

Colorado Bean News

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BEAN FIELD DAYS

NONPROFIT
ORGANIZATION
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Colorado State University and Colorado Dry Bean Administrative Committee personnel invite you to join them for a series of field days that promote dry bean varieties and promising breeding lines in grower fields in northeastern Colorado. Join your local Cooperative Extension agents, campus specialists, industry representatives and neighbors at one or more of these informative events. More specific times will be available later this summer; so stay tuned to DTN, VegNet, and your local extension agents and bean industry reps.



August 14, 2000

10:00 am

Golden Plains Site - Idalia

Cooperative Extension Agent: Ron Meyer [tele: 719-346-5571]

Cooperator: Dennis Towns

Location: 1 mile North on Road DD, 1 mile East on Road 10, north on farm road to house, then west NW 1/2 mile past corn circle to bean circle, west side of pivot road

3:00 pm

Platte River Valley Site - Snyder

Cooperative Extension Agent: Bruce Bosley [tele: 970-867-2493]

Cooperator: Andy Gerken

Location: 3/4 mile on Road W.5, 1/2 mile North on Woad 28.5, west side of road

August 15, 2000

9:00 am

Front Range Site - Berthoud

Cooperative Extension Agent: Jerry Alldredge [tele: 970-356-4000 ext. 4474]

Cooperator: Brent Adler

Location: Exit 250 on I-25, 3 miles South on East Frontage Road, 1.75 miles West on WCR 38, 1.4 mile North, then 1/4 mile East on Farm Road, north side of road

MAILING LABEL UPDATE

Please send changes to:

Dr. H.F. Schwartz, CBN Editor
E207 Plant Science Building
Colorado State University
Fort Collins, CO 80523-1177

Bean Field Day Committee:

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The **Colorado Bean News** is supported in part by your voluntary check-off dollars administered by the **Colorado Dry Bean Administrative Committee**. 31221 Northwoods Circle, Buena Vista Colorado 81211. Phone 800.318.8049 Fax 888.841.1243

In this Issue

BEAN FIELD DAYS1
 PRO/AM Cooking Classic2
 Symposium on the Colorado Culinary Arts2
 CDBAC Budget as of May 31, 20003
 AMERICAN DRY BEAN BOARD HIGHLIGHTS3
 NATIONAL DRY BEAN COUNCIL3
 1999 SW Colorado Research Center - Yellow Jacket4
 Variety/Crop Year CWT Summary5
 1999 Bean Breeding Project - Fort Collins5
 1999 Bean Variety Trial Summary - Eastern Colorado6
 New Tillage Practices Challenge Pernicious Weeds7
 Colorado State University - VegNet Report8
 1999 Bean Variety Evaluation - Rocky Ford:9
 Legumes = Quick & Easy Hearty Meals10
 Factors Affecting Dry Bean Consumption in the U. S.11
 egetables and Specialties Situation and Outlook12
 REVIEW: FOOD QUALITY PROTECTION ACT14
 Weather Impacts on Bean Seed Quality15

**COLORADO DRY BEAN ADMINIS-
TRATIVE COMMITTEE UPDATE**



PRO/AM Cooking Classic

The seventh annual PRO/AM Cooking Classic was a huge success! Approximately 1200 people attended the cooking classic and tried recipes featuring dry beans. We are proud to announce that over \$125,000 was raised for the Colorado non-profit community during the event. Your contributions of time and money are so appreciated by all of the recipients of this event. The Best Colorado Dry Bean Dish was presented to Chef Mike Leach, CEC, the Renaissance Hotel. (Excerpts from a letter to the CDBAC from Chef Snooze Sherlock of the Green Gables Country Club, Chairman of the Event, and Chef Chris Rybak, President of the Culinarians of Colorado).

Marty Meltas, Denver Rocky Mountain News, wrote that the event is sponsored by the ACS Culinarians of Colorado, a professional trade association for chefs and cooks, in partnership with the Colorado Beef Council. This year's theme was "carnival". The charities are in charge of decorating the booths; the chefs prepare dishes using beef, potatoes, beans, a fruit and a vegetable, and a dessert. The Colorado Dry Bean Administrative Committee and Colorado Potato Administrative Committee are among the sponsors.

The best bean dish went to Chef Leach, with Caring Connection, for a bean tartlet. Another interesting entry was pinto beans in olive sauce from Chef Dominic Menna of the Valley Country Club.

Symposium on the Colorado Culinary Arts

Chef Chris Rybak, CEC, Keystone, and President of the Culinarians of Colorado for 2000 sent a letter to update the CDBAC and its members on the progress of the first Symposium of the Colorado Culinary Arts. The Symposium, "Defining Colorado Cuisine", will be held on October 8 and 9, 2000 at Keystone Resort.

Because the Colorado Dry Bean Administrative Committee is a major sponsor of the ACF Culinarians of Colorado, the Symposium Committee has designed this event with the idea of showcasing your organization and the products that you represent. We have hired Arnold Media Services to act as our marketing agent for the symposium. One of our objectives is to gain higher visibility for our organization and for our Colorado sponsors.

There will be several areas in which we will showcase dry beans:

- Junior Hot Food Competition - menus will be built around Colorado products.
- Professional Level Mystery Basket Competition - chefs will create dishes from baskets of food containing Colorado products; as a major sponsor, dry beans will be showcased.
- All Colorado Dinner - with a competition called the Colorado Governor's Awards. Chefs from all over the state will submit recipes for the "Best Colorado Dish" in various categories; dry beans will be listed as one of the categories. This competition will be sponsored by the Colorado Restaurant Association, the Colorado Department of Agriculture, and the Colorado Proud Committee along with the Culinarians of Colorado.

