

INTRODUCTION AND STATEWIDE OVERVIEW OF ALFALFA

Dan Putnam¹

I would like to welcome you to Redding, CA, and to the 24th California Alfalfa Symposium. This is the first time that the Symposium has been held this far north of the geographical center of the state, and this far north of the major production areas of California (the San Joaquin and Imperial Valleys). It is also the first time the California Alfalfa Symposium has been co-sponsored by the neighboring states of Oregon and Nevada. We welcome their contributions and participation. Their co-sponsorship is a recognition that expertise knows no boundaries, and that we can accomplish much for agriculture through cooperation across borders.

The 1994 California alfalfa Symposium was designed to present important and relevant information of interest to the industry as a whole. However, the location of this year's symposium, at the cusp between the Sacramento River Valley, and the Intermountain Valleys of northern California and neighboring states, provides us with an opportunity to focus on issues of importance to growers and industry representatives from this region.

Alfalfa is a vital crop to the agricultural economy of Northern California. The counties north of Sacramento contains about 22% of the state's alfalfa acreage and was worth over \$107 million dollars in direct sales (Table 1). In addition to its general economic value to the state, alfalfa is the life blood of many individual ranches in the Intermountain regions of the West. Many simply would not exist without this productive and versatile crop. Alfalfa is also important to grazing animals and the horse industry in this region. It is probably not an exaggeration to say that alfalfa is central to the agricultural economy of northern California and to the adjacent counties of the neighboring states of Nevada and Oregon.

Alfalfa as a crop is marching relentlessly ahead in productivity throughout western states. In California, average yields this year were about 7.2 t/acre, which is about the same as last year, but a clear jump from the 1980s when the average yield was approximately 6.5 t/a. Long term average productivity of alfalfa has steadily increased in California about 1/2 t/a per year throughout the past 70 years, and this trend shows no sign of relenting. This is a tribute to the management ability of alfalfa growers, to their adaptation of new varieties and technologies, and to their innovation in producing alfalfa in a wide range of environments.

However, alfalfa as a crop is also facing several critical and important issues in the West. Acreage of alfalfa in California has declined to less than 1 million acres in 1993, from a high of over 1.2 in the early 1980s. Over the past 5 years acreage has declined from about 1.02 million to about 950,000 acres (CDFA). This follows a trend which is similar for most of the field crops (wheat, sugarbeets, beans, etc.) which are slowly being replaced with higher value specialty crops. However, there are pressures on alfalfa in addition to the replacement with higher value crops.

¹Extension Agronomist, Department of Agronomy and Range Science, University of California, Davis. CA 95616.

These have to do primarily with the costs and availability of water, but also to urban pressures and environmental constraints. Although alfalfa growers must contend with many production and marketing issues, efficient and economical use of water is undoubtedly the most important single factor impacting the future of alfalfa in the West.

The demand side of alfalfa from a grower's perspective continues to look promising. Now that California is the number one dairy state in the US according to USDA figures, the demand side of the alfalfa equation appears as strong as ever. This means that demand for high quality alfalfa is going to continue to be a significant part of alfalfa marketing, although supplies may not always be available. Currently, we import significant amounts of hay from Nevada, Arizona, Utah, and Oregon, a total of 575,000 tons in 1993, and a total of 145,000 tons of cubes, mostly from Utah. This is a total of about 10.5% of the state's alfalfa production. However, about 634,000 tons of alfalfa were also exported as compressed hay, cubes, or pellets from California ports in 1993, or slightly more than 9%, which indicates that the state may be almost, but not quite, self-sufficient in alfalfa (CDFA figures). The prices from late 1993 through the past summer have remained strong, even through the peak of the production period, indicating a relatively good situation for growers, perhaps making up for losses during past down-times.

In this symposium, we have sought to try to address many aspects of these issues facing alfalfa, for now and in the future. The morning of the first day is devoted to alfalfa production and economics. We will address a number of issues from cultivar selection and stand establishment, to fertility management, date of planting, and old stand management. During the afternoon of the first day, we will focus on management of alfalfa for forage quality, and how this goal is balanced with the goals of high yield and stand longevity. The second day consists of concurrent sessions, and we will focus on alfalfa pest management, alfalfa marketing, and alfalfa irrigation, using a workshop approach. Attendees will have a choice of two out of three sessions.

