

Managing Drought Stressed Corn Silage: Harvest and Pricing

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2012 Drought.....

Don't get caught up in the panic....

**Careful thought, analysis of the data, facts, logic
and informed decision making need to rule.**



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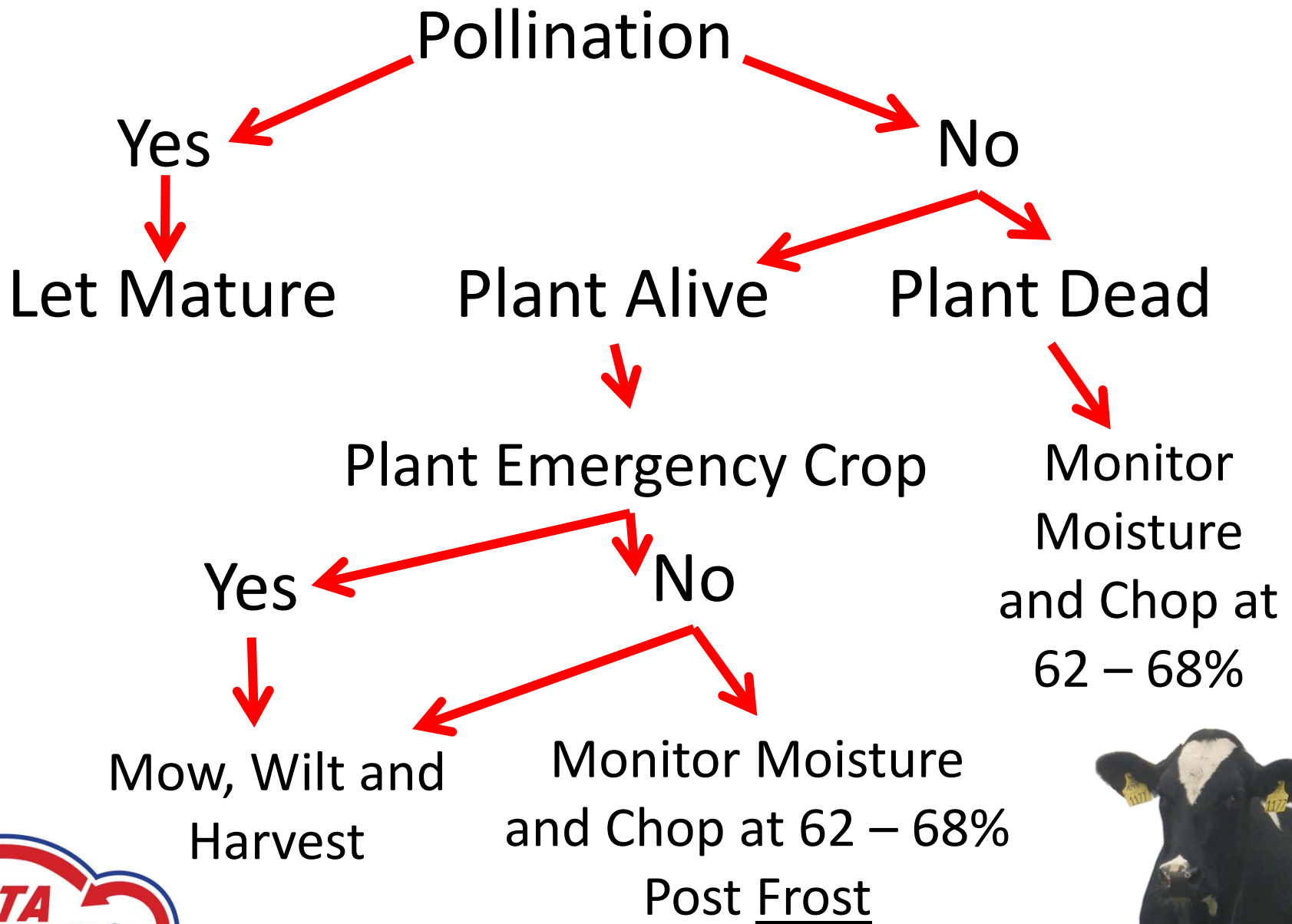


Pollination will Determine Direction

1. Did it pollinate or partially pollinate? If yes, potential to increase yield
2. It did not pollinate- can harvest at any time within moisture guidelines

<http://www.youtube.com/watch?v=IcbTVLIRcA>





Moistures Need to be Monitored!!

Visual estimates of Moistures are

Inaccurate!!



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Moistures Need to be Monitored!!

- **Monitor moisture often and among different maturities, field conditions and hybrids**
 - More variation will be the norm
- **Once chopping moistures are close: run a field chopper through the field for more accuracy**
- **Hybrid maturity, drought tolerance, plant health, insect pressure may influence harvest timing significantly – monitor closely!!**



Moistures

- **Recommend targeting 62-68% moisture**
- **Harvesting wet will result in very acidic & high acetic acid fermentations**
- **Ensiling at high temperatures can give some “funky” fermentations-compounding fermentation problems**
- **Harvesting too dry will restrict fermentation, compromise packing and aerobic stability**



Moistures

- **Once moistures start dropping watch carefully; Moistures can drop as much as 1-3 points/day in certain circumstances**
- **If it rains when harvest is close or happening**
 - **Look at moisture levels again, plant likely to pull up moisture if still alive**
 - **If possible avoid harvest for 5-7 days, nitrates likely**



