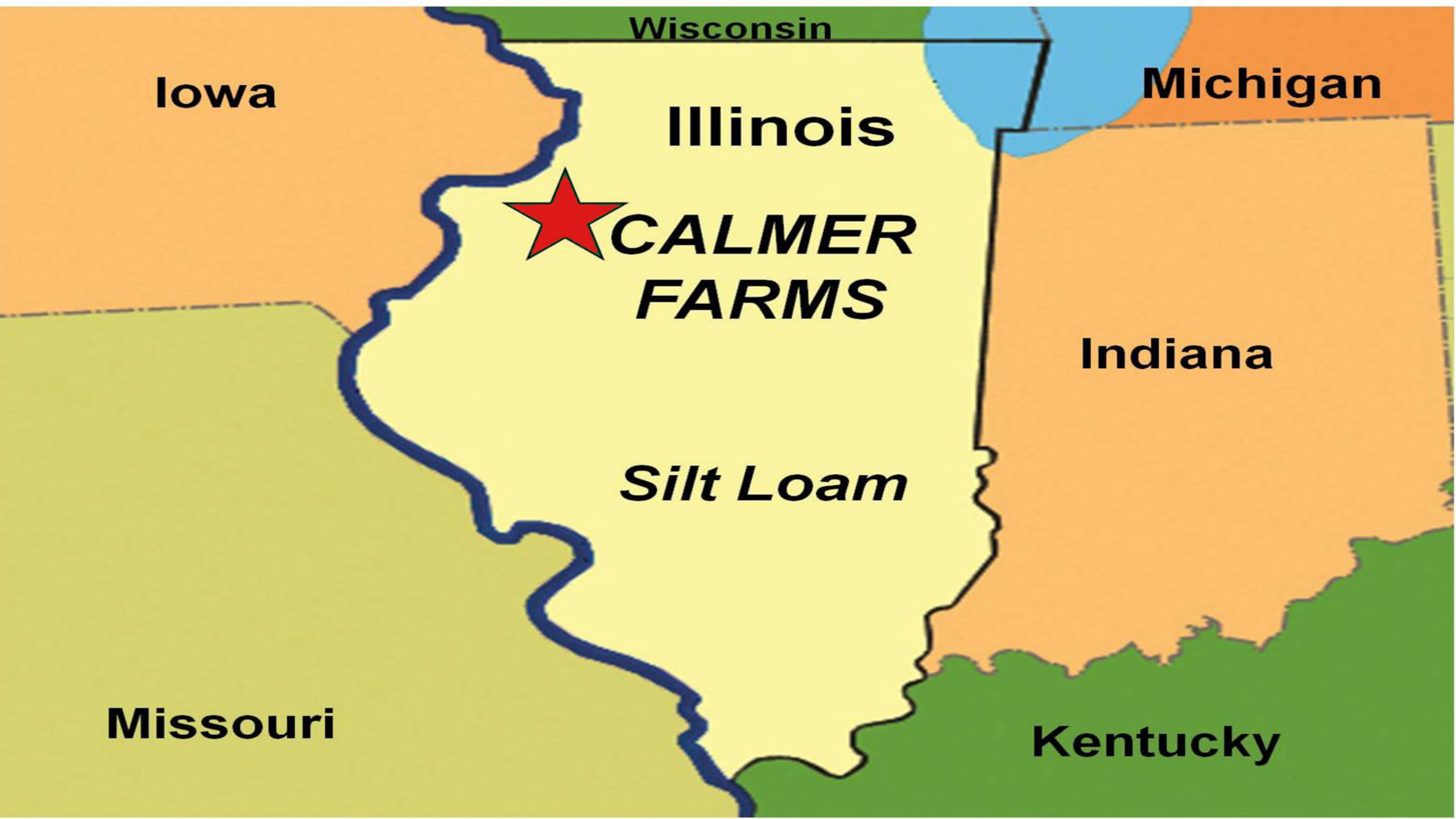




Dealing with
Residue Management
Marion Calmer



Wisconsin

Iowa

Michigan

Illinois

 **CALMER
FARMS**

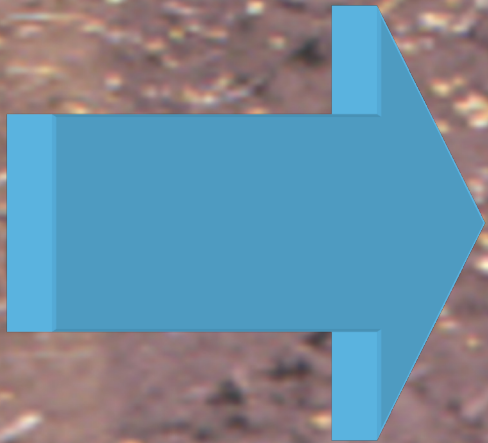
Indiana

Silt Loam

Missouri

Kentucky











Accelerated Decomposition



Problem!





