

**COORDINATING COMMISSION
FOR POSTSECONDARY EDUCATION**

140 N. 8th Street, Suite 300
Lincoln, NE 68508

Telephone: (402) 471-2847
FAX: (402) 471-2886

PROPOSAL FOR NEW INSTRUCTIONAL PROGRAM
Form 92-40

SECTION I

Institution Submitting Proposal: Nebraska College of Technical Agriculture

Title of Program: Agricultural Chemical Application

CIP Code: 01.0204

Organizational Unit in which program will be located:

Agriculture Production Systems Division

Name of contact person in the event additional information is needed: Dr. Susan M. Fritz

Telephone: 402-472-5242

Degree, Diploma, or Certificate to be offered (use separate submittal for each level):

Agricultural Chemical Application Undergraduate Certificate

Proposed date to initiate program: When approved by the Coordinating Commission

List the location(s) where this program will be offered: NCTA

If the program has a projected ending date, please so indicate:

Date approved by Governing Board: October 9, 2015

(Attach all documents related to this proposal upon which the Governing Board made its decision to approve the proposal.)

Chief Executive Officer's or other Authorized Officer's signature: _____


Susan M. Fritz

**PROPOSAL FOR THE CREATION OF AN
UNDERGRADUATE CERTIFICATE IN
AGRICULTURAL CHEMICAL APPLICATION**

**Nebraska College of Technical Agriculture
Agriculture Production Systems**

Proposed by: The University of Nebraska-Nebraska College of
Technical Agriculture (NCTA)
Curtis, Nebraska

Proposed program: Certificate in Agricultural Chemical Application

Proposed degree: Undergraduate Certificate

Other programs in this field at NCTA: None

CIP Code: 01.0204

Administrative Unit: Agriculture Production Systems

Proposed delivery site: Nebraska College of Technical Agriculture

Proposed delivery method: Face to face

Date approved by the academic council: November 19, 2013

Date approved by governing board:

Proposed start date: Spring 2016 semester

1. Description and Purpose of the Proposed Program

The Nebraska College of Technical Agriculture proposes that the Agriculture Production Systems Division establish an Undergraduate Certificate in Agricultural Chemical Application. The certificate is designed to give the learner applied knowledge and skills that meet agricultural chemical application industry requirements.

Nebraska has over 21 million acres of cropland, which includes over 8 million acres of irrigated cropland. Fertilizers, pesticides and other agricultural chemicals are applied to the vast majority of these crop acres and many of these acres receive multiple applications annually. Cooperatives and other custom applicator businesses in Nebraska have frequently communicated their job needs to NCTA. The Agricultural Chemical Application certificate was developed by agronomy faculty at NCTA and then presented to the agronomy industry advisory group on December 19, 2014. The advisory group included representatives from Ag Valley Coop, Cargill, and Crop Production Services, all businesses that include custom application of agricultural chemicals. The advisory group approved the certificate's curriculum and learning outcomes.

This certificate will consist of 18 credit hours of hands-on courses, covering areas such as Pest Management, Pesticide Certification, Agricultural Chemical Application, Precision Farming, Equipment Principles and Preventative Maintenance. Students will be able to successfully complete Commercial Applicator Certification exams after completion of the certificate at NCTA; however, the combination of learning experiences in these courses goes well beyond programs focused solely on achieving Commercial Applicator Certification. These learning experiences were developed with support from the agricultural chemical application industry to provide a well-rounded educational experience to meet the industry's needs.

The Agricultural Chemical Application Certificate is designed for students to enter the workforce as productive employees and citizens. If they choose to stay at NCTA, they can ladder into the Associate of Applied Science degree options at NCTA for more comprehensive career training. All the courses required for the certificate can be used to meet a degree requirement and with advisor assistance the student could transition into the degree program very efficiently.

2. Program of Study

The proposed certificate in Agricultural Chemical Application consists of 18 credits hours of course content. The certificate allows the division to offer a pathway for individuals to advance their education and skills along a focused, professional course of study and to have those skills and abilities acknowledged, documented, and later applied to an Associate of Applied Science, if the individual wishes to do so. The following table shows the structure of the certificate.

