup>10</sup>	82
Death <sup>11</sup>	18
Total Costs 2016	1557
Total Income <sup>12</sup>	1866
Net Income	309

<sup>1</sup>Taking an average 525 lb steer at \$1.80, Midwest, calf worth \$945

<sup>2</sup>Two hours/wk, 25 wks at \$12.50/hr

<sup>3</sup>One half hour/d May 14-November 7, 177 days at \$12.50/hr

<sup>4</sup>Fencing pro-rated 25 years; Electric for meter, water and piping/upl

<sup>5</sup>Represents 3315 lbs of winter intake (Nov-May) at \$18.4 average/c

<sup>6</sup>Represents 141 lbs of summer/fall intake at \$180/T

<sup>7</sup>Misc. health treatment

<sup>8</sup>Assumes a straight depreciation of 10 yrs on new equipment

<sup>9</sup>Represents additional items identify as important

<sup>10</sup>Interest of 5% on operating

<sup>11</sup>Death Loss at 1%

<sup>12</sup>Average carcass weight 650 lbs at \$2.87/lb carcass weight basis

# THOUGHTS ON COVERS

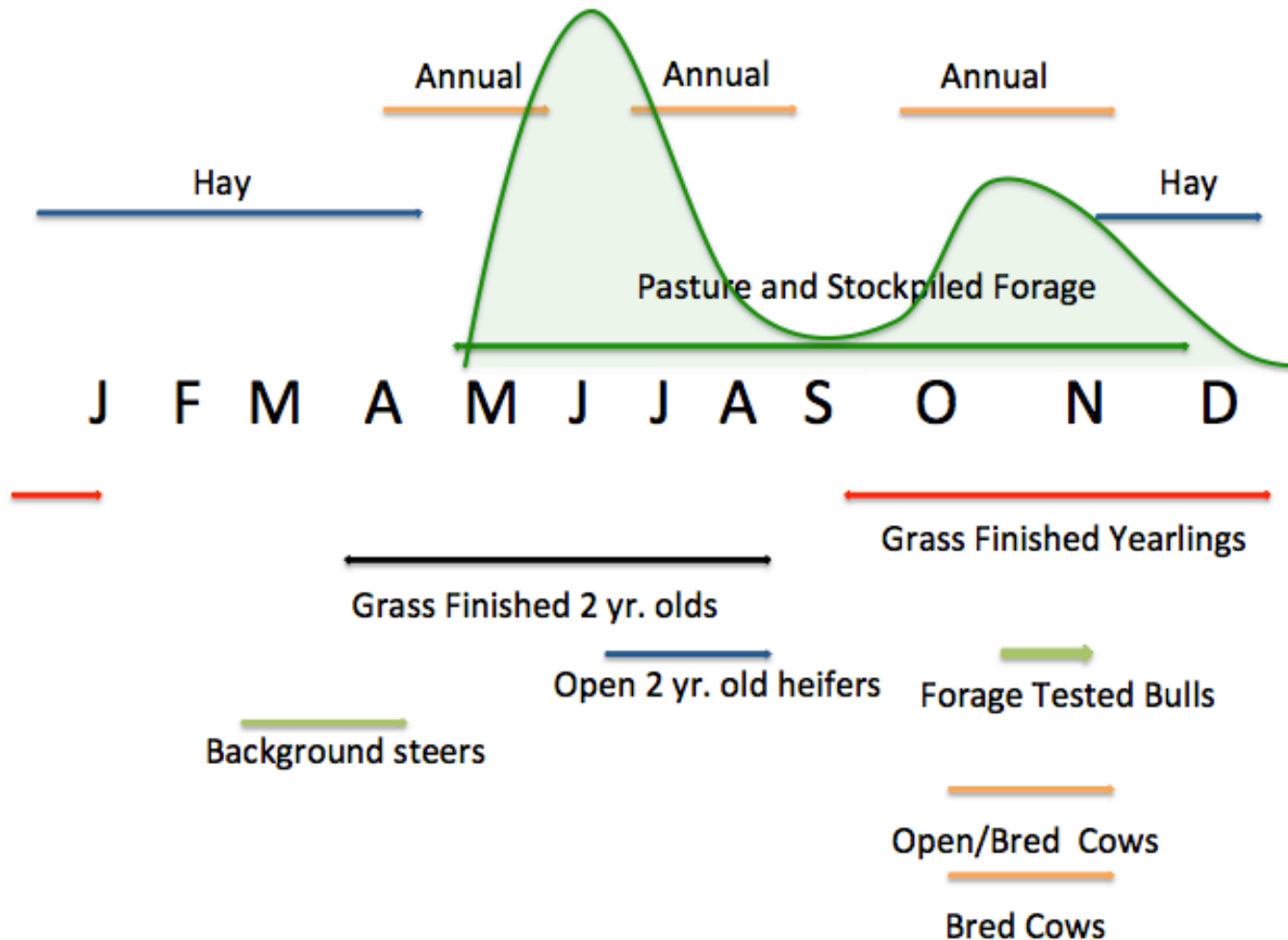
- HAVE A PLAN
- \$120-150.00/AC
- IF YOU DON'T GET 1 + T UTILIZATION  
MAY NOT MAKE SENSE
- DIVERSITY ANECDOTALLY SEEMS TO  
HAVE GREATER SUCCESS