25° ANGLE

orn

er Teste

+6 BU/AC YIELD ADVANTAGE

World's Only
All-Weather
Stalk Roll!™



Crushing
Rolls

Calmer BT
Chopper®

92%
Cover

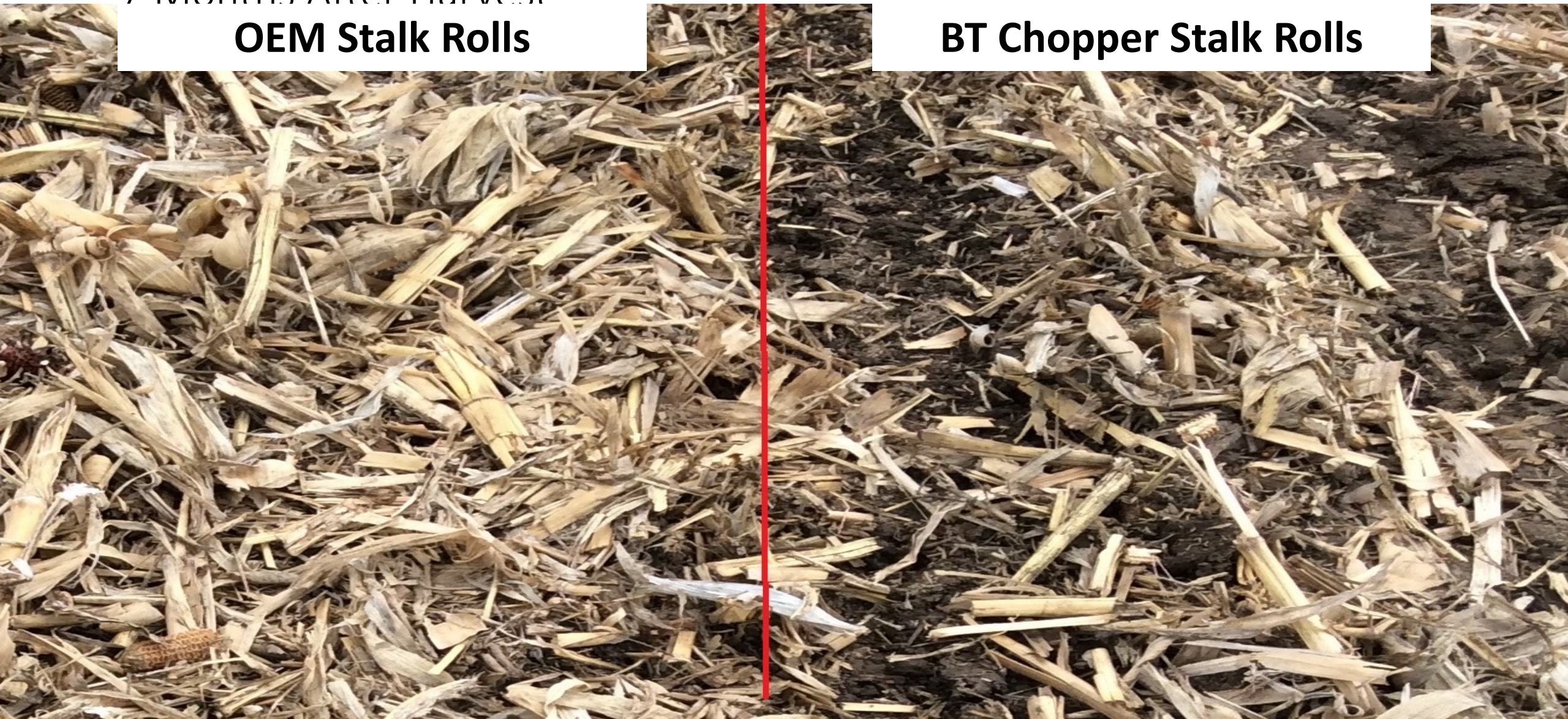
78%
Cover



OEM Vs. BT Chopper[®] Residue
7 Months After Harvest

OEM Stalk Rolls

BT Chopper Stalk Rolls





Calmer Corn Heads

Residue Management Specialists



PO Box 9 Alpha, IL 61413 ~ www.calmercornheads.com ~ 309-629-9000

Increased Earthworm Populations



Faster Nutrient Release =
Reduced Nitrogen Penalty



C : N



OEM Residue



BT Chopper Residue

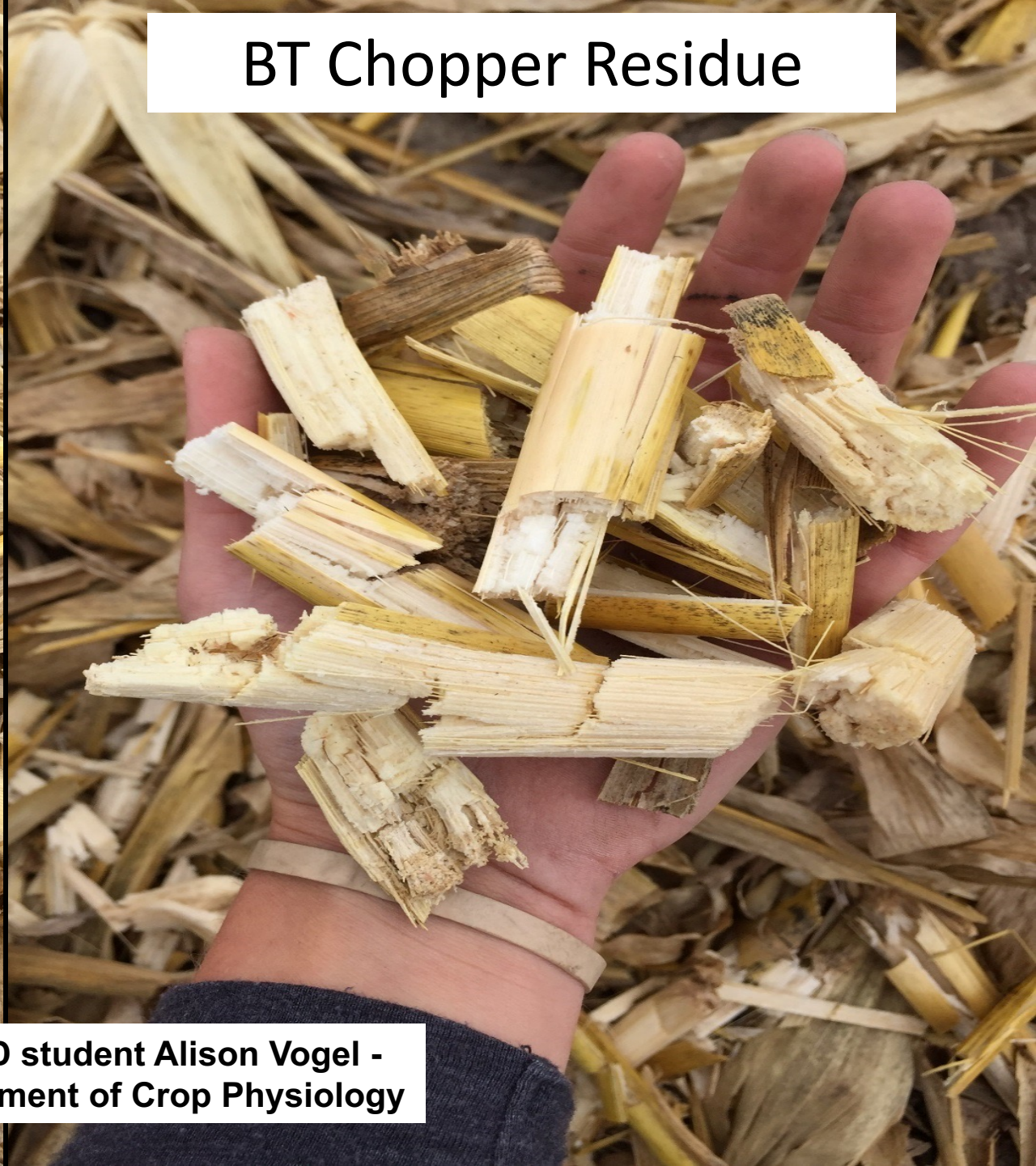


Photo Compliments of PhD student Alison Vogel -
University of Illinois' Department of Crop Physiology

Corn Residue Nutrition Released at Planting

| Nutrient | Harvest | |
|-------------------------------|-----------------|---------|
| | Standard | Chopped |
| | pounds per acre | |
| N | 44 | 52 |
| P ₂ O ₅ | 8 | 10 |
| K ₂ O | 49 | 58 |

Assuming 5.4 tons of residue with 39% vs. 46% with Standard and Chopped residue, respectively.

Values estimated from Agron J. 105:161-170 (2013)

OEM Stalk Rolls



BT Chopper® Stalk Rolls



Faster Emergence





Mattress - *Liability*



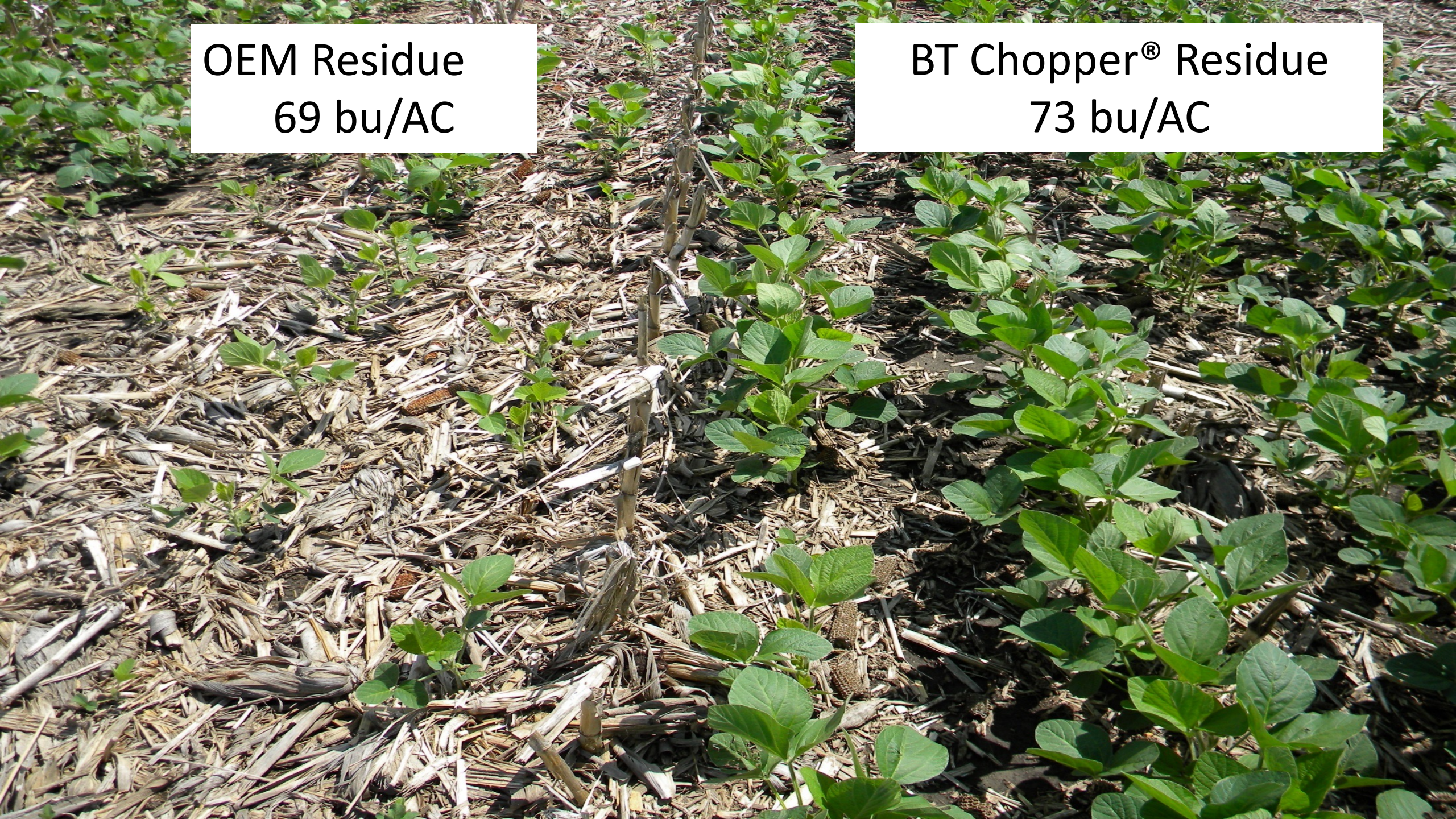
MAT - *Asset*



Problem!