Nitrates- 2 issues

- **Animals- ingestion**
- **Human- Silo Gases**



Common Nitrate Accumulators

- **Highly Susceptible- Corn, Sorghum, Sudangrass, Small grains**
- **Some weeds- Lambsquarter, Field bindweed, pigweed**



Environmental Causes

- Rain after a period of drought
- Extremely stressed crop- short
- Frost
- Weather extremes- hot or cold
- Cloudy weather
- High nitrogen field applications



Nitrates

- **Normal process- Nitrates taken up by plant incorporated into plant amino acids and protein compounds**
- **Drought stress slows normal process**

Nitrates accumulate in stalk, stem and other plant parts



Nitrates

- Can raise cutter bar- tend to accumulate in lower 1/3 of stalk
- Approximately 30-60% will be lost through fermentation
- Recommend waiting 3-4 weeks before feeding- but test it!!
- Inoculation may help reduce levels more



Guidelines for use of feed with known nitrate content for dairy cows

Reported as

NO3 (ppm)	NO3-N (ppm)	Comment
<4,400	<1,000	Safe under all conditions
<6,600	<1,500	Safe for non-pregnant animals; limit to 50% of ration for pregnant animals
6,600-8,800	1,500-2,000	Limit to 50% of total dry ration
8,800-13,200	2,000-3,000	Limit to 33% of total dry ration
13,200-15,000	3,000-4,000	Limit to 25% of total dry ration
>15,000	>4,000	Do not feed



Additional Thoughts

- Do not feed green chop or a “test” load of forage to animals without testing for nitrates
- Do not graze stressed corn without testing for nitrates
- If corn is baled it will not drop in nitrates



Inoculants

- **UV light kills/reduce natural bacteria populations**
- **Recommend using MTD/1 at a normal rate. Check application rate!!**



So...

If Plant Moisture is above 65%

- Crop N Rich MTD/1 recommended
- If excessive insect, plant damage or because of excess sugar...consider CNR Stage 2 or adding buchneri for feedout stability
- Avoid using buchneri on potentially wet (68% or above) corn silage



So...

If Plant Moisture is below 65%

- ✓ Chop finer (3/8") to eliminate oxygen
- ✓ Pack aggressively
- ✓ Consider feed out rate
- ✓ Consider using Stage 2 or CNR MTD/1 with buchneri



Considerations

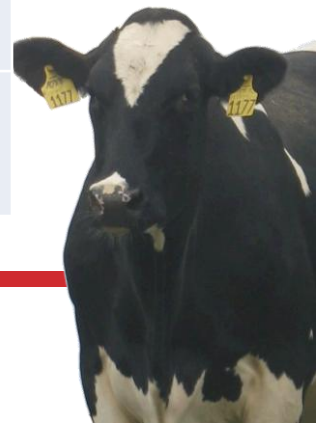
- If working with a custom harvester keep them in the loop and current status of your fields
- Make sure equipment, staff etc. is ready to go
- Do Forage Inventories



Quality Considerations

- ✓ Particle length/processing discussions
- ✓ Frequent testing is important- Variation will be the new norm
- ✓ Know Energy level

	NDF	CP	NEL	Predicted Milk
Drought Stressed Corn	56.9	11.7	0.66	76.3
Normal Corn Silage	40.0	7.5	0.76	92.9



Questions???

Prof Joe Lauer, Univ Wisconsin Agronomy

- <http://corn.agronomy.wisc.edu/Season/>
- <http://wisccorn.blogspot.com/2012/07/corn-management-decisions-during.html>
- <http://www.youtube.com/watch?v=IcbTVLIRcA>

Vita Plus Dairy Performance Blog and resources

- <http://dairyperformance.vitaplus.com/>

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Pricing Corn Silage 2012

July 20th, 2012



Pricing Corn Silage 2012

Straw ←-----→ **Corn Slg**
\$65/ton DM ←-----→ \$160/ton DM
←-----??2012 CS??-----→



Pricing Corn Silage 2012

- Hutjens' estimate: \$90-\$150/ton DM
- Others – 65-85% of regular CS (\$/ton)
- Price as grass hay/silage
- Price as corn silage



Pricing Corn Silage 2012

- Price as grass/small grain hay/silage
 - No or very low grain
 - Total loss for grain producer
 - Fertilizer value = ~\$15-20/ton DM
 - Price at local hay market
 - \$1.00-\$1.30 (?) per point RFV (RFQ?) @ 100% DM
 - Adjust for DM%
 - Includes harvesting (must deduct for standing)



Pricing Corn Silage 2012

- Price as grass/small grain silage/hay

– Example:

- 29.34% DM; 37.44% ADF; 70.51% NDF; 5.74% S+S
- RFV=79; $\$1.25 \times 79 = \$98.75/\text{ton DM}$
- $\$98.75 \times 29.34\% \text{ DM} = \$28.97/\text{ton}$
- Less $\sim \$9/\text{ton}$
harvesting/hauling/packing/storage
- $= \$20/\text{ton}$



Pricing Corn Silage 2012

- Price as CS
- UW pricing spreadsheet
 - Works with some grain
 - Need yield estimate
 - Fair value for seller
 - Fair value for buyer
 - Meet in the middle?



\$/AF ton @ \$8 Corn

Bu/acre:	30	50	75	100
AF tons:	7-8	9-11	12-13	14-16
Stch%:	20%	25%	30%	33%
UW	\$29	\$40	\$48	\$53
PU	\$28	\$41	\$50	\$56



Pricing Corn Silage 2012

- Use common sense
 - Straw selling for \$100-\$125/ton
- Look for buyer's market in some areas
- Crop insurance payments
- Supply and demand still rule



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