

STATE OF THE ALFALFA ADDRESS



*CROP MANAGEMENT CONFERENCE
MADISON, WI
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LONG TERM TRENDS IMPACTING ALFALFA

- ALFALFA BREEDING PROGRAMS
- AVAILABLE VARIETIES
- YIELD POTENTIAL
- PERSISTENCE / WINTER SURVIVAL
- FORAGE QUALITY
- SOIL FERTILITY
- TRANSGENICS

ALFALFA BREEDING PROGRAMS

- *AND THEN THERE WERE 3.....*
 - *FORAGE GENETICS INTERNATIONAL (LOL)*
 - *PIONEER (DUPONT)*
 - *DAIRYLAND / CAL WEST (DOW)*



AVAILABLE ALFALFA VARIETIES

- ALFALFA VARIETIES TODAY LOOK VERY DIFFERENT THAN THOSE OF THE 1990s.
 - SHIFT IN FALL DORMANCY (FD) RATINGS
 - SPECIALIZED TRAITS
 - ❖ FORAGE QUALITY
 - ❖ STANDABILITY
 - ❖ PLH RESISTANCE
 - ❖ SOIL SPECIFIC (WET, SALT, ETC.)
 - ❖ GLYPHOSATE RESISTANCE
 - HYBRIDS

AVAILABLE ALFALFA VARIETIES

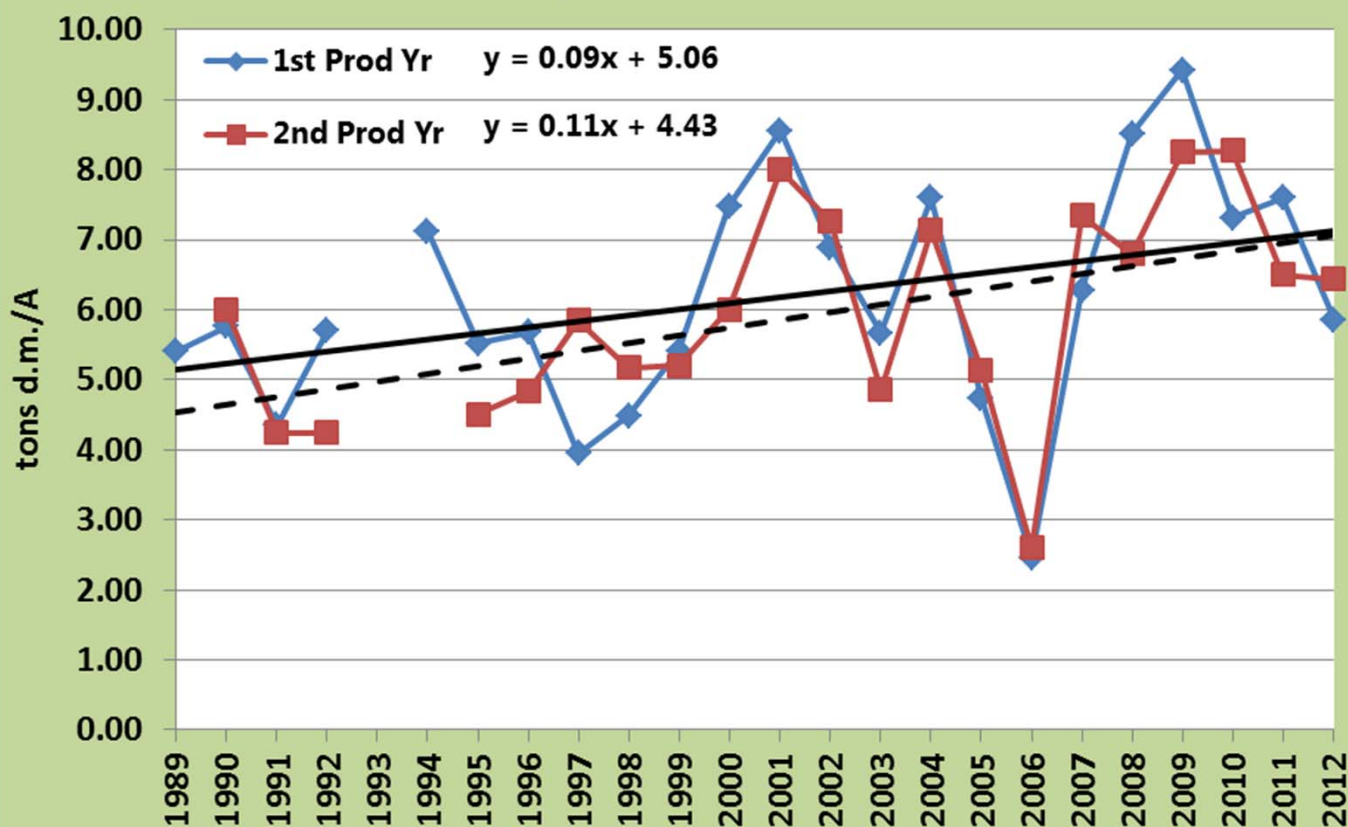
Fall Dormancy ratings of alfalfa varieties tested in the UW performance trials – 1995 vs. 2012