OEM Residue
69 bu/AC

BT Chopper[®] Residue
73 bu/AC











planting into

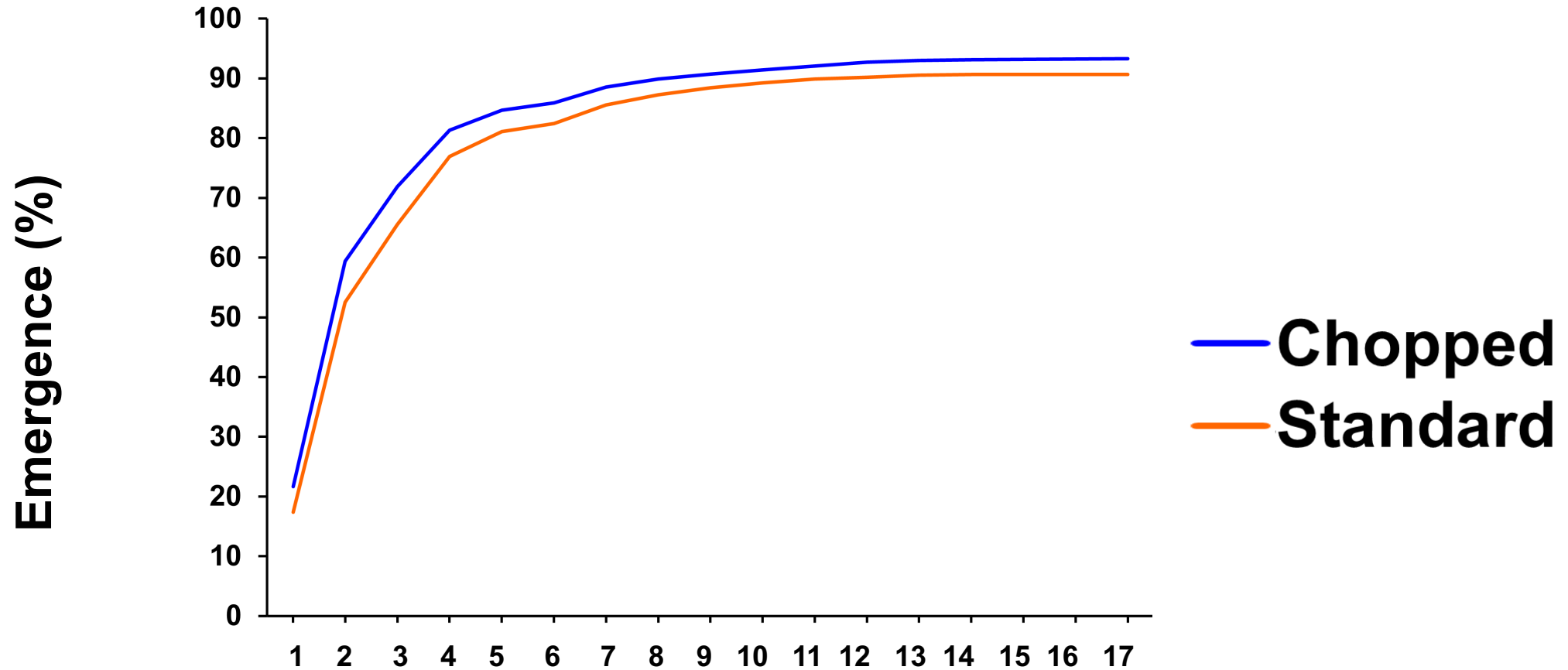
CALMER BT CHOPPER®

residue vs other knife rolls





Percent Emergence



Day of Emergence

Higher Yields



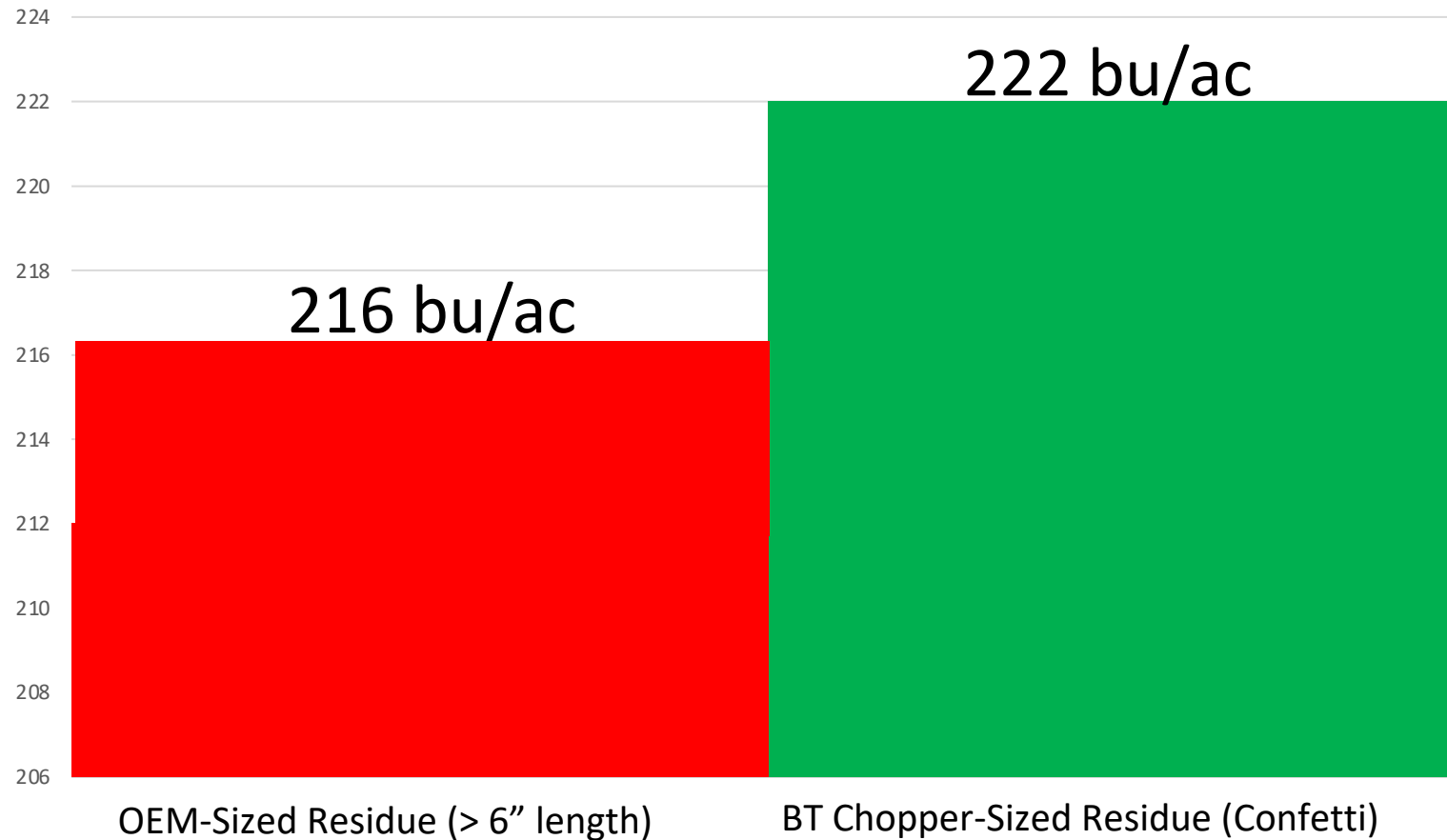
OEM Stalk Rolls



BT Chopper® Stalk Rolls



BT Chopper-Sized Residue 6+ bu/ac Yield Increase in Continuous Corn



Data Compliments of
University of Illinois'
Department of Crop
Physiology

Dave Hula
World
Record Corn
Yield
Champion
@ 616 bpa

616 bu/ac =
14 t/ac





WARNING
Avoid injury from rotating spreader
or PTO shaft.
Do not stand behind combine when
the spreader is running.

⚠ DANGER

**VITTE TOE
CHAFF**

SWING

WHIRLING BLADES
Avoid injury or death
from contact with
rotating blades.
Do not touch or
stand near blades.









