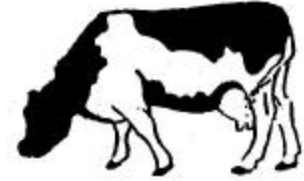


DAIRY NOTES

UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION

KINGS COUNTY



February 2001

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Dairy Element: Public review period extended for two weeks to Feb. 20th

In the last newsletter I announced that Kings County had released its draft *Dairy Element and Program EIR* for public review. The purpose of this document is to spell out comprehensive goals, objectives and policies to guide the development, expansion and operation of dairies within Kings County. Originally the review period was to end on February 5th, but it has been extended for two weeks. The review period will now end on **February 20th at 5 p.m.**

That means you still have time to **submit your letters to the Planning Department if you want to have input! They would really appreciate hearing from you about what has been proposed.**

You can get a copy of the draft *Dairy Element* by calling the Kings County Planning Agency at 582-3211 ext. 2670. If after reviewing the document you have any questions or comments about it, you can submit written comments (a letter) to the Planning Agency. The letter must be delivered by 5 p.m. on Feb. 20th. Following the close of the public comment period, responses to all the comments will be prepared. It is expected that the Kings County Planning Commission and then the Kings County Board of Supervisors will consider the Dairy Element between mid-March to early April.

Environmental Stewardship Classes: Feb. 28th, March 7th & 14th

The next round of this three part series will be held in Hanford from 10 AM to noon at the Kings County Ag Center multi-purpose room on three consecutive Wednesdays starting February 28th. If you haven't come to the classes yet, now is the time to plan for it. Call to register at (559) 582-3211 ext. 2730. The class is free for dairy producers.

Environmental Certification Pre-Evaluation Class – March 14th

This class is for producers who have completed the three classes above and who want to have a voluntary environmental certification of their farm done by the California Dairy Quality Assurance Program. The class meets for three hours and walks you through the evaluation procedure and makes sure you have done all the necessary preparation before the evaluators arrive on your farm. The class will meet at the Kings County Ag Center multi-purpose room in Hanford from 1 to 4 PM on March 14th. Please call to register at (559) 582-3211 ext. 2730.

EPA Public Meeting on CAFO rules

EPA proposed rules for confined animal feeding operations (CAFO's) will be presented at a meeting in Riverside, California on March 13th from 1 to 5 PM at the Riverside Convention Center.

Check the Federal Register (Jan 29) or watch local media for details.

Results of Corn Silage Variety Trials

Variety trials were held in Kings and Tulare counties during the summer of 2000. Yield and feeding value results are listed in the following tables. Weather last summer was fairly good for high corn yields except for a few hot days that had the potential to reduce yields if plants were pollinating at that time. Corn leafhoppers hurt some late-planted fields, particularly in Kings County.

The Kings County trial site was at 1½ Ave. and highway 198, near the Kings-Tulare county line where the soils are classified as Nord fine sandy loam. Prior to planting the field received 35 units/acre of N in the form of UAN-32 and was treated with Dual, a pre-emergence herbicide. Pounce was incorporated at planting for cutworm control. The field was planted on June 13 (a lovely day that reached nearly 107 °F before we were finished). Eighteen varieties were planted on 38-inch rows in 6 row plots that were 1230' long. These plots were replicated three times, so we had a total of 18 X 3 = 54 plots, which took up nearly the entire 40 acre field. Two weeks after planting, 130 units/acre of N and zinc were side-dressed. Comite was applied for spider mite control in mid-July. Another 30 units/acre of N were water run with each of the 3rd and 4th irrigations. Dairy lagoon water was applied in two or three of the seven irrigations that the field received during the season.