CDBAC Budget as of May 31, 2000

Budget Item	Budget (\$)	YTD – Actual \$	Budget Vs Actual	Remaining FY 1999 Commitments	Remaining Budgeted Funds
Assessments	145,000	62,268	(82,732)		
Interest	3,000	2,045	(955)		
TOTAL Income	148,000	64,313	(83,687)		
Research	39,400	39,400	0	0	0
Administrative	8,400	3,500	4,900	4,900	0
Promotional	20,600	14,800	5,800	0	5,800
Meetings & Travel	10,000	4,212	5,788	0	5,788
Dues	50,000	25,000	25,000	25,000	0
CBN Newsletter	8,000	2,000	6,000	6,000	0
Accounting/legal	2,400	2,100	300	0	300
Refunds	5,000	289	4,711	0	4,711
Telephone, postage	3,500	773	2,727	0	2,727
TOTAL Expense	147,300	92,074	55,226	35,900	11,888
Excess (Shortage)	700	(27,762)	(28,462)		

[Dues include membership in the National Dry Bean Council & American Dry Bean Board]

AMERICAN DRY BEAN BOARD HIGHLIGHTS

115 Railway Plaza, Scottsbluff, NE 69341 - Sue Hays, Executive Director

May 5 Bean Flash:

The Chicago Tribune Good Eating Section for April 26, 2000 featured an article entitled, "Hoppin' John, a good-luck dish, can be enjoyed any time." The editor revised a more traditional Hoppin' John recipe by substituting frozen black-eyes for dry; turkey bacon for salt pork; and brown rice for white rice. BEAN is pleased that the article emphasizes that Hoppin' John is a dish that can be enjoyed throughout the year. The Chicago Tribune has a readership of over 1.8 million.

We have over 4000 consumer requests for the Millennium Recipe booklet since the end of March. Our mailbox continues to be full of requests every day! Requests have been received from Michigan, New Jersey, Florida, Texas, Oregon, Arizona, Washington, North Carolina, Connecticut, Nebraska, Ohio, Pennsylvania, South Carolina, Rhode Island, and New York.

Address Change:

Northarvest Bean Growers Association, 50072 E. Lake Seven Road, Frazee, MN 56544-8963

Fax No. Change:

Nebraska Dry Bean Commission's new fax number is 308-632-1371



NATIONAL DRY BEAN COUNCIL



Excerpts form the NDBC Monthly Reports of May & June, 2000

The State of Zacatecas reported that the pressure from the bean grower organizations has disappeared. They estimate that there must be no more than 10,000 MT of

beans in the state waiting to be traded. They commented that there were never large amounts of beans in warehouses as growers were claiming (50,000 MT or so). Zacatecas just started the bean planting season for the irrigated areas, but they feel that growers are a little discouraged by the past year's scenario. As for the dryland beans, they are expecting a normal year in terms of weather and planting area.

SAGAR Spring-Summer 2000 Bean Forecast

State	Hectares Planted		Production (MT)	
	1999 Statistics	2000 Forecast	1999 Statistics	2000 Forecast
Zacatecas	793,533	763,520	195,165	304,622
Durango	305,142	287,744	96,515	90,353
Chihuahua	195,193	216,663	86,120	110,023
Other States	677,114	678,612	261,179	396,328
TOTAL	1,970,982	1,946,539	638,979	901,326

Note: SAGAR officials estimate that total production during the Winter 2000 cycle was 296,000 MT which thus provides a total bean production for Fall99/Winter00 of 934,979 MT.



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COLORADO BEAN NEWS is published quarterly by the Colorado Bean Network, a non-profit organization which supports the dry bean industry in Colorado. Address all editorial, advertising and mailing materials to: H.F. Schwartz, Dept of Bioag. Sci. & Pest Mgmt. Colorado State University, Fort Collins, CO 80523-1177, or call Mark McMillan at (970) 491-7846.

Advertising Material Deadlines and Rates for the Colorado Bean News

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Publication Material Due Dates:

Fall Issue	[Market Emphasis]	Sep. 7
Winter Issue	[Promotion, Nutrition Emphasis]	Dec. 7
Spring Issue	[Planting, Production Emphasis]	Apr. 7
Summer Issue	[Pest Mgmt., Harvest Emphasis]	June 7

Advertising Rates:

1/4 Page (3.5"x4.5")	B/W	\$100*
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	Each Additional Color	\$75

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*PMT's - 85 lines preferred
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CDBAC Project Report
1999 SW Colorado Research Center - Yellow Jacket
Summary from Annual Report by Abdel Berrada & Mark Stack

Precipitation was much below normal in early 1999 (January to March), and substantially above normal in April through August. The 30-year average for April to August at Yellow Jacket is 5.8 inches, while 9.1 inches were recorded during the same period in 1999. The 1999 growing season also had cooler temperatures than normal, which along with the favorable moisture conditions resulted in record non-irrigated dry bean yields.

Dryland pinto bean yields ranged from 916 to 1454 lb/A, well above the long-term average for Dolores and Montezuma counties (300 to 500 lb/A). The most widely-grown pinto variety in southwestern Colorado, 'Cahone', fared equal to or better than any of the entries in two variety trials at Yellow Jacket. The newer variety 'Fisher' averaged almost 1200 lb/A in one trial, which was not statistically different from the 1347 lb/A produced by Cahone. Few of the early generation breeding lines matured earlier than Cahone, and only one was equal to Cahone in seed yield.