FD Rating	1995	2012
	% of total	
2	19	4
3	42	12
4	38	71
5	1	13
# varieties	103	52



YIELD TRENDS AND POTENTIAL

UW Variety Trial Average Alfalfa Yield at
Arlington (1989-2012)



PERSISTENCE AND WINTER SURVIVAL

- WINTERKILL YEARS OF EARLY 1990s SHIFTED FOCUS OF BREEDING PROGRAMS.
- SELECTIONS MADE UNDER INTENSE CUTTING REGIMES.
- THE RELATIONSHIP BETWEEN FALL DORMANCY, YIELD POTENTIAL, AND PERSISTENCE HAS BEEN BROKEN.
 - YIELD DOESN'T NEED TO BE SACRIFICED FOR PERSISTENCE/WINTER SURVIVAL.

PERSISTENCE AND WINTER SURVIVAL

Typical "1990s" alfalfa varieties

Low FD = best winter survival, low yield, poor under intensive cutting mgt.

High FD = faster regrowth, higher initial yield, poor winter survival/persistence

	Winter Survival Score (1-6)	3 rd -Yr. Persistence Index (10-1)
FD2	2.6	3.2
FD4	4.7	2.3

New generation alfalfa (means of several varieties)

No relationship of FD to winter survival

High yielding and persistent

	Winter Survival Score (1-6)	3 rd -Yr. Persistence Index (10-1)
FD4	1.7	7.9
FD5	1.6	7.9