The field had good moisture right up to harvest on September 26, 105 days from planting. Overall, the harvested whole plant moisture was 67.4% or 32.6% dry matter (averaged for all varieties). If you scan down the % dry matter column in the table for Kings County you will see that there was a wide range in dry matters among the 18 varieties. A few varieties were very dry, notably ABI 9696 and DeKalb 697 which were close to 40% dry matter. Southland 1836 was on the wet side at only 26% dry matter. Ideally, we like to see corn for silage harvested at about 30% dry matter (70% moisture). The range in dry matters for this trial is mostly an

indication of different maturity among the varieties. Though we try to match maturity as closely as possible, it doesn't always work out that way.

Disease pressure may have been another factor that contributed to excessive dryness for some varieties in the Kings County trial. Late season corn leafhoppers were thick in some fields this year. Corn leafhoppers can carry a microorganism that causes the corn stunt disease. This disease hit Kings County corn fields hard in 1997. It is mainly a problem in late-planted corn. Symptoms vary depending on how mature the corn is when it gets infected but can include a reddish streaking of the leaves, poorly filled ears that start to dry too soon, short bushy plants with multiple small ears and plants that may dry from the top down. We sampled a few suspect fields this year and tests confirmed our suspicions that corn stunt was involved. I sampled a few plants from our plots and they also tested positive. Ours was not a trial designed to screen hybrids for susceptibility to the disease. Overall the trial looked good and the yields were respectable so any impact that the organism had would be minimal because the corn was close to harvest at the time the leafhoppers brought the disease in. But based on finding the organism in this field I would sure try to have my corn planted no later than June 15th next season.

If you have any questions or comments about this information please give me a call. A great deal of time and effort go into planning, planting, monitoring and harvesting these trials. If you appreciate the information derived from them be sure to thank the people (growers, seed people, commercial harvesting crews) who so willingly cooperate to make them possible. I am especially grateful to Don Giacomazzi and Danell Bros. harvest crews for their assistance with the Kings County trial.

Carol Collar, UC Farm Advisor
Dairy, Livestock & Forages

2000 Kings County UCCE Silage Corn Variety Trial

Cooperator: Don Giacomazzi
 Harvested by: Danell Bros.
 Planted: June 13, 2000
 Harvested: Sept. 26 @ 105 days

Fertilizer: 35 units N pre-plant; 130 units N sidedressed before 1st irrigation;
 30 units N water turn in each of 3rd and 4th irrigations for a total of 225 units
 of commercial N. Dairy lagoon water with some irrigations.
 Field has received annual applications of dairy manure solids for many years.

UC Farm Advisor: Carol Collar
 UC Field Assistant: Joe Padilla
 Site: Corner of 1 1/2 Ave and 198
 Plot size: 6- 38"rows X 1230 ft,3 reps

		Tons/Acre	%	Tons/Acre	Plants		Plant	Ear	Ear	Lbs/ear.
		as	Dry Matter	adjusted to	per acre	Seedling	height	height	%	@
Company	Brand	harvested	at harvest	30% DM		vigor	(ft.)	(ft.)	DM	60% DM
ABI	9696	23.4	39.2	30.4 a	30670	8.3	9.5	4.3	58.1	0.70
Baglietto	5674	27.7	31.6	29.2 ab	27830	9.5	10.8	5.1	53.4	0.70
DeKalb	679	24.4	35.8	29.0 ab	29670	9.3	9.7	4.6	59.6	0.66
DeKalb	697	21.8	39.6	28.7 abc	32500	10.0	9.2	4.2	58.6	0.65
NK	8214	27.6	31.2	28.7 abc	29170	9.2	10.0	4.2	55.1	0.69
Pioneer	3223	25.1	34.1	28.5 abc	29330	9.3	9.3	4.7	57.5	0.66
Germain's	4138	25.6	32.9	28.1 abcd	24670	9.3	9.9	4.3	58.9	0.74
Cargill	9027	24.6	33.9	27.7 bcd	29330	8.7	9.8	4.1	58.6	0.65
Novartis	91-R9	26.8	30.6	27.3 bcde	24170	9.7	10.8	4.9	53.6	0.63
Pioneer	31G98	25.9	30.4	26.2 cdef	26500	9.3	9.3	4.5	57.4	0.70
Southland	1836	30.0	26.2	26.2 cdef	27170	3.7	10.7	5.2	46.6	0.46
NC+	7507	26.5	28.8	25.5 defg	26500	4.7	9.9	4.7	52.7	0.63
Asgrow	938	25.1	29.5	24.7 efg	22330	9.7	9.8	4.6	55.2	0.68
Seedtec	7638	25.2	29.4	24.7 efg	23170	3.3	10.6	5.0	54.1	0.65
Seedtec	7600	21.7	33.8	24.4 fg	28830	5.0	10.9	4.0	54.0	0.60
ABI	9657	19.7	36.3	23.8 fg	22170	3.0	9.3	3.8	57.8	0.74
Dairyland	1020	24.5	28.7	23.4 g	20500	2.3	10.3	4.8	49.6	0.65
SC	1181	20.0	34.9	23.3 g	25330	4.5	9.8	4.3	56.7	0.62
<i>Coefficient of Variation %</i>		6.49	3.45	6.12	11.98	13.81	3.56	8.50	4.35	6.92
<i>LSD (0.05)</i>		2.628	1.839	2.670	5199	1.621	0.581	0.627	3.943	0.073
<i>average of all plots</i>		24.8	32.6	26.7	26490	7.2	10.0	4.5	55.4	0.66