Supplemental irrigation did not boost pinto bean yield compared to previous years. The irrigated dry bean trials were located in a low area of a west sloping field in 1999. Although only a total of 7.4 inches (gross) of irrigation water was applied throughout the growing season, above normal rainfall and possibly runoff contributed to a high level of white mold infestation. Average irrigated pinto bean yields ranged from 1442 to 2784 lb/A on small, replicated plots.

There was a hard frost on September 28, which reduced yield and quality of late maturing varieties such as Montrose and Frontier grown in irrigated plots on the station. Bill Z and Poncho averaged 2281 to 1581 lb/A in various trials in 1999, as compared to nearly 3000 lb/A in 1998 trials. Only a few of the experimental lines averaged significantly more than either Bill Z or Poncho in 1999.



*Colorado Dry Bean Administrative Committee
Variety/Crop Year CWT Summary*

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total
Pinto	1,966,727	2,524,825	3,580,857	2,494,438	2,346,493	2,387,224	2,487,128	2,227,880	1,689,470	1,867,358	2,400,824	1,433,629	27,406,853
LRK	38,113	72,934	16,475	41,874	70,784	63,776	129,064	232,610	79,360	228,202	109,946	66,941	1,150,079
GN	785	3,722	4,648	2,415	30,170	320	3,228	36,645	40,762	0	0	0	122,695
Navy	8,529	3,467	25,454	12,948	3,333	12,929	1,686	8,153	344	1,888	3,089	8,204	90,024
Blacks	0	0	0	394	16,634	17,830	5,998	9,125	0	0	0	2,328	52,309
Pinks	21,783	13,495	435	2,484	985	4,873	388	1,287	0	905	0	0	46,635
Anasazi	3,879	762	14	1,222	3,157	4,531	3,616	7,906	18	0	0	0	25,105
Sm White	11,957	7,672	0	0	0	0	0	0	0	0	0	0	19,629
Reds	0	3,525	138	1,853	8,456	30	0	308	5,909	912	0	0	21,131
Cranberry	0	0	0	0	0	0	0	798	0	0	0	0	798
Mayo Cuba	0	0	0	0	0	0	0	0	0	275	770	24,926	25,971
Total Assessments	2,051,773	2,630,402	3,628,021	2,557,628	2,480,012	2,491,513	2,631,108	2,524,712	1,815,863	2,099,540	2,514,629	1,536,028	28,961,229
Crop Estimate	2,558,000	3,108,000	4,275,000	3,300,000	2,608,000	2,609,000	3,140,000	2,558,000	2,250,000	2,280,000	2,868,000	2,755,000	
% of Estimate	80.21%	84.63%	84.87%	77.50%	95.09%	95.50%	83.79%	98.70%	80.71%	92.09%	87.68%	55.75%	

*CDBAC Project Report
1999 Bean Breeding Project - Fort Collins*

Summary from Annual Report by Mark Brick & Barry Ogg

The Dry Bean Breeding project conducted activities at Fort Collins, Fruita (with Calvin Pearson and Fred Judson) and Yellow Jacket (with Abdel Berrada and Mark Stack). Fort Collins was the primary site for selection and disease evaluations (with Howard

Schwartz and Kris Otto), Fruita for seed increase, and Yellow Jacket for evaluation of lines adapted to irrigated conditions and breeding of dryland beans. At Fort Collins, more than 600 F1's, 6500 lines composed of early generation material, and elite lines were evaluated for yield, root rot, rust, growth habit, and other characteristics. Yield tests and rust resistance evaluations were conducted on advanced material in the pinto, black and light red kidney market classes.



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Milliken: 1-800-635-2326



Breeding activities at Fruita involved seed increases for 46 advanced lines and 40 lines in single plant rows. At Yellow Jacket, 280 breeding lines were evaluated under dryland conditions and 20 in replicated plots. Forty-one advanced pinto lines from the program were tested under irrigation. Several outperformed Bill Z, which is the most popular variety in the San Juan Basin under irrigation. Dryland breeding efforts at the Yellow Jacket station continue to broaden the genetic base and improve drought tolerance of varieties adapted to the region.

See 1999 bean on page 7



CDBAC Project Report

1999 Bean Variety Trial Summary - Eastern Colorado

Summary from Annual Report by Jerry Johnson and Jim Hain

Replicated, irrigated trials were conducted at various sites in eastern Colorado during 1999. The seeding rate was approximately 87,120 seeds per acre with plots consisting of four 30-inch rows.

Resource Personnel:	Expertise:	Telephone #:
Howard Schwartz	Plant Pathology	970-491-6987
Mark McMillan	Plant Pathology	970-491-7846
Kristen Otto	Plant Pathology	970-491-0256
Mark Brick	Plant Breeding	970-491-6551
Barry Ogg	Plant Breeding	970-491-6354
Jerry Johnson	Variety Testing	970-491-1454
Cynthia Johnson	Variety Testing	970-491-1914
Jim Hain	Variety Testing	970-345-2259
Jessica Davis	Soil Science	970-491-1913
Scott Nissen	Weed Science	970-491-3489
Frank Peairs	Entomology	970-491-5945
Don Lybecker	Agr. & Res. Econ	970-491-5496
Pat Kendall	Food Sci./Nutrition	970-491-1945
Reg Koll	ARDEC Station	970-491-2405
Frank Schweissing	Arkansas Valley	719-254-6312
Mike Bartolo	Arkansas Valley	719-254-6312
Abdel Berrada	S.W. Colorado	970-562-4255
Mark Stack	S.W. Colorado	970-562-4255
Calvin Pearson	West Slope	970-858-3629
Fred Judson	West Slope	970-858-3629
Jerry Alldredge	Weld Cnty.	970-356-4000 x 4465
Paul Aravis	Boulder Cnty.	303-776-4865
Bruce Bosley	Morgan Cnty.	970-867-2493
Randy Buhler	Logan Cnty.	970-522-3200 x 1308
Wayne Cooley	Montrose Cnty.	970-249-3935
Dan Fernandez	Dolores Cnty.	970-677-2283
Assefa Gebre-Amlak	Phillips Cnty.	970-854-3616
Bill Hancock	Otero Cnty.	719-254-7608
Gary Lancaster	Sedgwick Cnty.	970-474-3479
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Stan Pilcher	Washington Cnty.	970-345-2287
Ken Smith	Montezuma Cnty.	970-565-3123
Frank Sobolik	Pueblo Cnty.	719-583-6566
Brent Young	Delta Cnty.	970-874-2195