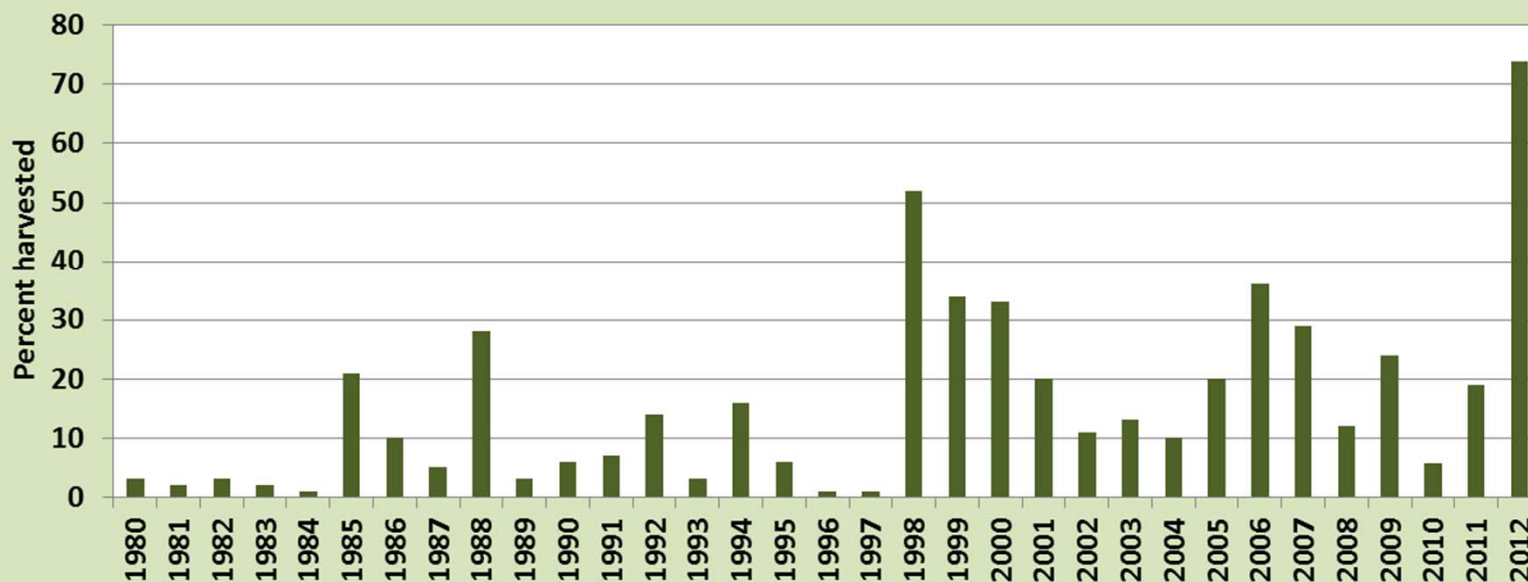
Data provided by M. McCaslin, Forage Genetics Int.

FORAGE QUALITY

- MUCH HIGHER QUALITY ALFALFA BEING FED.
- FACTORS INCLUDE:
 - ALFALFA SCISSORS-CUT PROGRAMS
 - NUTRITIONISTS
 - IMPROVED VARIETIES AND TRAITS
- GROWERS ARE CUTTING MUCH EARLIER AND MORE FREQUENTLY.

FORAGE QUALITY

Percent of 1st-cut hay harvested in Wisconsin on June 1st (1980-2012)



Years	Average % 1 st -cut harvested by June 1
1980-89	8
1990-99	14
2000-09	21

Source: NASS

SOIL FERTILITY

- SOIL NUTRIENT LEVELS ARE CHANGING AND SOMETIMES IMPACTING ALFALFA PRODUCTIVITY.
- OF PARTICULAR CONCERN: K AND S
 - MORE CORN SILAGE AND HIGHER FERTILIZER PRICE ARE TRENDING K LEVELS DOWN.
 - LACK OF S IN RAINFALL TRENDING S LEVELS DOWN.
 - HIGHER YIELDS = HIGHER REMOVAL RATES

TRANSGENICS

- ALFALFA – LATE TO THE PARTY, BUT...
- RR ALFALFA BEGINS THE TREND FOR MORE TRANSGENIC TRAITS
 - LOW LIGNIN
 - DROUGHT TOLERANCE
 - "YIELD" GENES
 - PEST RESISTANCE (INSECTS AND DISEASES)
 - IMPROVED PROTEIN UTILIZATION

CURRENT SITUATION

- 2012 STRESSES
 - DROUGHT
 - SHORT OR MORE FREQUENT CUT INTERVALS
 - INSECTS
- SEED
- HAY PRICE
- FUNGICIDES
- FORAGE INVENTORY

STRESS---DROUGHT

- IT'S A NEW YEAR!
- DEGREE OF DROUGHT HIGHLY VARIABLE.
- IF THIS WAS THE ONLY STRESS FACTOR IN 2012, STANDS WILL BOUNCE BACK.



