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TRAINING AVAILABLE FOR CERTIFIED CROP ADVISER PROGRAM

The Certified Crop Adviser (CCA) program is being offered in Colorado through the teamwork of Colorado State University Cooperative Extension, the agricultural industry of Colorado, the Colorado Departments of Agriculture and Public Health and Environment, and the Natural Resource Conservation Service of the U.S. Department of Agriculture.

National and State exams will be given at the Adams County Fairgrounds near Brighton on February 3, 1995. Several training opportunities are available for those taking either or both of these exams. The \$100 fee for the National

exam has been waived for public employees by the American Society of Agronomy for the next three testing sessions. Extension personnel considering this certification are encouraged to register for the National exam. The deadline for registration is January 5, 1995. The fee for the State exam remains at \$75, however.

Cooperative Extension conducted a review of the National and State Performance Objectives at the Lory Student Union, Colorado State University campus, Fort Collins on December 13, 1994. The purpose was to help potential applicants

assess their understanding of the subject matter to be covered by these exams.

A two-day workshop covering the national exam will be held for registrants paying an extra \$40 fee at the annual meeting of the Rocky Mountain Plant Food and Agrichemicals Association. This will be held at the Holiday Inn, Chambers Road, Denver on January 3-5, 1995. Contact Phil Shumway (303-772-4517).

The Colorado Chapter of the Soil and Water Conservation Society is sponsoring a two-day workshop on the national exam on January 17-19 (noon to noon) at the Holiday Inn (I-25) in Pueblo. The fee is \$80 and attendance is limited to 45 participants. Contact Ron Schierer (303-236-2900).

A two-day workshop covering both national and state exams also will be held for registrants at the annual meeting of the Independent Agricultural Consultants of Colorado. This will be held at the Holiday Inn-North, Northglenn on February 1-2, 1995. Contact Brad Walker (719-336-4016).

Several training manuals are available commercially for those who cannot attend any of these sessions. A Colorado CCA Resource Manual which includes relevant Service in Action Sheets and a list of other training materials also has been prepared by Cooperative Extension. This Manual is being sold through the Cooperative Extension Resource Center. The cost for this publication is \$25 which includes postage and handling at 4th class rate. Requests for 1st class mail can be made by paying the extra postage costs. Contact Gail McKee (303-491-6198).

□Apley, Mortvedt, and Waskom

NEW SIAS PUBLISHED ON FERTILIZER SUGGESTIONS FOR CROPS

Eight new SIAs on fertilizer suggestions for the major crops in Colorado have been published. These SIAs will be included on the CD-ROM, "Putting Knowledge to Work", published by CSU Cooperative Extension and scheduled to be released in January, 1995. Costs and other information for this CD-ROM can be obtained from Gail McKee, Cooperative Extension Resource Center (303-491-6198). Due to the recent change in publication policy, these SIAs will not be printed but users can download needed copies on a printer.

The new SIAs are intended to replace the 1991 Bulletin XCM-37, Guide to Fertilizer Recommendations in Colorado, now out of print. Each SIA contains a general discussion of the nutrient needs of the given crop, tables of suggested fertilizer rates, methods and timing of fertilizer application, and other relevant information. Individual SIAs have been written on fertilizer suggestions for alfalfa (0.537), corn (0.538), dry beans (0.539), grain sorghum (0.540), potatoes (0.541), sugarbeets (0.542), sunflowers (0.543), and winter wheat (0.544). SIAs on other crops discussed in the Bulletin (XCM-37) will be published later in 1995.

The following SIAs have been revised from previous publications and also will be available on the next CD-ROM: Plant analysis (0.116), Soil sampling: the key to a quality fertilizer recommendation (0.500), Salt-affected soils (0.503), and Management of salt- and sodium-affected soils (0.504).

The \$100 fee for the National exam has been waived for public employees by the American Society of Agronomy for the next three testing sessions. Extension personnel considering this certification are encouraged to register for the National exam. The deadline for registration is January 5, 1995.

A packet containing a copy of each of the eight new and four revised SIAs will be sent to each County Extension Office in December. □Mortvedt

CERTIFIED SEED PRODUCTION IN 1995

It seems that we just finished our 1994 cropping season, and it is already time to start looking ahead to 1995. In January, Colorado Seed Growers Association will begin the process of accepting applications for certified seed production of winter wheat seed. Anyone who produced certified seed in the previous two years will receive the necessary materials to begin their 1995 applications. Farmers who have not previously certified seed and wish to enter the program should contact the Colorado Seed Growers Association at 303/491-6202 to receive the correct materials.