Variety / Line	Origin	Yield (lb/Acre)*
CO45188	Colorado State Univ.	2912
Frontier	North Dakota State U.	2542
Cisco	Novartis Seeds Inc.	2775
Poncho	Novartis Seeds Inc.	2613
Montrose	Colorado State Univ.	2821
CO46322	Colorado State Univ.	2717
CO64155	Colorado State Univ.	2708
Bill Z	Colorado State Univ.	2617
CO74905	Colorado State Univ.	2732
CO66032	Colorado State Univ.	2579
Vision	Asgrow Seed Company	2604
CO75511	Colorado State Univ.	2631
Buckskin	Colorado State Univ.	2475
CO63603	Colorado State Univ.	2436
CO74630	Colorado State Univ.	2411
Chase	Univ. of Nebraska	2584
CO75714	Colorado State Univ.	2396
CO64000	Colorado State Univ.	2338
Buster	Asgrow Seed Company	2672
Maverick	North Dakota State U.	2434
Burke	Washington State U.	2464
Kodiak	Michigan State U.	2542
Elizabeth	Fox Bean Company	2178
USPT-73	WSU-ARS/USDA	2418
Othello	USDA	2265
Average:		2559

* Summary of Yield Averages from trials at Berthoud, Fruita, Idalia, Julesburg, Rocky Ford, Yellow Jacket, Yuma.

**Websites of interest
to bean growers**

www.csuag.com

www.colostate.edu/Orgs/VegNet/beanlinks



New Tillage Practices Challenge Pernicious Weeds

Excerpts from Western Regional IPM Report - 2000
Gary McIntyre, Project Coordinator, Colorado State University

A three-year tillage rotation funded by the Western Regional IPM Program indicates that eliminating spring tillage and direct seeding corn or beans results in greater weed and pest control, and lower pesticide use. Principal investigators were Ray Williams, Carol Mallory-Smith, Andy Moldenke and Edward Peachey at Oregon State University - Corvallis; with additional funding provided by the Oregon Processed Vegetable Commission and Western SARE/USDA.

Nightshade is a particularly pernicious weed in Oregon snap bean fields. Because nightshade berries are toxic, vegetable processors reject loads with any sign of the weed. Control is very expensive for growers, who do everything from hand hoeing to multiple applications of herbicide. An IPM study, funded in 1996, is generating data for vegetable growers in the Pacific Northwest. Researchers found a way to combat nightshade and most other weeds that germinate with the beans. The results are not a cure-all, but they give growers more options and additional side benefits.

The study compares four different tillage rotations combined with three different weed control levels - high

rates of herbicides, low to moderate rates, and no herbicide - it also examines the effects of those practices on plant diseases and beneficial organisms in the soil. Cover crop residues are another component, and another researcher is studying their effects on plant diseases.

Evidence suggests that eliminating spring tillage in one year of a three-year vegetable rotation can reduce nightshade emergence by 90 to 95 % compared with normal tillage practices, even with no herbicides. Eliminating tillage in two years of a three-year rotation completely controlled nightshade when coupled with a low rate of herbicide. Even when herbicides were not used, nightshade emergence was reduced 99 %. The results were less dramatic with pigweed, but followed a similar trend.

In general, direct seeding in two years of a three-year rotation with approximately half-rate of herbicide resulted in the same weed control of summer annual broadleaves as a conventional tillage rotation with the full herbicide rate. Researchers found that 70 % of the weed control can be explained by not tilling in spring and 15 to 25 % by adding residue from the cover crop.

1999 bean from page 5

The mixed market class Cooperative Dry Bean Nursery was planted at both Fort Collins and Fruita. Two entries from Colorado performed well. The Midwest Regional Performance Nursery, a nursery with advanced pinto and great northern lines submitted by breeders from Colorado, Nebraska, North Dakota and Michigan, was planted at Fort Collins. Variety trials conducted by the CSU Crops Testing Program (Jerry Johnson and Jim Hain) evaluated 16 advanced lines in seven locations. The variety 'Montrose' was officially released to seed growers in February 1999. 'Shiny Crow', the first shiny black seeded variety in the U. S. was released in February 2000.

Breeding strategies for the future will concentrate on introgressing genes that condition resistance to rust that are different from the predominate UR3 allele present in virtually all resistant varieties available today. Work on Fusarium Wilt resistance is progressing well. Several promising lines possess resistance to FW based on greenhouse evaluations. Field studies will be conducted in 2000 with the plant pathology program to determine if the greenhouse evaluation is representative of field reactions to the pathogen. Incorporating better resistance to Bean Common Mosaic Virus and White Mold continues. A greenhouse white mold screening method was conducted on two populations to estimate heritability and to determine if the technique is repeatable. Efforts are continuing to develop a field nursery for reliable white mold screening at ARDEC.



