

TABLE OF CONTENTS

Department of Soil and Crop Sciences Update	1
Certified Crop Adviser Program Exam Date Set	2
Review Session on CCA Performance Objectives Set at CSU	2
Regulations for Agricultural Chemical Storage and Handling	3
New Location for Soil, Water, and Plant Testing Laboratory	3
Pinto Bean Production and Price Outlook for 1994	4
Seed Storage in Colorado	5
Crop Production and Pest Management Field Records	5

DEPARTMENT OF SOIL AND CROP SCIENCES UPDATE

Several significant changes are occurring in our department. John Shanahan replaced Bob Croissant as our Extension Coordinator. John will continue his work on Crops Testing until we fill a new Extension position. Bob continues his efforts as our Crops Specialist until his retirement in March 1995. We thank Bob for his leadership as our Extension Coordinator for the last 4 years and for his tremendous contributions to our department and the State of Colorado over the 37 years he has served as a faculty member.

We have recently advertised two Extension positions that we plan to fill

next year. The first position is in Extension Environmental Soil Science. The individual in this capacity will provide leadership on the relationship between fertilizer management and water quality and waste management as well as the impact of soil management and tillage systems on crop residues, conservation compliance, and erosion control. The second position is in Extension Crop Production. This faculty member will provide leadership for crop variety testing involving small grains, corn, dry beans, and sunflower in irrigated or dryland cropping systems. Search committees have been appointed and

Deadline dates for applications for the two departmental Extension positions are:

Crop Production - December 15, 1994

and

Environmental Soil Science - January 2, 1995

If you need more information, please contact the main office, (303)491-6501.

job descriptions will be released soon. Closing dates for receipt of applications are January 2, 1995 for the Environmental Soil Science position and December 15, 1994 for the Crop Production position.

Two faculty members went on sabbatical leave beginning October 1, 1994. Jim Quick, wheat breeder, will be working at the International Wheat and Maize Improvement Center CIMMYT near Mexico City, studying heat tolerance selection techniques in wheat. He will return in the summer, 1995. Lee Sommers, our department head, will work with USDA-Cooperative States Research Service in Washington, D.C. on water quality proposals and program reviews at land grant universities until June 1, 1995. While Lee is in Washington, D.C., I will serve as Acting Department Head.
▫Barbarick

CERTIFIED CROP ADVISER PROGRAM EXAM DATE SET

State and national exams for the Certified Crop Adviser (CCA) program will be held at the Adams County Fairgrounds (Brighton) on February 3, 1995. A State Board, comprised of representatives from the following organizations, was recently organized to initiate this program in Colorado.

Organizations involved in this program are Cooperative Extension, Colorado Departments of Agriculture and Health, the Soil Conservation Service, the Rocky Mountain Plant Food and Agricultural Chemical Association, the Independent Agricultural Consultants of Colorado, and the Colorado Aerial Applicators Association.

This is a new national voluntary

program open to anyone who provides crop management recommendations to farmers and growers. To date, 35 states have joined this effort.

The goal of this certification process is to help the agricultural industry meet the challenges of environmental stewardship and enhance the credibility of professional crop advisers. To be certified, applicants must possess certain levels of education and field experience. They also must pass both national and state examinations. Certification includes a commitment to ethical standards of conduct and continuing education.

Private crop consultants, agrichemical dealers, SCS personnel, and others who advise farmers and growers all may wish to obtain these credentials. Extension agents and specialists who work with crop producers may also benefit from obtaining this certification.

If you have questions or comments about the CCA program, give us a call at (303)491-6201.

▫Mortvedt and Waskom

REVIEW SESSION ON CCA PERFORMANCE OBJECTIVES SET AT CSU

CSU Extension will host a review session, "Are You Ready? A review of the Certified Crop Adviser (CCA) Performance Objectives", on Tuesday, December 13. This session will be held at the North Ballroom, Lory Student Center, from 9:00 am. to 5:00 pm. Cost for attending this session will be \$10, payable at the door.

The purpose of this meeting is to

***"Are You Ready?
A review of the
Certified Crop
Adviser (CCA)
Performance
Objectives" will
be held Tuesday,
December 13
from 9 a.m. to 5
p.m. in the CSU
Lory Student
Center - North
Ballroom.***

assist potential applicants for the National and/or State CCA exam to determine their understanding of the materials to be included in these exams which will be held at the Adams County Fairgrounds (Brighton) on February 3, 1995. CSU specialists in Soil Fertility, Soil and Water Management, Pest Management, Crop Production, and state regulations relevant to use of fertilizers and agrichemicals will review the National and State Performance Objectives for the CCA exam. Time will be allotted for some questions and discussion of this material. Attendees should then be better able to determine what subject matter they will need to study in preparation for these exams. The deadline for registering for either or both exams is January 1, 1995.