Plants per acre were measured 4 weeks after planting.

A visual assessment of seedling vigor was made 2 weeks after planting. A scale of 1-10 was used with 10 being best.

Ear weights were measured at the west end of the field in all 3 reps. Ten consecutive ears were harvested, weighed and sampled for dry matter.

Feeding value (quality parameters) for these corn hybrids is listed on the following page.

2000 Kings County UCCE Silage Corn Variety Trial

Cooperator: Don Giacomazzi

Harvester: Danell Bros.

Planted: June 13, 2000

Harvested: September 26, 2000

		Yield Summaries ¹			Quality Parameters ²			
Company	Brand	Tons/A as harvested	% Dry Matter At Harvest	Tons/A adjusted to 30% DM	% crude protein	% ADF	% NDF	TDN
ABI	9696	23.4	39.2	30.4 a	7.0	25.9	40.1	69.8
Baglietto	5674	27.7	31.6	29.2 ab	7.7	25.6	39.4	70.0
DeKalb	679	24.4	35.8	29.0 ab	7.2	25.5	40.1	70.1
DeKalb	697	21.8	39.6	28.7 abc	6.6	26.7	42.8	69.3
NK	8214	27.6	31.2	28.7 abc	7.7	25.4	39.7	70.1
Pioneer	3223	25.1	34.1	28.5 abc	7.6	22.3	35.5	72.1
Germain's	4138	25.6	32.9	28.1 abcd	7.6	26.3	41.0	69.5
Cargill	9027	24.6	33.9	27.7 bcd	6.6	27.0	42.4	69.1
Novartis	91-R9	26.8	30.6	27.3 bcde	7.7	27.1	42.6	69.0
Pioneer	31G98	25.9	30.4	26.2 cdef	7.2	23.5	37.1	71.4
Southland	1836	30.0	26.2	26.2 cdef	8.7	29.9	47.2	67.1
NC+	7507	26.5	28.8	25.5 defg	7.5	28.2	44.3	68.3
Asgrow	938	25.1	29.5	24.7 efg	7.5	27.4	43.0	68.8
Seedtec	7638	25.2	29.4	24.7 efg	7.6	26.2	41.3	69.6
Seedtec	7600	21.7	33.8	24.4 fg	7.9	27.0	43.9	69.1
ABI	9657	19.7	36.3	23.8 fg	8.4	22.5	36.1	72.0
Dairyland	1020	24.5	28.7	23.4 g	7.7	26.2	41.1	69.6
SC	1181	20.0	34.9	23.3 g	8.1	23.7	38.2	71.3
<i>Coefficient of Variation %</i>		6.49	3.45	6.12	5.97	6.58	6.27	1.61
<i>LSD (0.05)</i>		2.628	1.839	2.670	0.74	2.79	4.20	1.85
<i>average of all plots</i>		24.8	32.6	26.7	7.6	25.9	40.9	69.8

¹Values within a column followed by a common letter do not differ significantly at the 5% level of probability.