I feel the committee has put together an excellent program, and is to be commended for its work. This program was the result of a highly collaborative effort. The members of the committee include: **Becky Bingham** (UC Davis Adm. Asst.), **Harry Carlson** (UC Coop. Extn. Farm Advisor, Tulalake), **Marsha Campbell** (UC Coop. Extn. Farm Advisor, Stanislaus Co.), **Mick Canevari** (UC Coop. Extn. Farm Advisor, San Joaquin Co.), **Carol Frate** (UC Coop. Extn., Tulare Co.), **Ike Kawaguchi** (Plant Breeder, IK Seeds, Davis, CA), **Rachael Freeman Long** (UC Coop. Extn. Farm Advisor, Yolo Co.) **Dan Marcum** (UC Coop. Extn. Farm Advisor, Shasta/Lassen Cos.), **Shannon Mueller** (UC Coop. Extn. Farm Advisor, Fresno Co.), **Pat Oilar** (grower, Shasta Co.), **Steve Orloff** (UC Coop. Extn. Farm Advisor, Siskiyou Co.), **Barbara Reed** (UC Coop. Extn. Farm Advisor, Glenn/Colusa Cos.), and **Larry Teuber** (Professor, UC Davis). I wanted to express my thanks to **Robert Norris**, Professor, Weed Scientist, and artist extraordinaire who designed the CA Alfalfa Workgroup logo which adorns this year's proceedings and program. A special thanks to our colleagues from Oregon & Nevada, especially **David Hanaway** from Oregon State University and **Gene Wheeler** from University of Nevada Cooperative Extension. We were especially saddened to hear of Gene's untimely death just a few weeks ago. Gene was very helpful in setting up this symposium. He was active in his work on alfalfa for Nevada growers, and was always generous with his time to the industry. He will be missed, not only by the growers in Nevada but by many colleagues in California and other states.

Table 1. Summary Statistics for California, 1993. Compiled from County Agricultural Commissioner's reports.*

County	Acreage	Yield (t/a)	Production (t)	Value (X \$1,000)
<i>Intermountain</i>				
Lassen	32,000	4.50	144,000	\$13,680
Mono	6,000	6.00	36,000	\$3,492
Plumas	4,500	2.70	12,100	\$1,234
Shasta	9,600	5.50	52,800	\$5,016
Sierra	675	2.10	1,384	\$132
Siskiyou	51,640	4.70	242,708	\$23,057
Trinity	<u>100</u>	<u>3.00</u>	<u>300</u>	<u>\$25</u>
Total or Average	104,515(11%)	4.68	489,292(7.1%)	\$46,635(6.7%)
<i>Sacramento Valley</i>				
Amador	195	6.50	1,268	\$121
Butte	2,488	6.80	16,918	\$1,819
Colusa	10,950	6.70	72,885	\$6,843
Glenn	17,585	7.00	123,095	\$12,310
Sacramento	7,230	7.00	50,610	\$4,555
Solano	20,500	6.10	125,255	\$11,273
Sutter	5,553	6.10	33,873	\$3,163
Tehama	4,500	7.20	32,265	\$2,710
Yolo	30,350	6.90	210,022	\$18,805
Yuba	<u>626</u>	<u>6.40</u>	<u>4,006</u>	<u>\$361</u>
Total or Average	99,977(10.5%)	6.70	670,197(9.7%)	\$61,959 (8.8%)
<i>San Joaquin Valley</i>				
Alameda	1,650	5.80	9,605	\$976
Contra Costa	3,060	6.20	19,000	\$1,887
Fresno	66,000	8.60	568,000	\$67,024
Kern	78,568	7.70	604,000	\$60,963
Kings	27,457	7.20	196,867	\$21,305
Madera	31,800	7.90	251,220	\$26,378
Merced	75,220	6.60	496,600	\$54,378
Modoc	29,000	4.00	116,000	\$10,440
San Joaquin	64,000	7.00	448,000	\$52,416
Stanislaus	40,200	7.80	313,600	\$33,242
Tulare	<u>76,900</u>	<u>8.20</u>	<u>625,000</u>	<u>\$62,375</u>
Total or Average	493,855(52.0%)	7.39	3,647,892(53.0%)	\$391,384(56.0%)
<i>High Desert</i>				
Inyo	3,600	6.00	21,600	\$2,095
Los Angeles	5,532	8.10	44,518	\$6,410
San Bernardino	16,150	8.50	137,819	\$15,058
Total or Average	25,282(2.7%)	8.07	203,937(3.0%)	\$23,564(3.4%)
<i>Low Desert</i>				
Imperial	176,119	8.20	1,433,785	\$131,101
Riverside	<u>39,549</u>	<u>9.20</u>	<u>361,873</u>	<u>\$36,444</u>
Total or Average	215,668(22.7%)	8.33	1,795,658(26.1%)	\$167,545(24.0%)
<i>Coastal</i>				
Humboldt	351	3.70	1,300	\$104
Lake	285	5.50	1,565	\$160
Monterey	1,993	5.90	11,800	\$1,416
San Benito	1,800	5.00	8,946	\$957
San Luis Obispo	3,700	6.60	24,420	\$2,808
Santa Barbara	<u>2,687</u>	<u>8.20</u>	<u>22,114</u>	<u>\$2,863</u>
Total or Average	10,816(1.1%)	6.49	70,145(1.0%)	\$8,308(1.2%)
California Total or Average	950,113	7.24	6,877,121	\$699,395

*Fed.-State Market News Serv., California Dept. of Food & Agric., Sacramento, 1994.