Copies of the CCA Resource Guide prepared by CSU Extension also will be available for sale at this meeting.
□Apley, Mortvedt, and Waskom

REGULATIONS FOR AGRICULTURAL CHEMICAL STORAGE AND HANDLING

Rules and regulations developed by the Colorado Department of Agriculture requiring secondary containment and mixing and loading pads where threshold amounts of pesticides and fertilizers are stored and handled have been adopted by the Commissioner of Agriculture and became effective September 30, 1994.

These regulations, required as part of the Agricultural Chemicals and Groundwater Protection Act (SB 90-126) are designed to protect groundwater from contamination by agricultural chemicals at sites where these products are stored and handled in large amounts.

***Rules and
regulations for
secondary
containment and
mixing and
loading pads
became effective
September 30,
1994.***

The regulations are divided into separate requirements for pesticides and fertilizers and contain a graduated phase-in schedule. Pesticide handling facilities which are subject to the regulations must have secondary containment and mixing and loading pads in place in 1997.

Most commercial fertilizer facilities must be in compliance in 1999. Some special requirements apply to fertilizer tanks larger than 100,000 gallons. Most producers and chemigators will not fall under the thresholds for secondary containment, but some will need mixing/loading pads.

For complete copies of the regulations and a summary sheet which contains a checklist of the thresholds, contact Mitch Yergert at the Colorado Department of Agriculture (303)239-4140 or myself (303)491-6210.
□Waskom

NEW LOCATION FOR SOIL, WATER, AND PLANT TESTING LABORATORY

The Soil, Water, and Plant Testing Laboratory has moved from its previous location in the Vocational Education Building to the new Natural and Environmental Sciences Building (NESB) on East Drive on the CSU main campus. The lab is located on the third floor in Room A319 and is open from 8:00 a.m. to 5:00 p.m., Monday through Friday.

There is temporary parking on East Drive and in the loading area adjacent to East Drive. Anyone with large numbers of samples that may require assistance in getting them to the third floor can call the lab directly by using the phone in the receiving room

***New information
on the Soil,
Water, and Plant
Testing
Laboratory:***

***Location: 3rd
floor in room
A319 of the
Natural and
Environmental
Science Building
(NESB) - located
on CSU main
campus/East
Drive.***

***Hours: 8-5 p.m. -
Monday - Friday***

***Phone number:
(303)491-5061***

***Fax number:
(303)491-2930***

***(Phone and fax
numbers remain
unchanged.)***

***Contact Jim Self
for a tour of the
facilities.***

adjacent to the loading area.

The amount of storage space in the lab is very limited, making it difficult to store samples for an extended period of time. After the analysis is completed, samples will either be destroyed or returned after thirty days at the customer's expense. It is important for customers to review their data as soon as possible after receiving their report to be sure additional tests are not needed.

To get to the Natural and Environmental Sciences Building, proceed west on Pitkin Avenue from College Avenue. Turn right onto Mason Street, and head north to "A" Street. Turn left at "A" Street and head west to East Drive. The NESB will be directly in front of you, and the loading zone will be slightly to the right on East Drive.

The lab phone number is still (303)491-5061, and the fax number remains (303)491-2930. Anyone interest in a tour can contact Jim Self at the lab.
▀Self

PINTO BEAN PRODUCTION AND PRICE OUTLOOK FOR 1994

The USDA Crop Reporting service is due to publish their October dry edible bean statistics, but there should not be many surprises from the August report. In August, the report showed total US production in 1994 projected to be up 28%, just over 27.9 million cwt, compared to 21.8 million cwt in 1993. Colorado production was forecast at 3.2 million cwt in 1994, compared to 2.8 million cwt in 1993, also up from 1993.

Production in North Dakota is projected to be almost double that of last year, at 5.8 million cwt in 1994 compared to 2.9 million cwt in 1993. The large projected pinto crop in Colorado and

North Dakota have caused a decline in pinto prices. Pinto prices fell from the high twenties to the mid teens in September.

Where will pinto prices go from here? The Mexico market may be an important component in the equation. The pinto crop in northern Mexico will be somewhat short this year, due to a drought in the Chihuahua region. However, in the Durango and Zacatecas regions (in the southern highlands), production is near or above normal which might compensate for the lower production in Chihuahua. One report has indicated that Mexico plans to buy black beans for domestic consumption, but, to date, have not indicated a need to buy pintos. If the pinto crop in Mexico is short, coupled with the increased allowance of duty free beans into Mexico under the NAFTA agreement, pinto prices should not erode further. We will just have to await further news about the Mexico crop and world export demand before speculating about future pinto price.

The price of navy beans has gone up dramatically in recent months due to the short crop in Michigan, the major navy bean producer. Production is down in Michigan due to an extremely wet summer and is forecast at 3.9 million cwt in 1994, compared to the 1993 crop of 6.1 million cwt. This factor will ensure that the long-term price outlook for navy beans will be good.