²Percent crude protein, acid detergent fiber (ADF) and neutral detergent fiber (NDF) measured by Near Infra-Red (NIR) Spectroscopy.

Total Digestible Nutrients (TDN) calculated from ADF using the Penn State formula.



2000 Tulare County Silage Corn Trial

Cooperator: Mike Santos

Planted: May 31, 2000

Harvested: September 8, 2000, by Eugene Nunes and Sons

Soils: chino silty clay loam and foster loam; 38-inch row spacing

Fertilizer: 20 tons solid manure applied prior to pre-irrigation, 125 units anhydrous

ammonia sidedressed prior to first irrigation, lagoon water in some irrigations

Between first and second irrigations, Banvel was applied for weeds, Comite for spider mites

Company	Brand	Yield/A as harvested tons	Moisture at harvest %	Yield/A adj. To 70% Moisture tons	Initial Plant Population	After harvest Plant Population	Plant height ft.	Ear height ft.
Asgrow	RX913	47.5 a	77.0	36.3	27,943	30,091	12.6 def	7.4 bc
Baglietto Seed	5674	45.8 ab	75.9	36.7	34,500	30,367	13.8 a	7.8 a
Dairyland Seed	1020	45.3 ab	76.8	35.0	32,473	27,533	13.2 bc	7.5 abc
Novartis	N91-R9	45.0 ab	76.7	34.7	31,413	29,767	13.8 a	7.8 ab
ABI	9696	42.9 abc	76.3	33.9	28,917	27,133	12.2 fghi	7.3 cd
Southland Seed Co.	1836	42.8 abc	78.3	31.1	29,140	27,967	12.1 ghij	6.9 de
SeedTec	ST7638	42.2 abc	76.1	33.5	28,290	26,833	13.5 ab	7.7 ab
Pioneer	31G98	41.9 abc	75.5	34.1	28,250	28,033	12.5 efg	7.1 cde
Cargill	9027	40.9 bcd	73.4	36.3	28,583	26,667	12.9 cd	6.8 ef
United AgriProducts	9110	40.5 bcd	75.7	32.7	29,290	27,267	11.8 ij	6.4 f
NC+	NC+7507	40.3 bcd	77.7	29.9	28,223	24,633	11.7 j	6.9 de
Pioneer(Field Variety)	32K61	39.6 cde	73.5	34.8	29,028	28,983	12.6 def	6.9 de
Douglas King	6125	39.1 cde	76.6	30.5	29,553	26,000	12.3 efgh	6.9 de
DeKalb	697	35.8 de	72.6	32.8	31,557	28,700	11.8 ij	6.8 ef
SC1181	SC1181	33.9 e	73.9	29.4	29,137	25,333	12.0 hij	6.8 ef
coefficient of variability (%)		7.2	1.6	8.9	4.5	5.1	1.9	3.2
LSD		5.0 @P=5%	2.0	NS @ P=5%	2.2	2.4	0.4	0.4

Values within a column followed by a common letter do not differ from each other at the 5% level of probability using Duncan's Multiple Range.

Harvest data are based on 3 replications and 3 of the 6 rows of each plot.

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Oakland, CA 94612-3560**

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In This Issue of Dairy Notes

- *Public review for draft Dairy Element extended to February 20th*
- *Environmental Stewardship Classes - February 28, March 7 & 14*
- *Environmental Pre-Evaluation Class - March 14*
- *EPA Meeting on CAFO Rules - March 13*
- *Corn Silage Variety Trial Results - Kings and Tulare Counties*

**UC Farm Advisor
Dairy, Livestock & Forages**