For field production to qualify as certified seed, a farmer must have planted either foundation or registered class seed on a field that did not grow another small grain crop the last cropping season. It is important that the farmer have the tags or bulk certificates from the seed planted because these source materials must be included with the application materials. The field should have a history of being relatively free of weeds, especially noxious weeds such as jointed goatgrass and field bindweed. It is also essential that care was taken during planting to assure that seed mixtures did not occur.

The initial form needed is the Declaration of Certifiable Fields (Form A). This form is due in the CSGA office by March 15 and gives the certification service information about fields that you

might possibly certify. No fees are associated with this form and there is no obligation to continue in the certification process at this point. Once the Form A has been filed, more information will be forwarded to the grower and final applications and payments are due by May 15. The grower can withdraw any fields with a complete refund of field fees up until the time of field inspection.

January is also the time of year that the Colorado Department of Agriculture solicits new and renewed registrations under the Colorado Seed Law. Any seed seller, conditioner, or labeller of seed must be registered with the department. New applicants or anyone who does not receive renewal notices should contact the Colorado Department of Agriculture at (303-239-4140) by February 28, 1995. □Stanelle

ALTERNATIVE/SPECIALTY CROPS

Canola appears to have gotten the attention of the major vegetable oil producers. This year, Archer-Daniels-Midland (ADM) will assume operations of National Sun Industries in Enderlin, ND and Goodland, KS. Rumor has it that the Goodland plant will process only sunflower, which is not good news for safflower and canola producers looking for local markets. Meanwhile, ADM is building a new facility for canola processing in Canada. InterMountain Canola (Idaho Falls, ID) has been purchased by Cargill. InterMountain is the largest buyer of canola in the western U.S.

Further development of these crops requires that a market structure be in place. Where do we send oilseed producers with their crops? I have

If you have previously or are considering participation in the certified winter wheat seed production program, January is the time to begin thinking about the process.

identified several potential additional markets.

Safflower can be sold locally to Oilseeds International of Greeley, Vulcan Ranch in New Castle (organic only), Mountain States Oilseeds (American Falls, ID), and Pinnacle Group in Colorado Springs. Contract prices may vary considerably so you will want to investigate all options. On January 3, 1995, Bill Ekstrom (Rio Blanco County) has arranged to have a safflower meeting in Meeker where several of these companies will be represented. Current offering prices range from \$9.00 to \$10.00/hundredweight (CWT). Dryland yields have ranged from 4 CWT at Last Chance (north of Limon) to 16 CWT at Meeker. Irrigated yields ranged from 18 CWT in Ft. Collins to 28 CWT at Rocky Ford.

***Alternative crops
require new,
additional markets
- where are they?***

Safflower is a good rotational crop because of its tap root system which benefits soil structure and can improve water infiltration. Think of it as a biological deep tillage operation. The growers in the Cortez area indicate their dryland beans following safflower yielded twice as much as beans without safflower preceding them. Safflower does not tolerate poor soil drainage. It is best to plant as early as possible (February in the Arkansas Valley, late March in the Northern half of the state), irrigate early if you want to, and withhold water later in the season.

Canola may be seeing new life as a canola processing plant appears to be on the planning horizon in the San Luis Valley, with most of the canola being processed from the SLV area. Yields this year ranged from 24 to 31 CWT for SLV spring canola trials. Contract prices for 1995 should be in the range of \$10 to 11.50/CWT. A new winter canola cultivar with sufficient spring

dormancy will be evaluated by our program beginning in 1995. The cultivar is called "Debut" and is available from Spectrum Seed in Ritzville, WA. It is a Brassica rapa type rather than the traditional Brassica napus. Debut will probably have 1-2% less oil than available varieties. While processors won't like the oil levels, this variety should meet all oil percentage specifications. It also will have greater heat tolerance (no missing pods from blasting), better shatter resistance, and will require 12 weeks of cool temperatures for vernalization. Current winter canolas only require 5 -7 weeks and this can lead to premature spring regrowth and frost injury in March and April. These winter rapa types have an excellent chance to open up canola production on the High Plains; at least until traditional winter canolas develop. Winter canola should be planted between the end of August and September 15. Spring canola can be planted one to two weeks after the time you would plant spring barley.