Start soybean harvest on the
down wind side of the field



CHICAGO BEARS



Ag Leader
YIELD MONITOR 2000

Task in Role 3
Cabin Settings

| Color | Color | Seat |
|--------------|-------|------|
| Green | 3 | 3-1 |
| Yellow | 4 | 4-1 |
| Blue | 5 | 5-1 |
| Red | 6 | 6-1 |
| White | 7 | 7-1 |
| Black | 8 | 8-1 |
| Grey | 9 | 9-1 |
| Light Blue | 10 | 10-1 |
| Light Green | 11 | 11-1 |
| Light Yellow | 12 | 12-1 |
| Light Red | 13 | 13-1 |
| Light Blue | 14 | 14-1 |
| Light Green | 15 | 15-1 |
| Light Yellow | 16 | 16-1 |
| Light Red | 17 | 17-1 |
| Light Blue | 18 | 18-1 |
| Light Green | 19 | 19-1 |
| Light Yellow | 20 | 20-1 |
| Light Red | 21 | 21-1 |
| Light Blue | 22 | 22-1 |
| Light Green | 23 | 23-1 |
| Light Yellow | 24 | 24-1 |
| Light Red | 25 | 25-1 |
| Light Blue | 26 | 26-1 |
| Light Green | 27 | 27-1 |
| Light Yellow | 28 | 28-1 |
| Light Red | 29 | 29-1 |
| Light Blue | 30 | 30-1 |
| Light Green | 31 | 31-1 |
| Light Yellow | 32 | 32-1 |
| Light Red | 33 | 33-1 |
| Light Blue | 34 | 34-1 |
| Light Green | 35 | 35-1 |
| Light Yellow | 36 | 36-1 |
| Light Red | 37 | 37-1 |
| Light Blue | 38 | 38-1 |
| Light Green | 39 | 39-1 |
| Light Yellow | 40 | 40-1 |
| Light Red | 41 | 41-1 |
| Light Blue | 42 | 42-1 |
| Light Green | 43 | 43-1 |
| Light Yellow | 44 | 44-1 |
| Light Red | 45 | 45-1 |
| Light Blue | 46 | 46-1 |
| Light Green | 47 | 47-1 |
| Light Yellow | 48 | 48-1 |
| Light Red | 49 | 49-1 |
| Light Blue | 50 | 50-1 |



FOX
800-942-1041
309-368-9980



2188 AXIAL-FLOW

CASE IH





Key Takeaways

- Chopped Residue Accelerates Residue Decomposition
- Faster Nutrient Release = Reduced Nitrogen Penalty
- Warmer Soils – Avg. 8% or 6 warmer
- Drier Soils – Avg. 28% drier
- Increased Earthworm Populations
- Faster Emergence
- **Higher Yields!**

Combine Settings for a Great No-Till Soybean Harvest



SAMSUNG



2188

Soybeans Only

2577

Corn Only

S-680

Corn & Soybeans

9120

Corn Only







Combine Soybean Harvesting Problems & Solutions

Problems

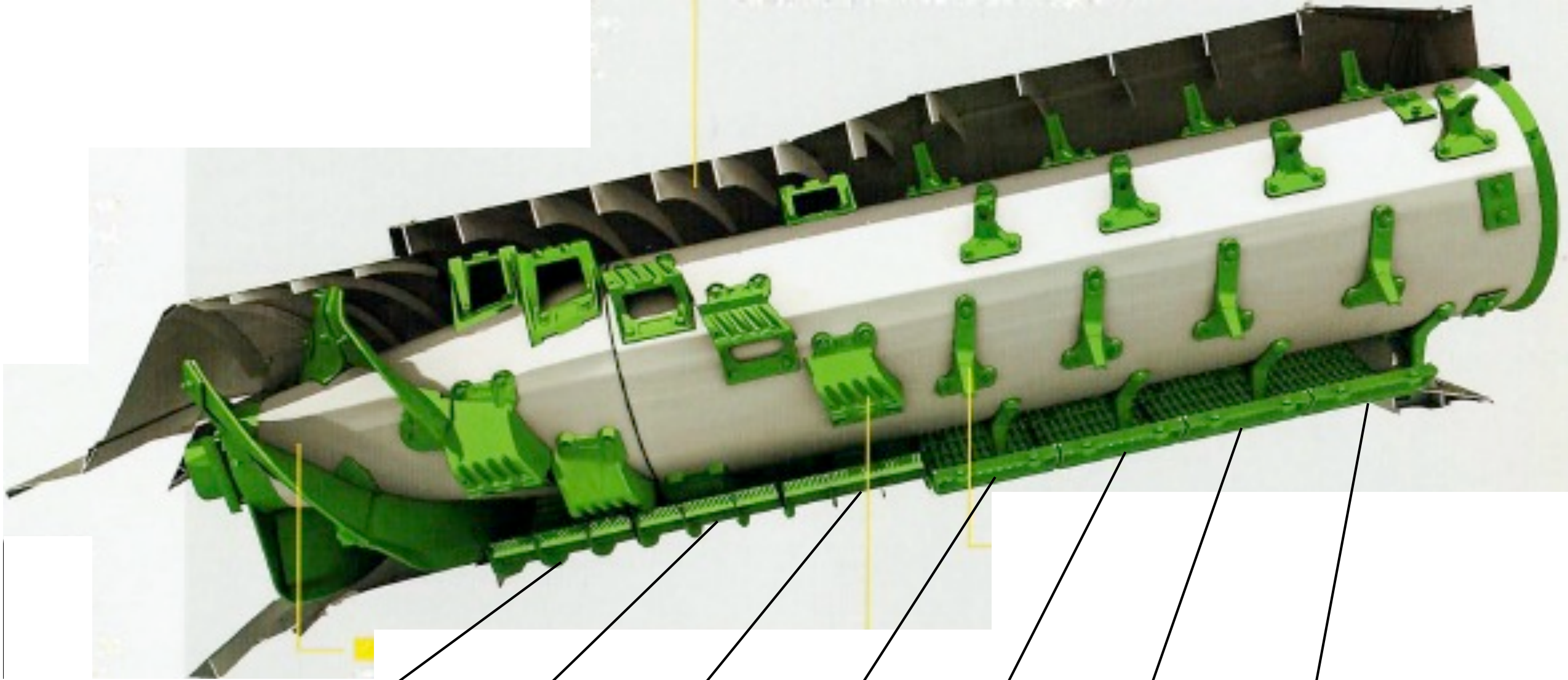
- Pods in the Sample & High Tailings
- Chaff in the Sample
- Sieve Loss