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Colorado State University - VegNet Report

The bean rust model has shown low potential for disease development based upon scattered outbreaks of light rust late in the 1999 season, no evidence of infected volunteer bean plants this spring, widespread planting of rust-resistant varieties, reduced bean acreage, high temperatures and dry conditions this spring, and forecasts for continued hot, dry conditions.

If high temperature periods persist throughout the vegetative and flowering periods, common bacterial blight will probably be the most common foliar disease threat this season; especially if storms and/or contaminated irrigation water move the bacterium within and between bean fields. The early to mid-season copper-based bactericide program initiated during the vegetative period (preferably with a ground-rig) can reduce common blight severity later during flowering and pod-set.


The hot, dry conditions this spring have contributed to recent reports of high thrips populations on dry bean plants in northeastern Colorado and surrounding region. Thrips are small, active, cigarette-shaped, yellow-to-brown insects. Onion thrips are most commonly associated with furrow irrigated beans grown in close

proximity to winter wheat. Infestations commonly occur as the wheat matures and the onion thrips disperse in search of new food sources. Onion thrips feeding results in leaf cupping and distortion, and reduced plant growth that is made more severe by additional plant stress (low moisture and high temperature).

Consider treatment (e.g., Orthene or Lannate sprays, Disyston lay-by) if there are more than 15 thrips per plant and damage is observed. Tap the plant on white cardboard or in a white container and then count the thrips that have been knocked off. Onion thrips infestations and damage are often more severe at field edges so be sure to assess the entire field before making a treatment decision.

Western flower thrips feed in developing flowers and can cause flower and pod abortion. Five flower thrips per blossom can reduce the number of pods per plant. Control of flower thrips with insecticides is more difficult.





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contact us via our Internet address -- www.waltonbean.com

Working Together For A More Successful Future For Farmers



CDBAC Project Report

1999 Bean Variety Evaluation - Rocky Ford:

Summary from Annual Report by Frank Schweissing

The replicated, irrigated trial was planted May 21 and threshed September 30, 1999 at the Research Station. The only pest problem that occurred last year was Mexican Bean Beetle; and an insecticide was applied August 16.

Variety / Line	Origin	Yield (lb/Acre)	No. of Seed / lb
CO45188	Colorado State Univ.	3575	1132
Frontier	North Dakota State U.	3524	985
Cisco	Novartis Seeds Inc.	3425	1102
Poncho	Novartis Seeds Inc.	3340	1076
Montrose	Colorado State Univ.	3324	1146
CO46322	Colorado State Univ.	3207	1061
Bill Z	Colorado State Univ.	3201	1148
CO64155	Colorado State Univ.	3167	1137
CO74905	Colorado State Univ.	3149	1147
CO66032	Colorado State Univ.	3083	1223
Vision	Asgrow Seed Company	2951	1179
CO75511	Colorado State Univ.	2832	1214
Buckskin	Colorado State Univ.	2750	1166
CO63603	Colorado State Univ.	2700	1150
CO74630	Colorado State Univ.	2692	1103
Chase	Univ. of Nebraska	2651	1130
CO75714	Colorado State Univ.	2615	1215
Buster	Asgrow Seed Company	2518	1062
Maverick	North Dakota State U.	2463	1117
Burke	Washington State U.	2365	1191
Kodiak	Michigan State U.	2337	1020
Elizabeth	Fox Bean Company	2144	1133
USPT-73	WSU-ARS/USDA	1967	1053
Othello	USDA	1828	1147
Average:		2749	1130
CV (%):		8.7	
LSD (.30):		205	



Legumes = Quick & Easy Hearty Meals

Anna Aughenbaugh, Starlite Publications, 2100 W. Drake #295, Fort Collins, CO 80526

Jack's mother thought her son was crazy when he traded the family cow for a handful of beans. I'm sure that just as much of the world depends on legumes, she thought of beans as a cheap staple in her kitchen. Had she known "beans" about the nutrition they provide for such little cost, she may have praised Jack for his deed.

For those of us with high blood pressure, legumes are great because they are high in potassium and low in sodium. A half cup of cooked beans provides nearly a third of the recommended daily allowance of iron. Those inexpensive beans also give us vitamin B6, copper, magnesium, folic acid, and thiamin. The versatility of beans and many tasty recipes available, lets you serve them in dishes that can be sweet, sour, or hot. No longer are they just "Grannie's baked beans, or wagon train-type soup."

To help make beans more digestible, drain the soaking water and start cooking with fresh water. Add 1/4 tsp ginger to the cooking water. Serve apple salad or apple-sauce as a side dish.

Quick Bean & Rice Skillet

1.5	C	cooked pinto (or garbanzo) beans
1	14 oz	can of stewed tomatoes, cut up
2	C	frozen, mixed vegetables
1	C	water
3/4	C	quick-cooking brown rice (2 cup cooked)
1/2	t	thyme
		several dashes of hot pepper sauce
1	10 oz	can condensed tomato soup
1/4	C	toasted, slivered almonds
1/2	C	grated, mozzarella cheese

In large skillet, stir beans, tomatoes, vegetables, water, uncooked rice, thyme and hot pepper sauce. Bring to a boil, reduce heat, simmer covered for 12 to 14 minutes, or until rice is tender. Stir in almonds. Top with cheese. Serve immediately. Makes 4 main dish servings.