STRESS---FREQUENT CUTTING

- DROUGHT
 - FEWER DAYS TO FLOWER
- EARLY SPRING
 - LONGER GROWING SEASON
- HIGH NUMBER OF GDUs
 - FEWER DAYS TO FLOWER
- A DRY SEPTEMBER
 - LIMITED FALL PRODUCTION....
PERHAPS A POSITIVE



STRESS---INSECTS

- *VARIEGATED CUTWORM*
- *ALFALFA WEEVIL*
- *POTATO LEAFHOPPER*



Photo: J. Laufenberg



STRESS-FEST

Drought

Potato
Leafhoppers



5-6 cuttings

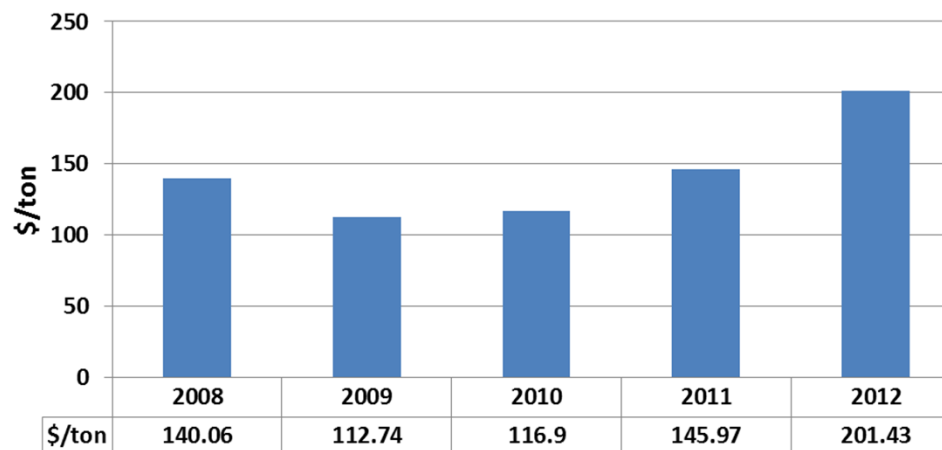
Late fall cut

SEED SITUATION

- LOOKS TO BE ADEQUATE SEED AVAILABLE FOR 2013.
- OF COURSE, BEST VARIETIES IN SHORTEST SUPPLY.
- MORE AND MORE COATED SEED
→ 1/3 OF TOTAL WEIGHT

ALFALFA HAY PRICES

Monthly All Alfalfa Hay Mean Price for the Upper Midwest (2008-2012)



K. Barnett, UW-Extension

Rock Valley Hay Auction for Thursday, December 06, 2012

All prices dollars per ton, except where noted.

All sales FOB Rock Valley, Iowa, vicinity.

Receipts: 85 loads

One load Small Squares equals approximately 5 tons;

Large Squares and Large Rounds range from 10-25 tons per load.

Alfalfa: Supreme: Large Squares, 5 loads 300.00-335.00; Large Rounds, 8 loads 275.00-290.00. Premium: Large Square, 3 loads 270.00-275.00; Large Rounds, 12 loads 255.00-270.00. Good: Large Square, 1 load 220.00; Large Rounds, 1 load 235.00.

FUNGICIDES

- ALFALFA – THE LAST FRONTIER
- A LOT OF RESEARCH CURRENTLY BEING DONE.
- RESULTS: VARIABLE
- IF NOTHING ELSE.....
THE NEED FOR PLH
CONTROL VALIDATED.



FARM FORAGE INVENTORY

- RANGE FROM OK TO CRITICAL.
- SOME MAY NEED NORMAL PRODUCTION + MORE
- ASSESS THE SITUATION
- WHAT'S THE PLAN?
 - SEED MORE ACRES
 - BUY STANDING ALFALFA
 - ALTERNATIVE FEED
- EVALUATE STANDS EARLY AND OFTEN IN SPRING.



CONCLUSION

- *SOME (HOPEFULLY) SHORT-TERM PRODUCTION AND INVENTORY ISSUES TO DEAL WITH, BUT....*
- *A RELATIVELY BRIGHT FUTURE FOR ALFALFA.*