Solutions

- Cover Plates
- MOG Limiting Inserts
- Slotted Grates for Case IH Combines

John Deere Rotary Combines





Position
1

Position
2

Position
3

Position
4

Position
5

Position
6

Position
7

Unthreshed Pods in Sample





Grain Loss Monitor Showing High Tailings



Calmer Pod Buster Cover Plate

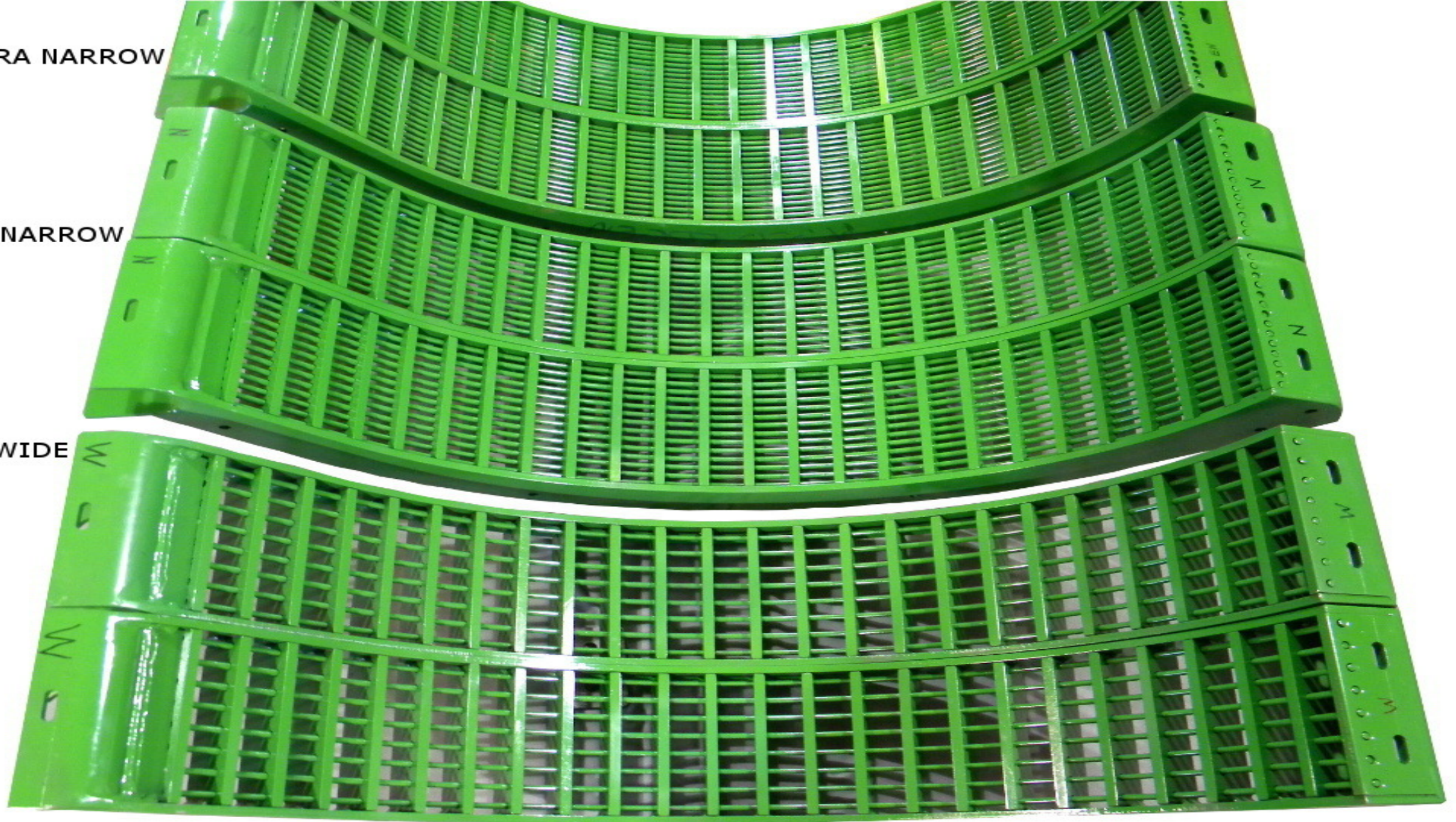




EXTRA NARROW

NARROW

WIDE



Problem

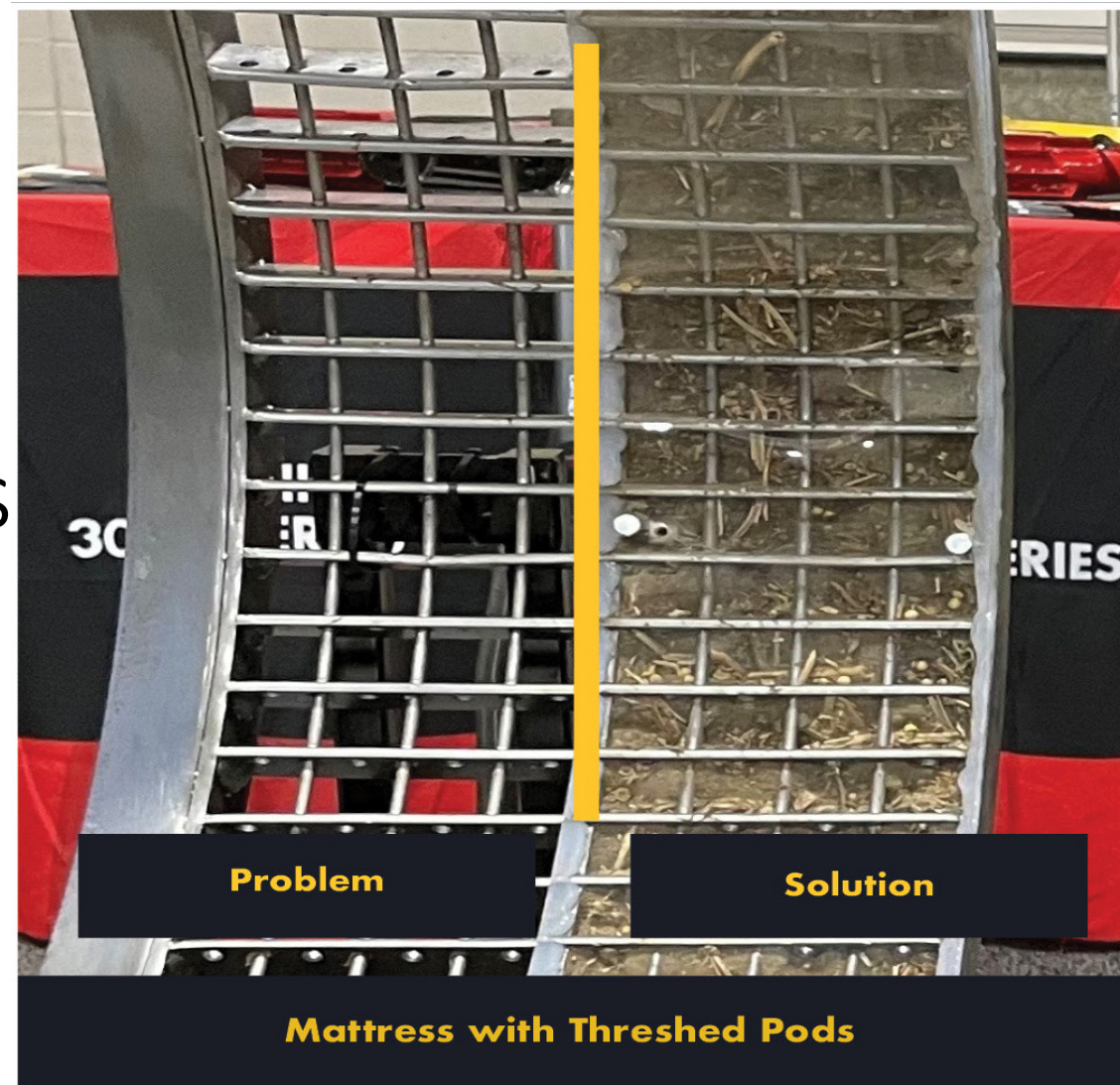
Unthreshed Pods
Fall Through



Solution

Cover Plates
Helps Retain
Threshed Pods

Problem
Unthreshed Pods
Fall Through



Solution
Mattress is
Formed with
Threshed
Pods



Fully-Threshed Beans in Clean Sample



Lima Beans in Hand



Hulls/Chaff in Sample



MOG Falling Through Concave

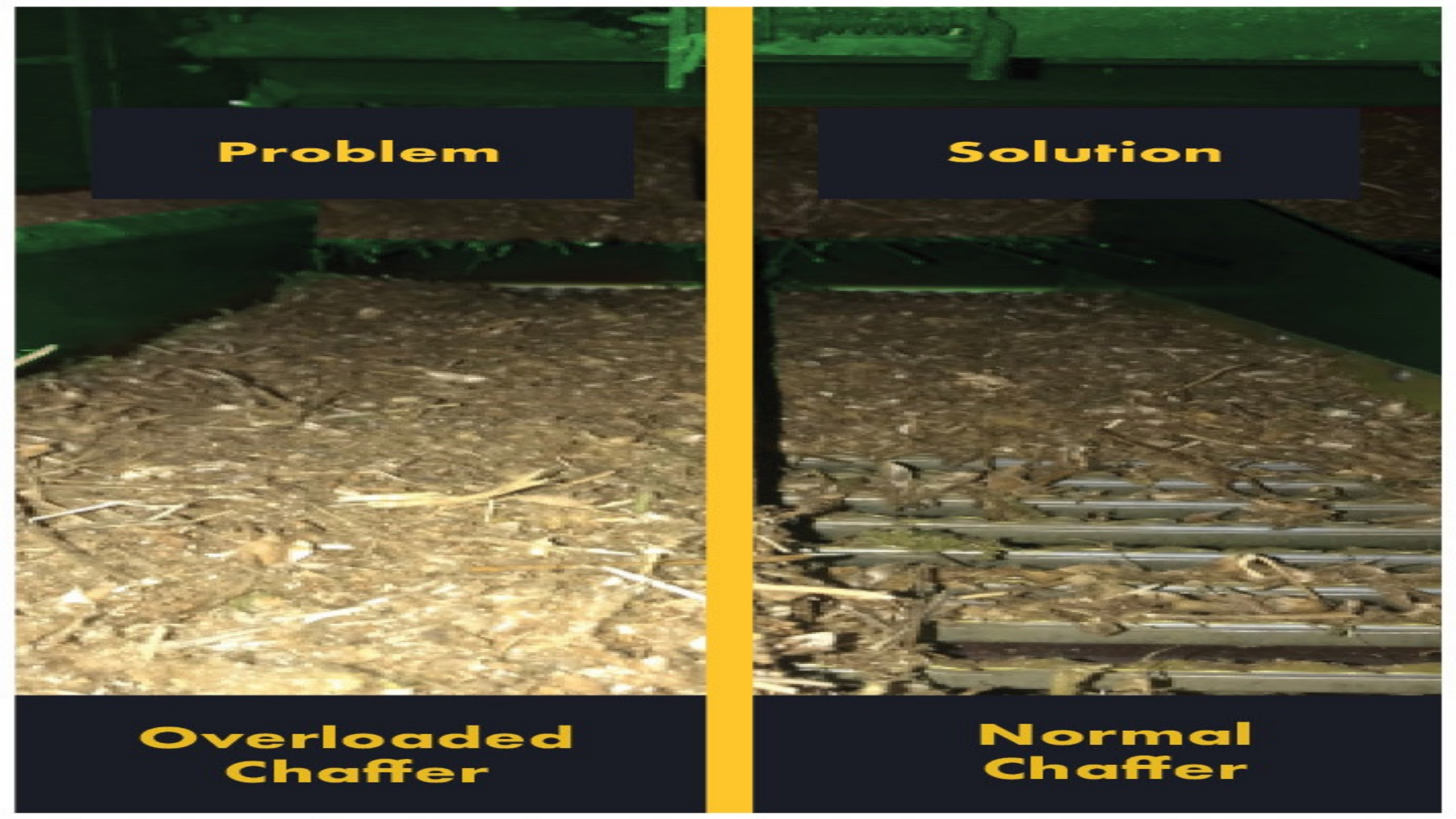


Problem

Solution

**Overloaded
Chaffer**