# FORAGES AND WHAT IS NEEDED

- 5400 LBS !
- NEUTRAL DETERGENT FIBER
  - TYPICALLY 40-50%
  - INTAKE SHOULD BE AROUND 1.25% OF BW
- HIGH % OF LEGUMES/HIGH ENERGY FORAGES IN SWARD
- DON'T SLOW DOWN!



# FORAGES

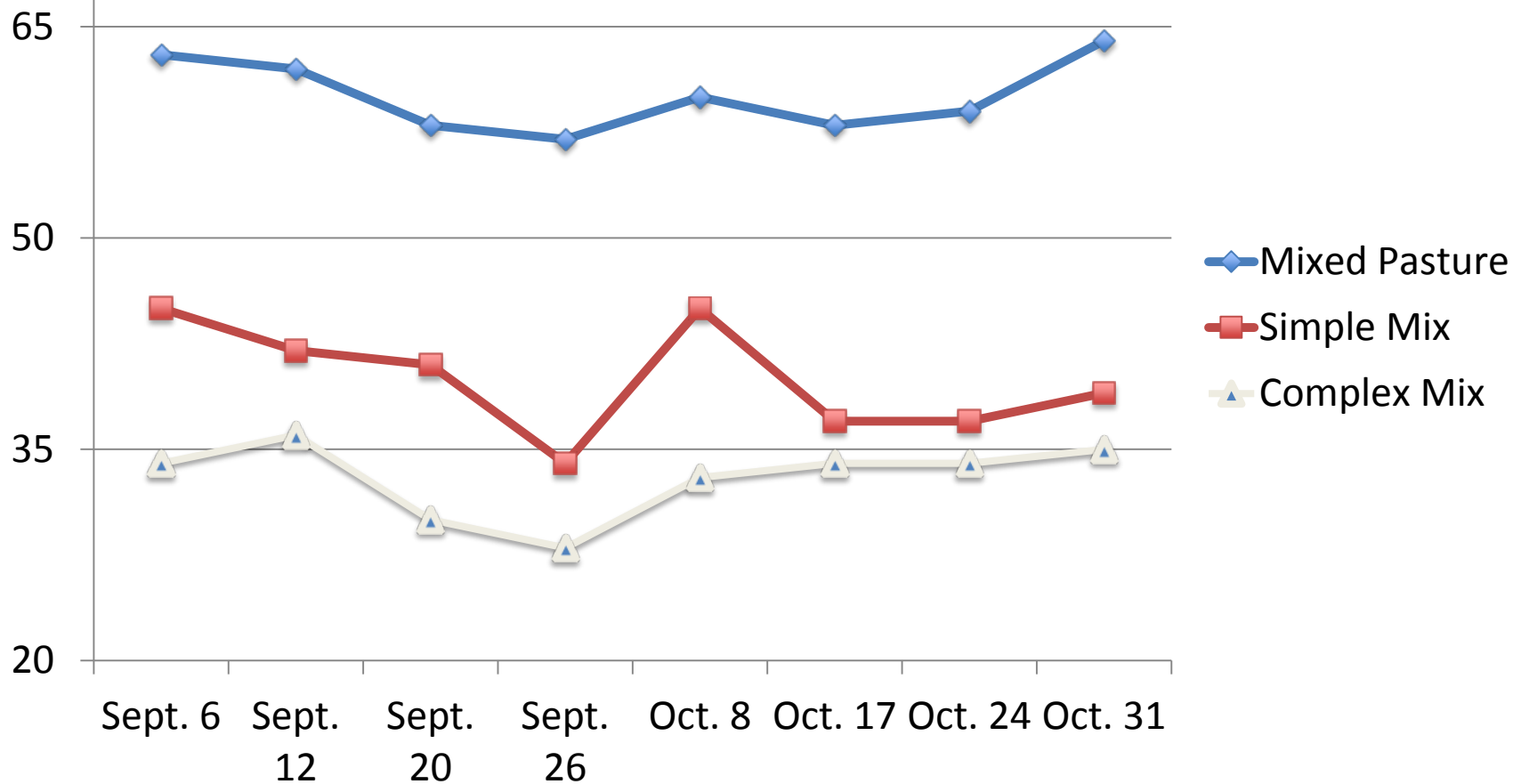




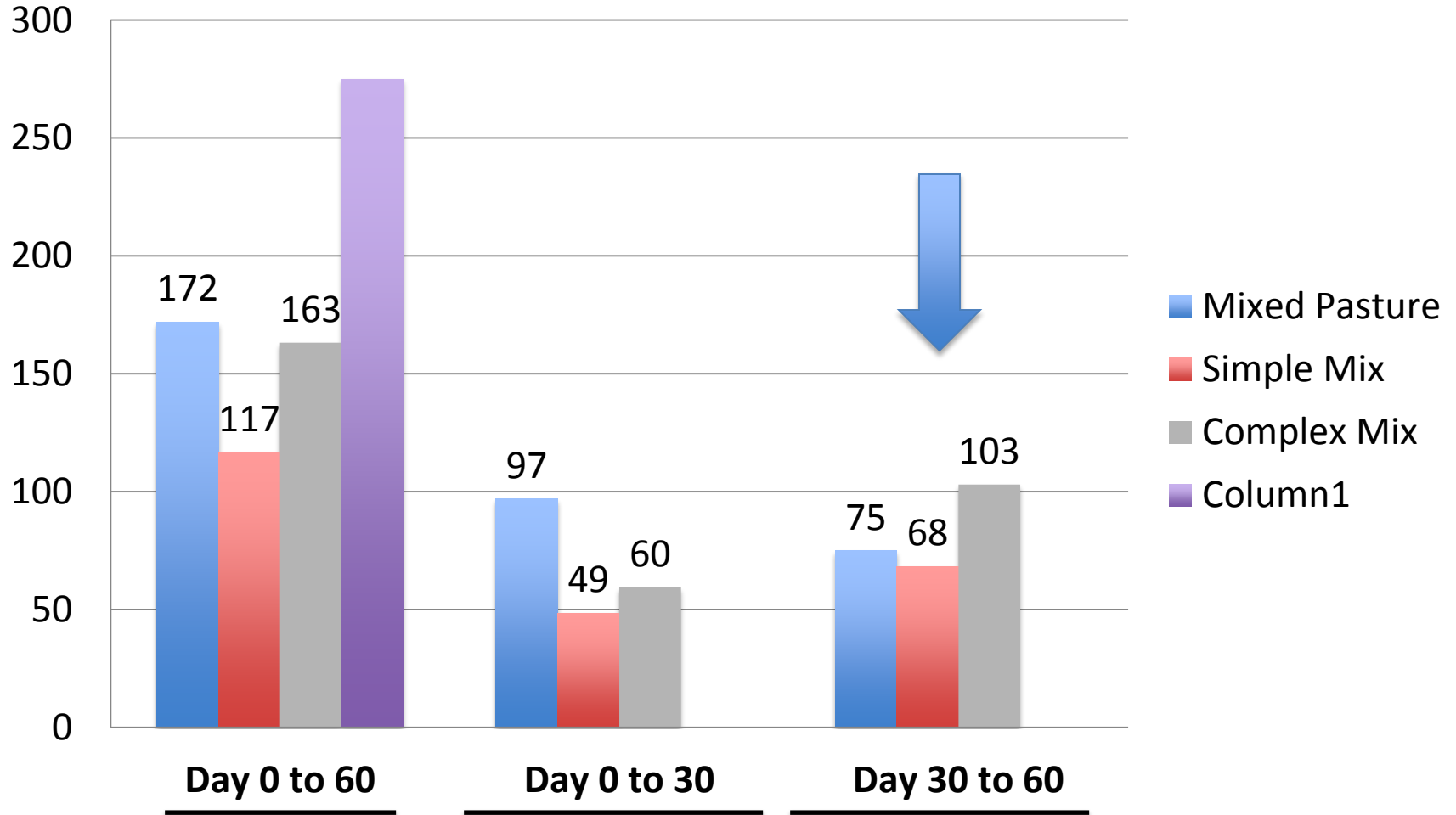
# FORAGE ANALYSIS: NDF, %

Cell wall content

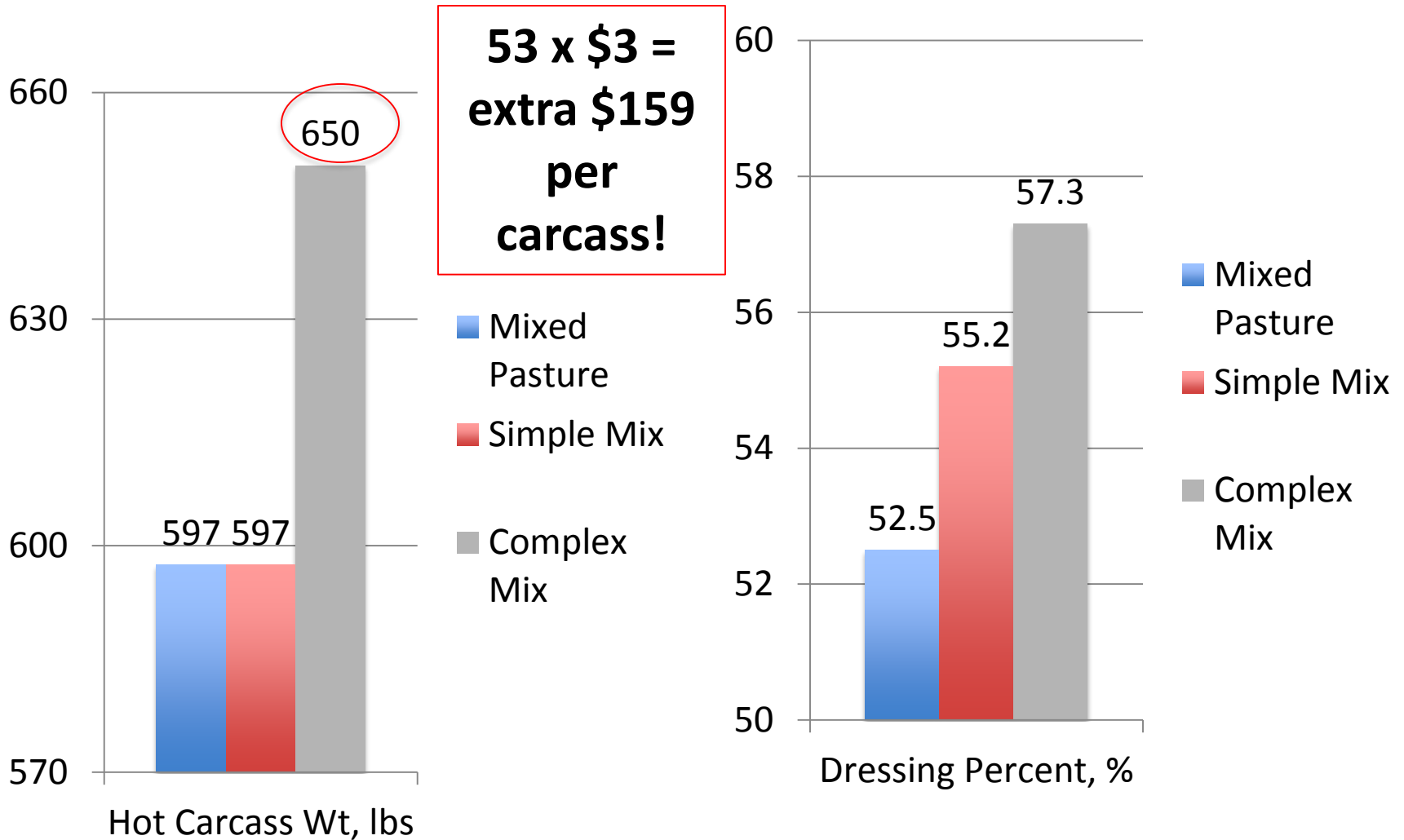
Ideally, ~45-50% NDF