Beans will last for years if stored in airtight containers in a cool, dry place; but old beans may take longer to cook. Be sure to pick beans over to remove stones, etc. Wash them, then soak overnight, or by bringing to a boil for two minutes, cover and remove from heat and let sit for one hour. Lentils and split peas don't need to be soaked. Simmer over low heat, well covered with water. Don't add acidic foods or salt until beans are tender.

When cooked, a cup of dry beans will expand to 2.5 to 3 cups, making them a real budget and meal stretcher. Cooked beans will keep in the refrigerator about a week. They can also be frozen, so a big batch can be cooked to have handy for future meals. As fall approaches, bringing cooler weather and heartier appetites, put on a big kettle of beans and enjoy serving these quick and heart-healthy recipes.

Lentil & Rice Salad

1/2	C	lentils
1.5	C	water
1	C	cooked rice
1/2	C	fat-free Italian dressing
1/2	C	tomatoes, diced
1/4	C	green pepper, chopped
3	T	onion, chopped
2	T	celery, chopped
2	T	pimento-stuffed green olives, sliced
		chopped parsley for garnish

Wash lentils, put in saucepan, add water. Bring to a boil, reduce heat and simmer covered for 20 minutes, or until just tender. Don't overcook. Drain immediately and rinse with cold water. Mix well with rice and remaining ingredients, except parsley. Store in refrigerator until serving time. Garnish with parsley. Makes 5 servings.

Factors Affecting Dry Bean Consumption in the U. S.

Gary Lucier, Biing-Hwan Lin, Jane Allshouse and Linda Scott Kantor
Economists with the USDA Economic Research Service
Excerpts from Report VGS-280

There are many types of dry edible beans, and USDA per capita disappearance data cover 14 specific classes "or varieties" (e.g., pinto, navy, black, etc.). Dry beans are used in an assortment of ways with similar uses possible for different varieties. All varieties are available dry in consumer or foodservice packages. Most varieties are also processed into canned products such as refried beans, soups, and baked beans. High starch bean flour is also produced from dry beans and used in a variety of baked goods. Restaurant use of dry beans and bean products also appear to have increased during the past 10 - 15 years, especially among those establishments serving such dishes as tacos, burritos, and chili. During this time, several firms featuring Southwestern/Mexican cuisine have grown to become important national restaurant chains.

Summary

Slightly more than 75 % of all cooked dry beans are purchased in retail stores. The at-home vs away-from home use pattern varies greatly among bean variety, with lima beans most concentrated in home use, while refried pinto beans are mostly used in restaurants.

Cooked dry bean consumption concentrates in the Southern and Western States of the country, accounting for 39 and 38 % of all bean consumption. This regional consumption pattern is consistent with California, Texas, and Florida being the three populous states in these regions, and they have a high concentration of Hispanic population.

Rapid growth of the Nation's Hispanic population has indeed contributed to the increasing popularity in cooked dry bean consumption. People of Hispanic heritage represent 11 % of the U.S. population and account for 33 % of cooked dry bean consumption. Hispanics of Mexican descent are the largest consumers of cooked dry beans, with nearly 21 % of total volume - more than four times their proportion of the population. The Nation's Hispanic population is expected to continue rising over the next few decades.

Cooked dry beans as a whole are favored by lower income households. While the poor tend to consume more pinto and lima beans, black and garbanzo beans could be termed the upscale members of the cooked dry bean community.

Cooked dry bean consumption varies by age and gender. Men consume more beans than women, likely because of their larger food consumption. As children grow up, they tend to frequent fast food restaurants and develop a taste for Mexican-style food and hence consume more beans.



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Vegetables and Specialities Situation and Outlook

Report VGS-280, April 2000, Gary Lucier
Economic Research Service, USDA

Per capita use of all vegetables and melons totaled 454 pounds in 1999 - up 9 pounds from a year earlier. Large supplies and much lower prices led to a 5 % increase in fresh vegetable use (excluding potatoes). Increases were also noted for vegetables for freezing, potatoes, and dry beans.

Spring onion area for harvest is expected to rise 2 %, with rebounding acreage in Texas outweighing a large drop in Georgia. Relatively favorable weather this season is contributing to reduced acreage losses compared with a year ago when 7 % of planted area was abandoned. Given good quality and strong demand, the spring onion market is expected to show some improvement over last year. However, larger supplies may keep a lid on price increases.

The 2000 winter-season potato crop is estimated at 4.7 million cwt, up 16 % from a year ago and 58 % above the weather-affected crop of 1998. Harvested acreage was down 4 % from a year ago, but was outweighed by improved yields (up 21 %), leading to the largest winter season crop since 1967. All of the increase came from California, which experienced an excellent growing season resulting in record winter-season yields for the State. Florida also experienced a good growing season, but production was lower than a year ago due to a 14 % reduction in harvested acreage.

The first estimate of the 2000 spring potato crop is 21.4 million cwt, down 15 % from comparable totals last year but 1 % above 1998. Area for harvest is forecast at 80,800 acres, down 4 % from last year, and 10 % below 1998. Per-acre yield is forecast to average 264 cwt, down 12 % from last year's comparable yield but up 13 % from the low of two years ago.

Preliminary indications point to a 9 % decline in dry bean area this year, with acreage in Minnesota, Nebraska, Idaho, and California down considerably. During January to March, U. S. grower prices for all dry beans averaged 14 % below the low levels experienced a year ago. This was the third consecutive first-quarter decline, having dropped about 10 % in each of the past two years. Producers were coming off a year featuring the fourth largest planted area in the past 55 years and the lowest prices since 1992. Grower prices were almost universally low across every class of dry beans. However, with low prices this year encouraging larger domestic use and improved export volume, reduced stocks and

improved dry bean prices are expected in the coming months.