**Normal
Chaffer**



Grain Loss
Monitor Showing
High Tailings









Calmer ¼ Wrap MOG Limiting Concave Insert

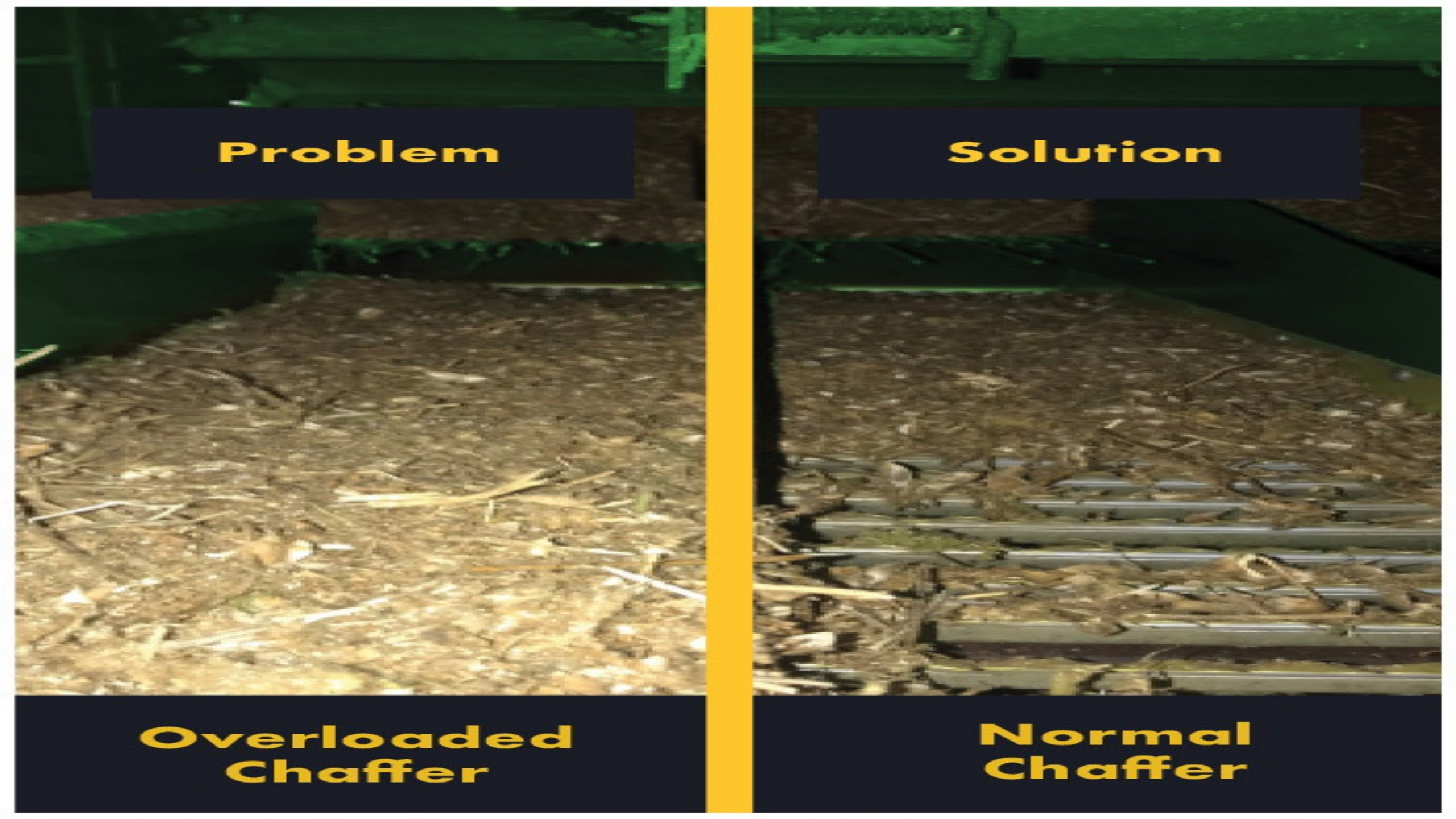


Problem

Solution

**Overloaded
Chaffer**

**Normal
Chaffer**



Clean Soybean Sample



Combine Soybean Harvesting Problems & Solutions

Problems

- Pods in the Sample & High Tailings
- Chaff in the Sample
- Sieve Loss

Solutions

- Cover Plates
- MOG Limiting Inserts
- Slotted Grates for Case IH Combines





Start soybean harvest on the
downwind side of the field

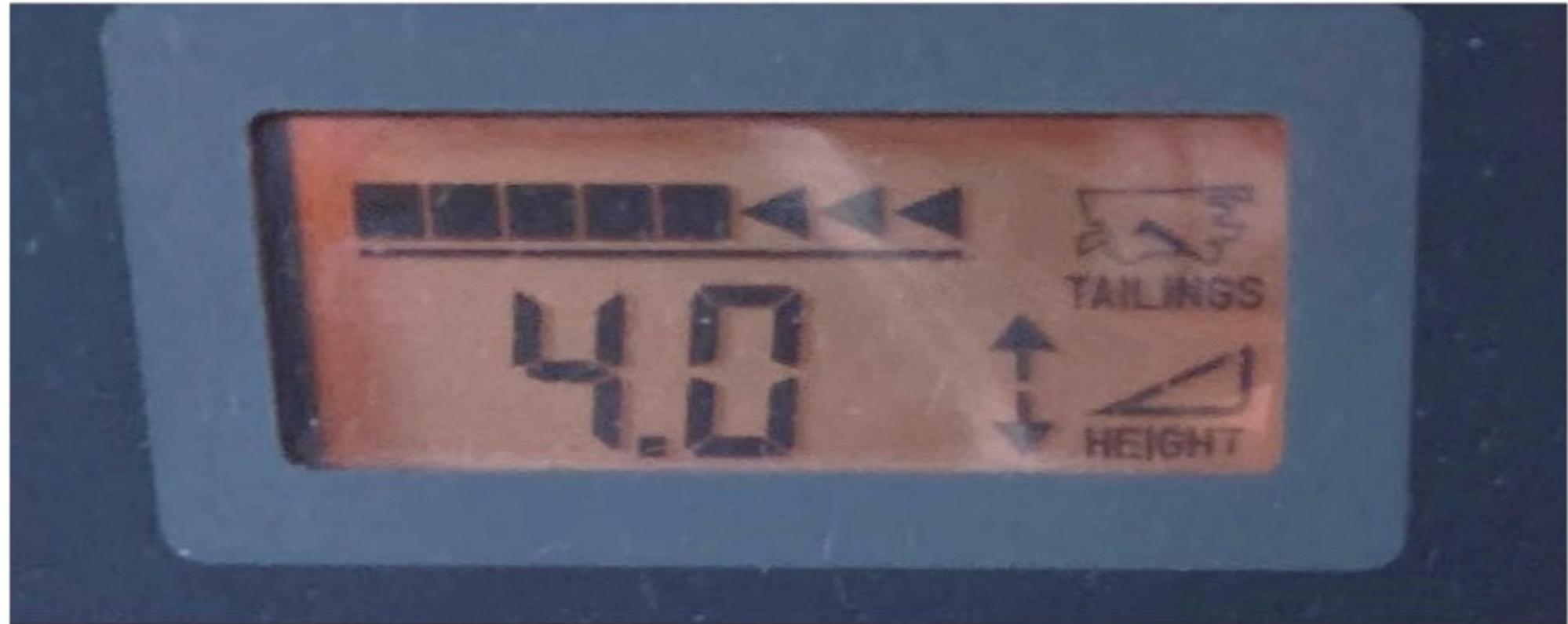
Case IH Legacy Series Combines



Unthreshed Pods in Sample



Case IH Grain Loss Monitor Showing High Tailings



**Case IH Grain Loss Monitor
Showing High Tailings**

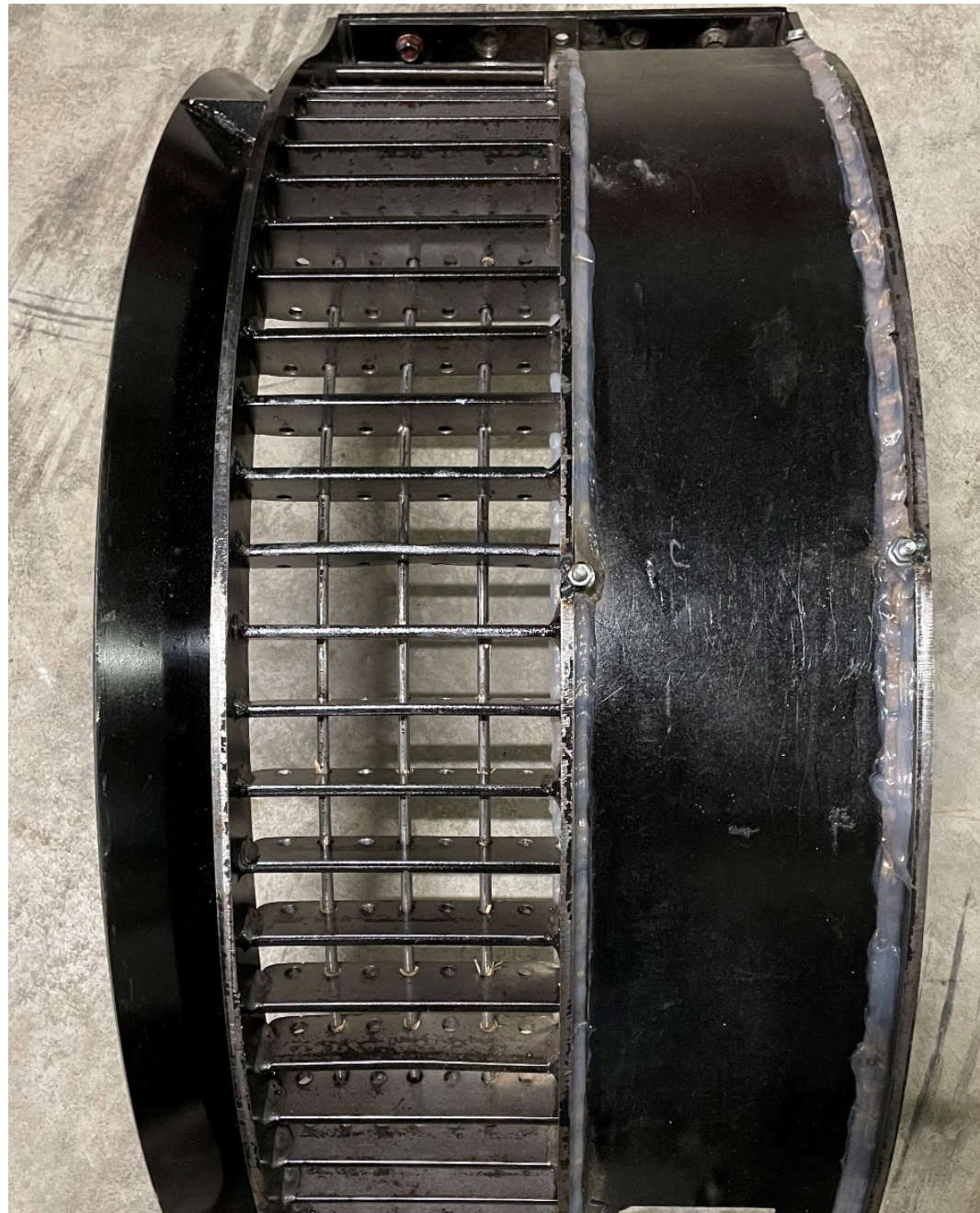
Pods Easily Drop
Through This
Concave Design