# BODY WEIGHT GAINS, LBS.



# CARCASS DATA













# CONCLUSIONS

- THE UPPER MID-WEST HAS OUTSTANDING POTENTIAL FOR GRASS FINISHING LIVESTOCK
- OUR CATTLE CAN FINISH IN A 18-20 MO WINDOW, BE PROFITABLE AND PLEASE THE CONSUMER
- GFB MEETS OUR TRIPLE BOTTOM LINE NEEDS



# DATES

- APRIL 26-27 INTRO TO HM, LAKE CITY RESEARCH CENTER
- AG INNOVATION CONF AUG 24, LAKE CITY RESEARCH (TENTATIVE)
- SEPT 14-15, ADVANCED GRASS FINISHING SCHOOL, LAKE CITY RESEARCH
- GRASSFED EXCHANGE, ALBANY NY, SEPT 28-29



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# Agenda

- Jon Nelson/JNelson Farms
- 2012 Cover crop after wheat
- 2016 Cover Crop after bale grazing





# JNelson Farms

- Grew up on a dairy farm in Wisconsin
- Went to school at University of Minnesota (the real U of M)
- Work at Dow Corning in Midland, Mi
- Purchased 200 acre cash crop farm in 2000
  - Currently 360 acres
- Began transition to grassfed beef in 2011
  - Rotational grazing cattle and harvesting hay



# Current Operation

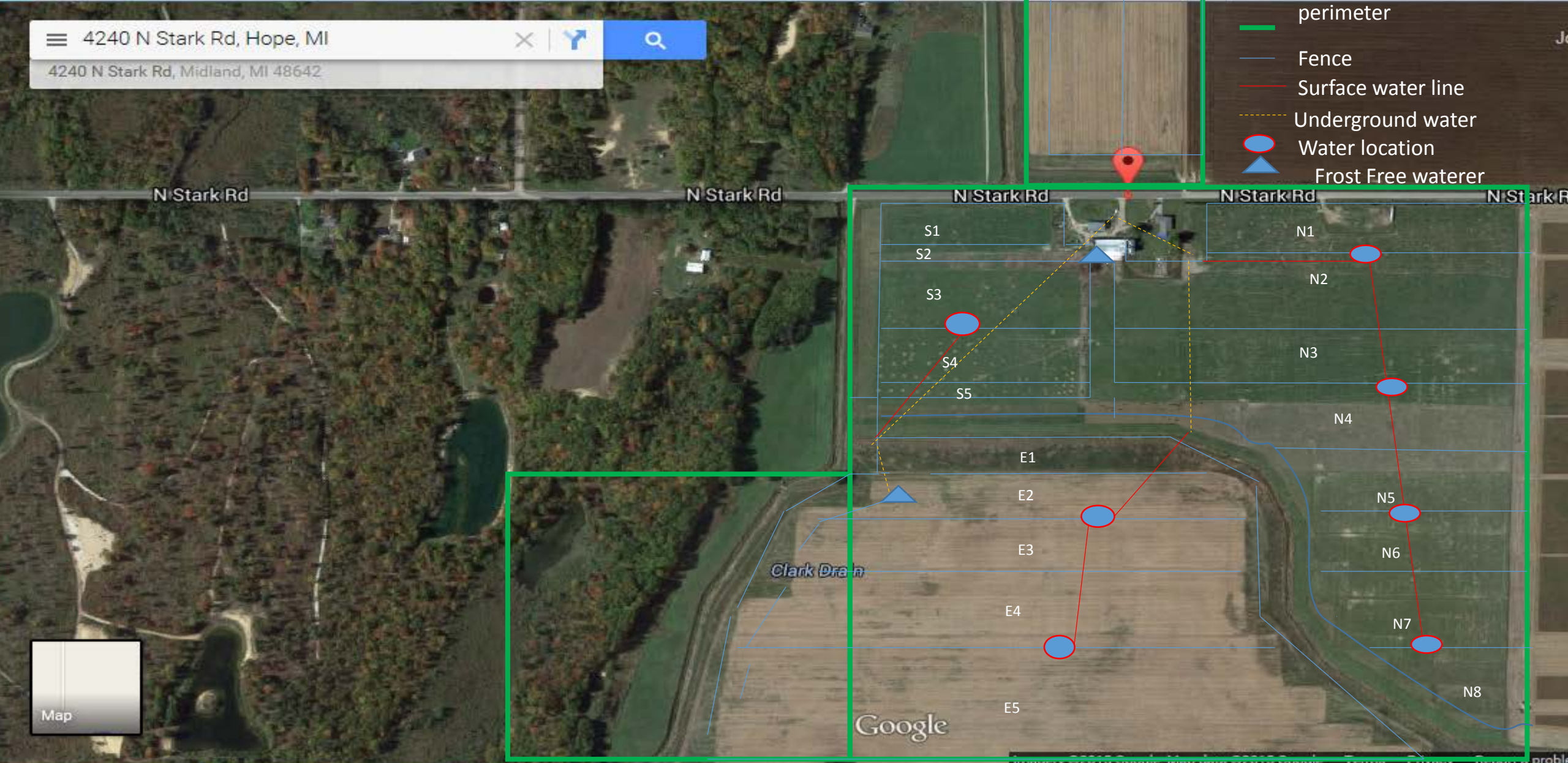
- Land:
  - 200 acres pasture divided into 21 permanent paddocks.
  - Bale graze in pasture in the winter
- Cattle
  - 100 Angus cross cows – red and black
  - 150 finishing animals
- Cooperating Producers
  - Cow/calf – supplying yearlings
  - Grazers
  - Hay supply