Despite the fact that domestic markets have been much more important for most other dry bean classes, export markets also remain vital. For example, although pinto beans account for 40 % of domestic dry bean consumption, over the past 5 years about 11 % of pinto bean supplies were exported. Pintos totaled 20 % of all U. S. dry bean export volume.

Pinto Beans

Reflecting the general malaise in agriculture over the past year, the 1999/2000 pinto bean market remained weak. Despite a 25 % reduction in production in 1999, weak export demand and persistently high stocks continue to weigh heavily on prices at both the grower and dealer levels. This spring, average grower prices in North Dakota and Colorado, the two leading pinto States, were the lowest since 1992.

See Outlook on page 13

CSGA
1/4 page
Green

Outlook from page 12

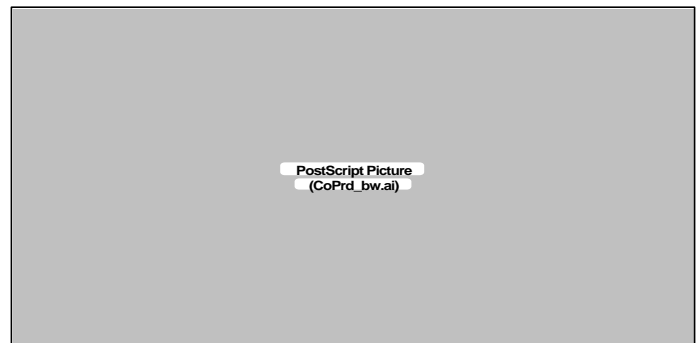
Market fundamentals for the 1999/2000 pinto bean season were as follows:

- Acres harvested in 1999 fell 30 % to 644,900;
- Per-acre yields jumped 7 % to 16.8 cwt/A;
- Production totaled 10.8 million cwt, down 25 % from 1998;
- Grower bids in North Dakota/Minnesota have averaged about \$ 12.50 during the 1999/2000 marketing year - down 3 % from a year earlier and 34 % lower than in 1997/98;
- Dealer prices in Colorado have averaged \$20.55, about 2 % below a year earlier;
- The farm value of the 1999/2000 crop is down 28 % to an estimated \$136 million;
- Export volume during calendar year 1999 declined 32 % to 176 million pounds. Exports were also 16 % below the average of the 1990's;
- Import volume increased 25 % to 21.4 million pounds - the fourth consecutive increase, with most volume coming from Canada.

With prices down, domestic use of pinto beans rose 6 % to a record high 1.0 billion pounds - per capita use of pintos increased to 3.7 pounds. The record per capita use is 3.8 pounds in 1992.

Entering early spring, grower prices for pinto beans in places such as North Dakota and Colorado were at or

below the low levels experienced a year ago, likely prompting a modest cut in area. With acreage expected to decline and yields moving back down to trend, pinto production is likely to range from 9 - 10 million cwt. Production in this range would be a significant change since pinto bean production has not been less than 10 million cwt since 1993. With a small gain expected in export volume this year, pinto bean dealer prices, which have averaged around \$20.50 per cwt in 1999/2000, are currently expected to average a few dollars higher in 2000/01.



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REVIEW: FOOD QUALITY PROTECTION ACT

By Sandra McDonald, Bioagricultural Sciences & Pest Management Specialist

Since August 3, 1996, almost every conversation regarding pesticide issues has included the phrase "Food Quality Protection Act (FQPA)." Many people believe this to be the most significant legislation to affect agriculture in the last decade. The act amends the two major laws involving pesticides: the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA).

FQPA revises FFDCA so the 1958 Delaney Clause no longer affects pesticides. In effect, the zero cancer risk standard for pesticide residues in some processed foods is replaced by a single "safe" standard of a reasonable certainty of no harm to consumers from pesticide residues in raw and processed foods. "Reasonable certainty" is a one in one million risk of cancer over a 70 year lifetime.

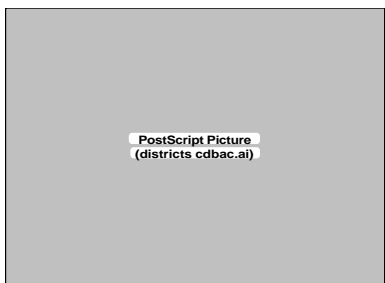
The safety standard creates four areas for EPA review:

- cumulative effects (common mechanism of toxicity);
- aggregate exposure;
- sensitivities of major subgroups (such as infants and children); and
- estrogenic effects.

FQPA focuses on consumers and food, not the farmer. FQPA was designed to improve food safety in the United States so that the public will be more confident that their food is safe, especially for infants and children. Another stated purpose of FQPA was to base pesticide registration on sound scientific principles and make the process more efficient.

Pesticide registration review is now required on a 15-year cycle to ensure that all pesticides meet new safety standards. EPA plans to reassess 1/3 of all existing tolerances and exemptions by August 1999, another 1/3 by August 2002, and the remainder by August 2006. EPA is to publish by August 1997 a fully developed plan for completing reassessment of the existing tolerances.

CDBAC Membership



There are 620 pesticidal compounds registered with EPA. These active ingredients are formulated into about 20,000 registered products, of which about half, or 9300 are used on food or feed crops. Organophosphates, carbamates, triazines, pyrethroids and B-2 carcinogens are the classes of chemistry the EPA will scrutinize during the first three years of the reassessment.