Problem

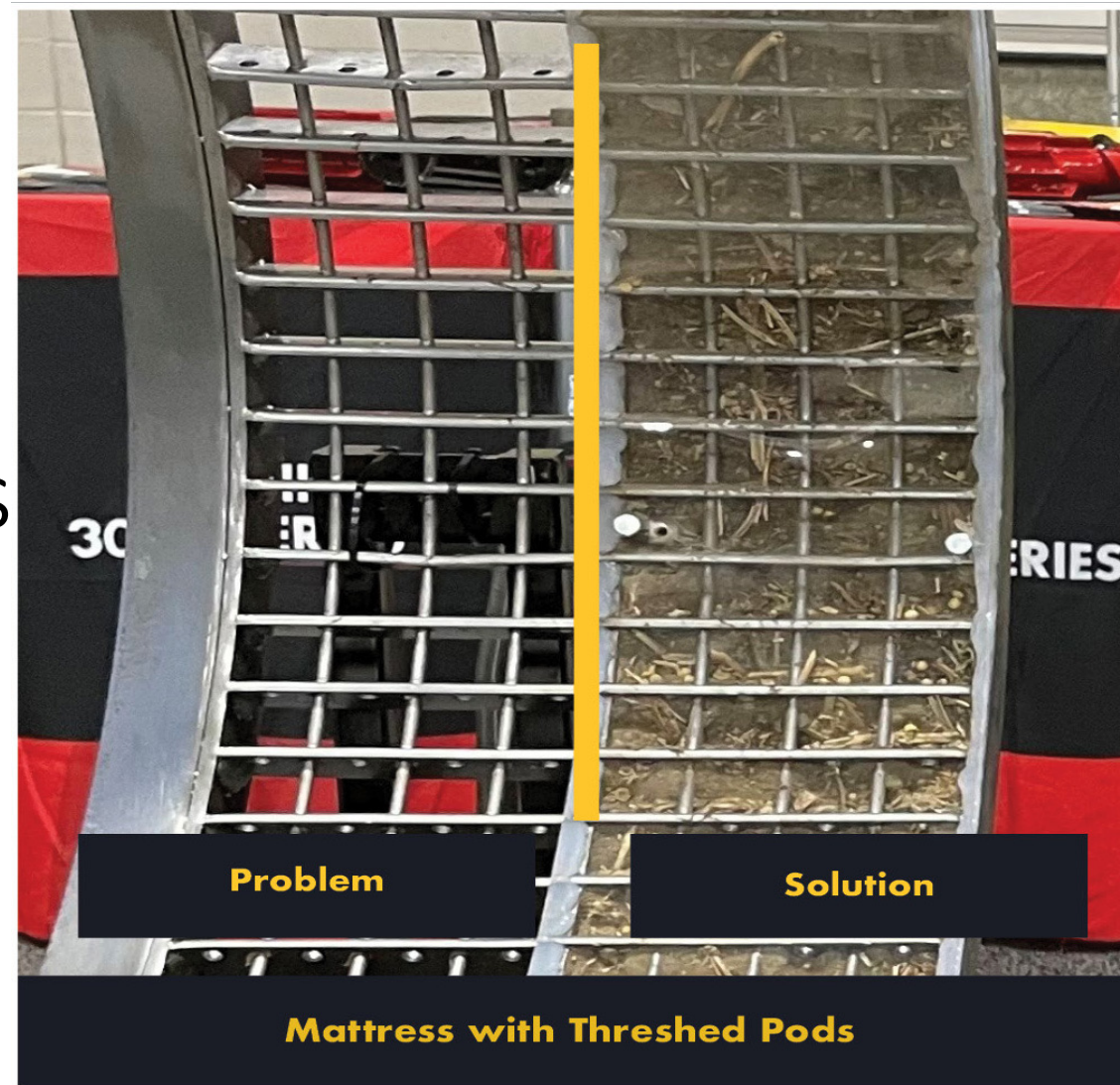
Unthreshed Pods
Fall Through



Solution

Cover Plates
Helps Retain
Threshed Pods

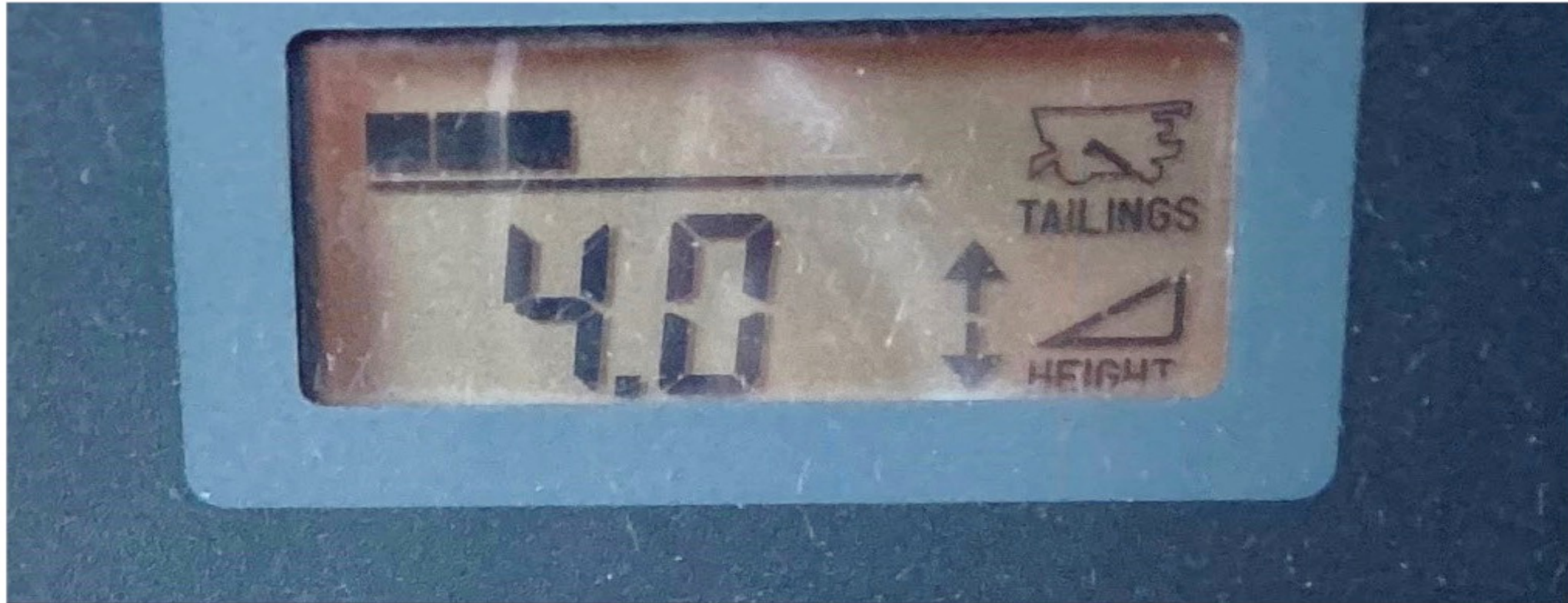
Problem
Unthreshed Pods
Fall Through



Solution
Mattress is
Formed with
Threshed
Pods



Case IH Grain Loss Monitor Showing Low Tailings



**Case IH Grain Loss Monitor
Showing Low Tailings**

Fully-Threshed Beans in Clean Sample



Hulls/Chaff in Sample



Problem: Case IH Large Wire Concave







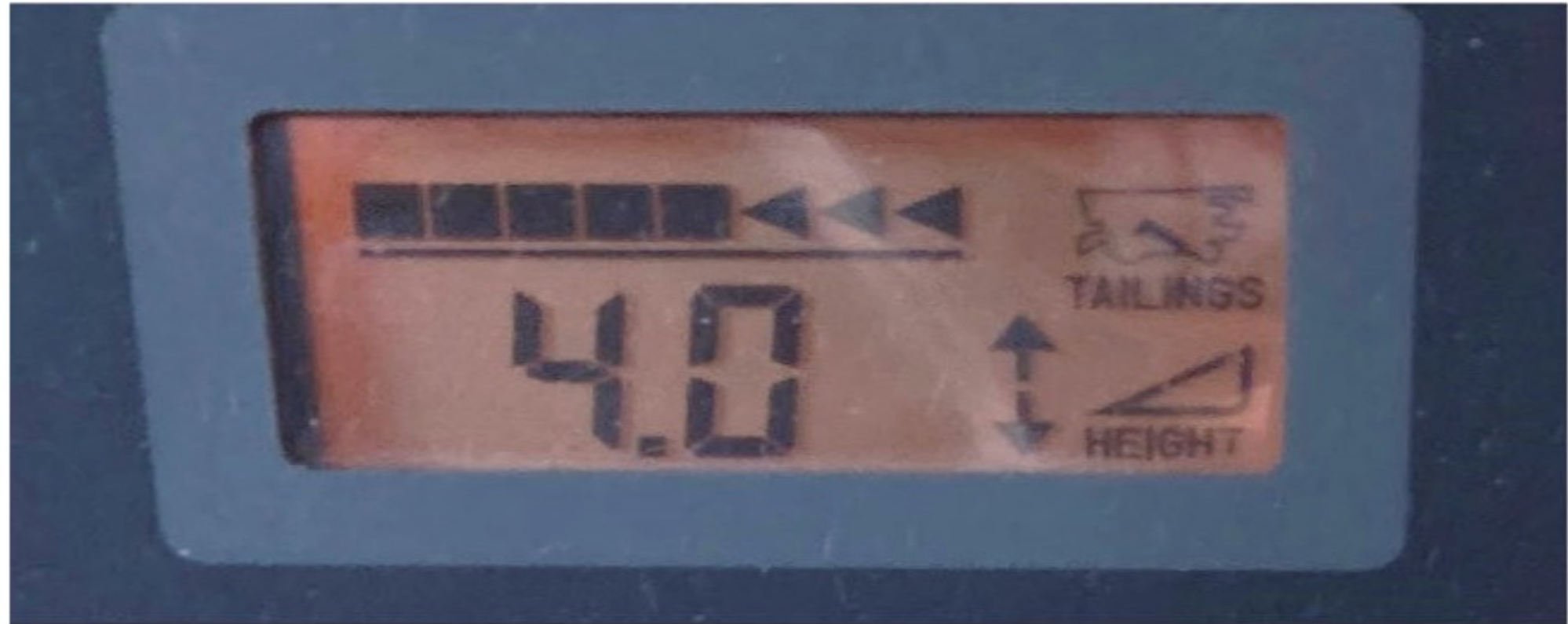
Clean Soybean Sample



Problem: 3/8" Square Bar Concave