Winter canola and spring safflower can be planted dryland. Spring canola and spring safflower can be planted under irrigation. □Johnson

THE 1994 PINTO BEAN VARIETY TRIAL RESULTS FOR EASTERN COLORADO

The 1994 dry bean production season was excellent in most regions of eastern Colorado. The Colorado Agricultural Statistics Service reported that total bean production in Colorado was 3.38 million cwt in 1994, up 19% from 1993. This increase was due to both increased area harvested (20,000 more acres in 1994) and higher mean yield (16.5 vs 15.3

cwt/acre in 1994 and 1993, respectively).

Pinto bean variety trials were planted by the Colorado State University Crop Testing Program at Burlington, Eaton, and Sterling, CO. The field plots were replicated four times at each site and consisted of four rows 24 ft in length. The middle two rows of each plot were harvested to determine seed yield. All trials were planted in a commercial bean field with most cultural practices, other than planting and harvest, performed by the grower. The producers that participated in the trials were Steve Scott at Burlington, Ed Croissant at Eaton, and Howard Hettinger at Sterling.

As with financial investments, the key with bean production may be to diversify. Choose varieties which differ in harvest maturity time and differ genetically with different pest resistances.

The Burlington site had a severe infestation of rust and moderate halo blight pressure which reduced yield on highly susceptible varieties. Consequently, mean seed yield among entries was low at 1582 lbs/acre. There was also mild disease pressure from bacterial brown spot. The varieties Chase and the experimental line B310, had significantly higher yield than all other entries at the site. Both of these entries are resistant to the rust pathogen and expressed some level of field tolerance to halo blight. Both have a vine growth habit and are a few days later in maturity than Bill Z. The entries which ranked in the second group statistically, NW-410 through UI 126, were all susceptible to rust except ROG 123. These results illustrate the importance of rust resistance for high yield potential in this region. Rust resistance in this region is especially important because rust has been a problem annually in the recent past. Growers should either plant rust resistant varieties or have a strict chemical control plan to obtain maximum economic pinto bean yields.

The Eaton site had very low disease pressure, only Fusarium root rot caused obvious disease symptoms. There was a trace of rust, but not enough to cause yield loss. Mean yield was high, with the grand mean among entries at 2489 lbs/acre. The top three entries, NW 410, Bill Z and B310 had significantly higher yield than the remainder of the entries. Chase and RS 101 has significantly lower yield than all other entries, with the remaining entries intermediate. The elevated performance of NW 410, Bill Z and B310 may reflect their tolerance to root rot since all three entries expressed high tolerance to Fusarium root rot in the trial.

The Sterling site had the highest mean yield at 2792 lbs/acre. There was mild disease pressure from rust and a trace of common blight and white mold. Disease pressure likely did not significantly reduce yield of any entry at this site. Chase, ROG 179, Bill Z and Othello ranked in the highest group for seed yield. In general, most entries performed very well with the exception of the experimental line NE91-11.

Overall, Chase, ROG 123 and B310 appear to be the best entries for areas which have a history of severe rust pressure. In the absence of rust, where root rots are problematic, Bill Z and NW 410 should perform well. However, small seed size has been a problem in NW 410. When disease pressure does not reduce yield, most of the new varieties will provide high yield potential. The best strategy for planning next year's bean crop is to plant more than one variety to diversify the genetic base of your crop and spread out the harvest time by choosing varieties which differ in time to harvest maturity.

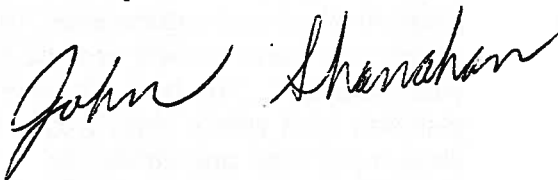
▫Brick and Shanahan

Table 5. Avg. pinto bean performance trials over three eastern Colorado sites in 1994.

ENTRY	BURLINGTON	EATON	STERLING	AVG.
NW-410	1781	2907	2797	2495
CHASE	2138	2133	3185	2485
B310	2118	2769	2523	2470
BILL Z	1485	2744	3098	2452
OLATHE	1548	2535	2915	2333
UI-114	1522	2513	2883	2306
UI-129	1525	2574	2744	2281
UI-126	1397	2595	2810	2267
OTHELLO	1293	2354	3036	2227
ARAPAHO	1510	2397	2746	2218
NE91-11	1243	2403	2277	1974
RS-101	1172	1910	2553	1878
AVERAGE	1561	2486.0	2797.0	2282

Where trade names are used, no discrimination is intended, and no endorsement by the Cooperative Extension Service is implied.

Sincerely,



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Extension Agronomist - Crops

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