4240 N Stark Rd, Hope, MI  
4240 N Stark Rd, Midland, MI 48642

- perimeter
- Fence
- Surface water line
- Underground water
- Water location
- Frost Free waterer





# Why Do I use Cover Crops?

- Purpose:
  - Harvest nutrients from sacrifice paddock
  - Extend grazing
    - Grazable acres during summer slump – green when perennials are dry
    - Cool season grazing
  - Off season crop for cash crop
  - Water utilization in Spring
  - Transition back to perennials
  - Keep living forage on land
  - Nutrient/Organic Matter soil input



## 2012 Baleage after Wheat harvest

- 2012 – 40 acres - Oats, Peas, Sorghum Sudan for baleage
  - 7/15 – round baled wheat straw
  - 7/17 - local dairy applied 11,000 gallons of liquid manure per acre.
  - 7/20 - Planted with no till drill
  - 9/15 - Harvested baleage - 2500 lbs per acre of dry matter
  - Use similar system with a cash cropping neighbor each year.





# 2016 Summer annuals after bale grazing

- Purpose:
  - Harvest nutrients from sacrifice paddock
  - Grazable acres during summer slump
  - Transition back to perennials
  - Keep living forage on land
- Pre planting
  - Bale grazed 70 cow/calf pairs from November to May
  - Land was very pugged with little forage growth
  - Disked twice in early June



2016

- Planting

- 6/13 planted 30 lbs Sorghum Sudan, 5 lbs Pearl Millet, 2 lbs turnips per acre on 20 acres
- Planted with John Deere 750 drill



July 8, 2016 – planted June 13  
Started slow





July 26, 2016 – stayed green and growing  
when perennial pasture got dry







July 30, 2016 – Strong SS in  
this area





August 12, 2016 – a bit of variation in the stand; 4 feet tall to 1 foot tall – good turnips here





# 2016 Cover Crop

- Grazed mid August
- 8/20 - No till drilled 2.5 bushels of rye, 6.25 lbs of red clover, 3.75 lbs of trefoil per acre.
- Different species did well in different areas





August 25, 2016 – planted August 20 –  
rye, red clover, trefoil







# 2016 Cover Crop

- Grazed in November after Sorghum Sudan was well frosted



# Spring 2017

- Anxious to see what grows this spring



# Thank you

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Facebook.com/JNelsonfarms