Case IH Grain Loss Monitor Showing High Tailings



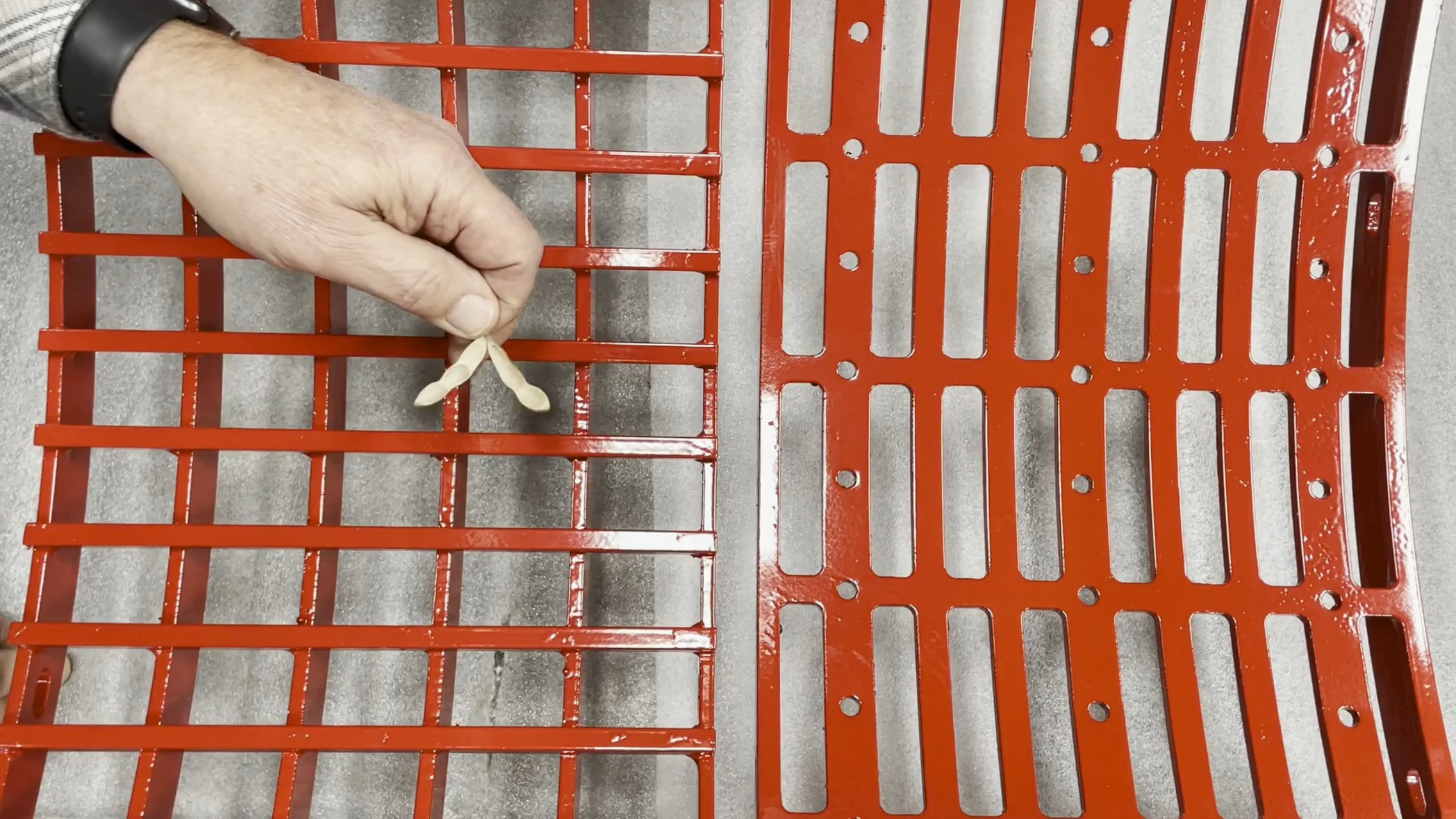
**Case IH Grain Loss Monitor
Showing High Tailings**

Hulls/Chaff in Sample



No MOG Falling Through Calmer MOG Limiting Separating Grates









Grain Loss Monitor Showing Low Sieve Loss & Low Tailings



Clean Soybean Sample



Combine Soybean Harvesting Problems & Solutions

Problems

- Pods in the Sample & High Tailings
- Chaff in the Sample
- Sieve Loss

Solutions

- Cover Plates
- MOG Limiting Inserts
- Slotted Grates for Case IH Combines

Thank you from Marion Calmer!
309 368-1182 (Cell)

www.CalmerCornHeads.com

