

Results Of 2001 Winter Forage Variety Trial
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The 2001 winter forage trial was conducted in cooperation with den Dulk Farming. The field was planted on December 12, 2000 in a 35-acre field east of 4th Ave and north of Excelsior. Each of the nine forage entries was planted in four blocks or plots. The plots were planted in random order in strips that were 20 feet wide by 1/4 mile long. The field was harvested on May 22. A 15' swath was cut down the center of each plot and immediately chopped into an empty truck. Trucks were weighed and forage samples were collected at the silage pit.

Yield and feeding value data are in the table that follows. The first column in the table below shows yield in tons per acre on an "as harvested" basis. These yields ranged from a little over 14¹/₂ tons for Yecora Rojo wheat to 21 tons per acre for Trical 111 triticale. The next column shows the percent dry matter at harvest. Last May was exceptionally hot which caused the field to dry down rapidly the week prior to harvest. This explains the high dry matter (low moisture) at harvest. The forage trial averaged 40% dry matter (60% moisture), which is a bit too dry. Ideally one should shoot for 30 to 35% dry matter to ensure a good pack in the silage stack.

The next column shows the yields of all the entries adjusted to a common dry matter of 30%. The adjusted yield data make it possible to compare the relative yields of the different forages at the same moisture level, just like adjusting milk production to a common milk fat percentage allows you to compare milk production of individual cows. Baglietto SSK wheat had the highest corrected yield in this trial, although from a statistical standpoint there were no differences among the entries. Statistical tests of the data reveal that any of the other varieties could have ranked on top. The numbers in bold at the bottom of the table relate to the statistical analysis. The percent crude protein (CP) and acid detergent fiber (ADF) for each of the forages are listed in the next two columns. Crude protein ranged from 10.5% for Trical 111 to 12% for Brooks. Acid detergent fiber ranged from 27.5% for Yecora Rojo to 32.5% for Trical 111. The triticale was taller than all the wheat entries and despite its height it had very little lodging. Lodging was a problem for Zancor, the tallest wheat, and also for Brooks and Baglietto SSK wheat.

Rust, a leaf disease of winter forages was most severe for Yecora Rojo wheat, but it was also heavy in the Brooks and Eldon wheat plots. For more information on winter forages and to see results of other local, regional or statewide grain trials there are websites that you can visit. Local forage trials are posted on my website, <http://countyofkings.com/kingsce>. From there you can link to the UC Davis Small Grains website if you want more information on varieties that don't appear in our tests. The grain trials provide information on grain yield, disease and lodging ratings and other characteristics that can help give you a sense of how the varieties compare to one another. Forage yield is not listed, but can be estimated from grain yield and plant height.

I am especially grateful to cooperator Gil den Dulk for his willingness to provide a site, a planter and some extra time for planting the trial. Special thanks also go to the harvesting crew from Netto Ag Inc. for the care they took in harvesting it. Without help like this from the ag community we would not be able to provide unbiased information from field trials like this one. Let them know you appreciate their support of the UCCE forage program next time you see them!

2001 Kings/Tulare Counties UC Cooperative Extension Winter Forage Trial

Cooperator: den Dulk Farming, Gil den dulk
 UC Farm Advisors: Carol Collar (Kings) and Steve Wright (Tulare)
 Harvested by: Dias & Fragoso
 Planted: December 12, 2000 @ 135 lbs/acre
 Harvested: May 22, 2001

* denotes non-certified seed;
 all others were CCIA certified

Feed analysis provided by Dairyland Lab

Cultivar	cereal type	tons/acre as harvested	% DM at harvest	tons/acre at 30% DM	plant ht. (in)	% CP	% ADF	% lodging
Baglietto SSK *	Wheat	18.4	40.3	24.7	42	10.6	30.6	33
Kronos	Durum wheat	19.8	36.3	23.8	38	11.1	27.6	3
Bonus	Wheat	17.1	41.6	23.7	35	11.8	28.0	1
Brooks	Wheat	15.6	44.9	23.4	39	12.0	28.4	33
Trical 111	Triticale	21.0	33.2	23.3	46	10.5	32.5	4
Eldon	Wheat	18.0	38.2	23.0	39	10.6	28.0	3
Express	Wheat	17.3	39.7	22.8	38	11.5	29.8	0
Yecora Rojo	Wheat	14.6	46.7	22.6	35	11.7	27.5	9
Zancor *	Wheat	17.2	39.5	22.6	40	11.3	31.9	44
Mean (4 reps)		17.7	40.0	23.3	39.2	11.2	29.36	14.25
CV %		6.82	6.10	8.09	7.02	3.27	4.08	122.4
LSD(.05)		1.761	3.570	2.760	4.03	0.537	1.754	25.51

CP=Crude protein ADF=Acid Detergent Fiber – a measure of cellulose and lignin; the fibrous, less digestible parts of the plant.

Description of statistical terms (in bold): Mean = the numerical average; CV% = the coefficient of variation. It is the standard deviation expressed as a % of the mean of all the plots. For example there was very little variation in % crude protein (CV is 3.27) but huge variation in the % lodging (CV is 122.4). Generally, the lower the CV, the more confidence you can have in the data.

LSD = Least significant difference. It is a statistical test used to determine whether differences between varieties are real or are just the result of random variation within a field or analytical process. If you compare two varieties in a column, and the difference between them is greater than the LSD value, then you can be 95% sure that the difference is real, and not just due to chance.

THE VALUE OF CERTIFIED SEED -CALIF. CROP IMPROVEMENT ASSOC. (CCIA)
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The CCIA is a non-profit corporation that provides seed certification services in California. Seed certification is a voluntary quality assurance program for various crops including small grains. Varieties that are entered into this program have been evaluated for their genetic integrity and for their unique agronomic characteristics of pest resistance, adaptability, uniformity, quality and yield. Seed production is closely monitored to prevent out-crossing, weed, other crop, and disease contamination that may negatively affect seed quality. The certification process provides a tracking and inspection system that ensures reliability. Many small grains planted for forage are enrolled in the CCIA program and others are not. The tag on the seed bag identifies seed that is CCIA certified. Two of the wheat entries in our forage trial were non-certified, Baglietto SSK and Zancor. Use of common seed that is not certified has a certain amount of risk because you must take on good faith that what is delivered is reliable.