Price swings in different market classes from year to year are primarily due to climatic conditions and changing demand in the export market. Since these factors are out of our control, the only way to stabilize economic return on your bean crop is to diversify production into more than one market class. You may not

increase net profit in any given year, but your return on investment will be more stable from year to year. Next year, you may want to consider planting more than one market class to diversify your production. By planting more than one type of bean, you can also spread out your harvest operations, since different market classes often differ in their harvest maturity.

▫Brick

SEED STORAGE IN COLORADO

Many of us who live in Colorado consider ourselves lucky to live in a state that has the beauty, moderate climate, and recreational opportunities that are found in this state. Now, there is another reason to feel proud about our state. Seed stores very well here. Colorado's moderate temperatures and dry air combine to form an ideal climate for storage of seed. A rule of thumb for seed storage states that if the combination of the temperature and relative humidity over time is less than 100, then seed will store well. Colorado's average 24 hour temperatures are almost always below 80 degrees and average relative humidity is 20% or less, so that total is lower than 100 and our seed thrives in storage.

But that does not mean that storage problems will not occur. Take, for example, a 5,000 bushel bin of wheat in October after a week of warm days. A sudden change in air temperature will slowly change the temperature of the grain mass, starting with the outside of the bin. The cooler air in the outer parts of the bin is heavier and settles to the bottom of the bin, forcing the warm air in the bin's center to move upward. Since moisture in the seed tries to equilibrate with the air, some water vapor will leave the seed and migrate

with the air current in the bin. When the warm air currents in the seed mass reach the surface in the middle of the bin, it again becomes exposed to the ambient air temperature and begins to cool. Since cold air holds less moisture than warm air, some of this migrating water condenses on the seed at the top center of the bin.

So, seed in the top/center of a bin is most susceptible to moisture build-up which can eventually cause mold formation. This can be complicated by the fact that light material and fines tend to collect in the center of a seed mass. Once moisture migrates into this tightly packed mass, air movement is restricted and moisture levels remain high. Also, remember that even seed that is stored at moisture levels lower than 12% are still vulnerable to this moisture migration.

Colorado's climate is a paradise for seed storage, but it still may be necessary to monitor bins during times when temperatures vary between very warm and very cold. It is also important to remove as many of the fines and foreign material before storage.

▫Stanelle

CROP PRODUCTION AND PEST MANAGEMENT FIELD RECORDS

Record sheets are available now from the Extension Agronomy office in the Department of Soil and Crop Sciences. The record sheets are designed to aid farmers and other chemical users to maintain required records when applying Restricted Use Pesticides (RUP). This information must be kept on file after May 9, 1993 according to

Colorado's moderate temperatures and dry air are not only good for the human population but the seed population as well.

provisions within the 1990 Farm Bill and be available for inspection upon demand.

The four page layout is designed to permit the user to record all necessary items for multi-use purposes (crop rotations, crop insurance, pesticide programs, water quality monitoring, conservation tillage, etc.). Information to complete all blanks on these forms may not be available or relevant for all field records.

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

Certified private applicators of restricted use pesticides must record and maintain information as indicated with an "*" on the forms. This information must be recorded within 72 hours of the date of application and be retained for 2 years. Upon request, a copy of this information must be submitted to authorized individuals (Agricultural Marketing Service) within 30 days.

The 1990 Farm Bill also requires records on stored commodities treated with RUP. This information can be added to page three, column six.

The records are designed, one copy of general information and a grid for constructing a farm map, along with 12 folded pages (each folded to represent a 4 page layout), one for each field on the farm.

Extension agents are urged to pick up copies for use according to their needs. Visual aids are available for those interested in presenting group workshops. Orders for record sheets are also available from the Resource Center.

□Croissant

I would like to take this opportunity to thank Bob Croissant for his years of dedicated service in editing this newsletter and congratulate him on his upcoming retirement.

CONTRIBUTING AUTHORS

Apley, Kathryn L.,
Extension Agronomist-
Environmental and Pesticide
Education,
Colorado State University
Barbarick, Kenneth A.,
Acting Department Head,
Soil and Crop Sciences,
Colorado State University
Brick, Mark A.,
Extension Agronomist -
Bean Production,
Colorado State University
Croissant, Robert L.,
Extension Agronomist - Crops,
Colorado State University
Mortvedt, John J.,
Extension Agronomist - Soils,
Colorado State University
Self, James R.,
Manager, Colorado State University
Soil Testing Laboratory,
Colorado State University
Shanahan, John F.,
Extension Agronomist - Crops,
Colorado State University
Stanelle, James R.,
Manager, Colorado Seed Growers
Association,
Colorado State University
Waskom, Reagan M.,
Extension Agronomist -
Water Quality,
Colorado State University

I look forward to this opportunity and hope we will succeed in maintaining the level of quality that he established.

Sincerely,



John F. Shanahan
Editor

Extension Agronomist - Crops