The analogy of a "risk cup" is being used to describe aggregate exposure estimates. The full cup represents the total reference dose (RfD); each use of the pesticide contributes a specific amount of exposure that adds a finite amount of risk to the cup. As long as the cup is not full, meaning that the combined total of all estimated sources of exposure to the pesticide has not reached 100% of the RfD, EPA can consider registering additional uses and setting new tolerances. It has been decided that, in general, 80% of the risk cup will be set aside for dietary exposures. The remaining 20% of the risk cup will be left for non-dietary risk with 10% from water, 5% lawn and 5% residential exposure.

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Weather Impacts on Bean Seed Quality

By Howard F. Schwartz, Colorado State University

Recently some bean dealers in the Front Range area raised some interesting questions about differences they have observed in seed quality for specific pinto varieties harvested during 1998 and 1999 in northern Colorado. The following summary provided some revealing contrasts between the 1998 crop (high quality, bright, light colored seed) versus the 1999 crop (lower quality, dull, darker colored seed) of a commonly-grown pinto variety such as 'Vision.'

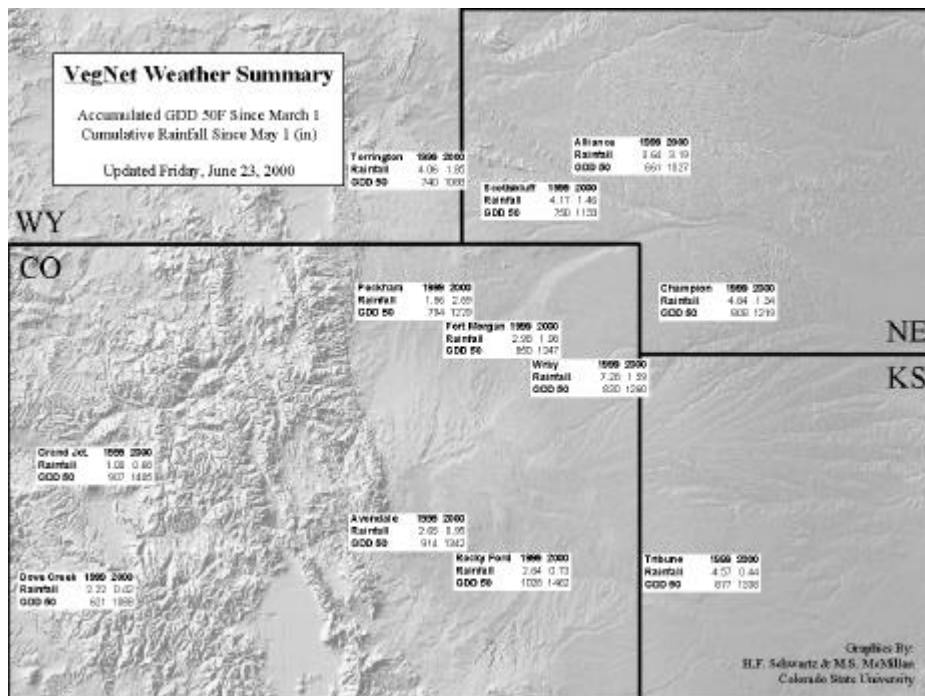
I did not evaluate temperature averages, but the rainfall records raised some red (or brown!) flags that could have contributed to more seed darkening observed after the 1999 harvest. When the May to September rainfall patterns were compared at Ault, Lucerne and Kersey, it became apparent that there was a minimum of 2.5 to 5 inches more rainfall at each site in 1999 versus 1998. And much of the higher rainfall occurred during August and September when the crop was maturing. Of course, this does not consider additional negative effects of grower practices such as late-season irrigation.

Monthly Rainfall (inches) - CSU COAGMET Weather Stations

	Lucerne		Ault		Kersey	
	1998	1999	1998	1999	1998	1999
May	1.13	1.55	1.17	1.49	1.36	1.34
June	0.78	0.62	1.07	0.82	0.32	1.05
July	0.43	1.39	0.79	0.94	0.27	1.91
August	0.23	1.42	0.59	2.06	0.09	2.78
September	0.68	1.62	0.84	1.69	0.60	2.15
TOTAL:	3.25	6.60	4.46	7.00	2.64	9.23

These data certainly implicate late-season rainfall as a contributing factor to seed darkening for sensitive varieties of dry beans. It will be interesting to monitor this year's crop quality in relation to variety, rainfall and production practices.

Temperature and moisture data from May and June, reveal that Colorado, Nebraska, Kansas and Wyoming are much warmer and drier this season than in recent years. Stay tuned to the CSU VegNet web site and DTN for frequent updates on regional weather trends and potential impacts on the bean crop and pests for 2000.



Future Aspects of Weed Control Implications for Dry Beans

- Focus on non-uniformity of weed species and their densities within a field which continues to be treated with great precision in a uniform manner
- GPS & GIS site-specific and sensor-driven control with selective herbicides that reduce environmental exposure and costs
- Genetic engineering applications to dry beans for resistance to specific herbicides



Schwartz & Peairs, 1999
Common Bean Improvement
in the 21st Century

Highlights of Disease Control Strategies for Dry Beans

- Crop rotation for more than 2 years
- Timely application of specific pesticides
- Tillage practices that reduce pathogen carryover and promote plant development
- Weed control to reduce plant stress from competition, microclimatic influences, and sources of insect pests (refugia)
- Multiple cropping with non-hosts and crop barriers to reduce pathogen spread
- Plant resistance to one or more plant pathogens



Schwartz & Peairs, 1999
Common Bean Improvement
in the 21st Century