Course	Institution	Credit Hours
AEQ 2301 Pesticide Certification	NCTA	1
AGR 2201 Commercial Agricultural Carrier	NCTA	1
AGR 2354 Pest Management	NCTA	4
AEQ 2103 Agricultural Chemical Applicator	NCTA	3
AEQ 2323 Precision Farming	NCTA	3
AEQ 2303 Equip. Preventative Maintenance	NCTA	3
AEQ 1153 Equipment Principles	NCTA	3
TOTAL		18

The program learning outcomes for the Agricultural Chemical Application Certificate are:

1. Students will be able to deliver, mix and apply agricultural chemicals safely and efficiently.
 - Identify and integrate cultural, physical, biological, and chemical pest management strategies.
 - Identify insects, diseases, weeds, and other pests that commonly occur in agricultural crops grown in Nebraska.
 - Locate and interpret pertinent information from pesticide labels including application rates and methods; mixing, handling, storage, and transport guidelines; environmental concerns; and measurements of pesticide toxicity and hazards.
 - Interpret the important federal and state laws that regulate pest management and pesticide use in Nebraska.
 - Describe pesticide formulations and how the formulation may affect the efficacy and environmental impact of the pesticide.
 - Describe how spray adjuvants can improve the performance of pesticides through improved efficacy and spray application characteristics.
 - Describe the processes in which pesticides are physically dissipated and degraded in the environment and apply this knowledge and formulate strategies to minimize negative environmental impacts.
 - Analyze how a given pesticide type influences biological systems through modes of action and mechanisms of selectivity inherent to each pesticide class.
 - Select methods and equipment necessary to efficiently and safely apply pesticides, describe the basics of sprayer calibration and be able to calculate pesticide application rates.
 - Formulate strategies to minimize the occurrence of pest resistance to pesticides.
 - Deliver agricultural chemicals safely and in compliance with Nebraska Department of Transportation regulations.
2. Students will be able to maintain and safely operate agricultural chemical application equipment.
 - Understand and maintain engine intake, fuel and exhaust systems on application equipment.
 - Understand and maintain lubrication, cooling, hydraulic and electrical systems on application equipment.
 - Understand and maintain tires, brakes, and drive systems on application equipment.

- Understand basic tune-up and troubleshooting procedures on application equipment.
 - Exhibit a working knowledge of global positioning systems (GPS) including factors influencing accuracy and potential uses/applications.
 - Effectively operate sprayer control and guidance systems including systems that utilize variable-rate application and swath control.
3. Students will be able to interact professionally with colleagues and clients.

Student learning outcomes will be distributed among certificate courses according to this matrix:

Course Number	Course Name	SLO1	SLO2	SLO3
AEQ 1153	Equipment Principles		X	
AEQ 2103	Ag Chemical Application ¹	X	X	X
AEQ 2301	Pesticide Certification ²	X		
AEQ 2303	Equipment Preventative Maintenance		X	
AEQ 2323	Precision Farming Technology		X	
AGR 2201	Commercial Ag Carrier ³	X		
AGR 2354	Pest Management	X		X

¹ The Ag Chemical Application course focuses on the self-propelled sprayers commonly utilized by the industry and will include direct interaction with the industry.

² Pesticide Certification is the course that directly prepares for the Commercial Applicators Certification exams.

³ The Commercial Ag Carrier course prepares students for the written CDL license exam.

3. Faculty Staff and Other Resources

Number of faculty and staff required to implement the proposed certificate

No new faculty or staff resources are required to implement the certificate. All the courses used in the certificate program for filling student requirements are existing and no new courses are required. The current frequency of course offerings is sufficient to support the proposed certificate program. Modest enrollment increases are expected, but can be accommodated within the balance of existing faculty workloads.

Additional physical facilities needed

Students enrolled in this division will take courses currently offered by NCTA. Current classroom, laboratory, and land laboratory facilities are adequate and require no additions or renovations.

NCTA's campus includes a farm laboratory containing over 200 acres of crop land that adequately facilitates education in crop management and equipment operation. The Agricultural Mechanics building is located in central campus and consists of office space, tool room, two large mechanics labs, with an adjacent building with a small welding lab and classroom. This building is used for equipment related courses included in this proposal, which are used in several degree programs at NCTA. Furthermore, there is the newly constructed Agricultural Industry Education Center which houses our agronomy program and faculty. This new facility

includes a fully equipped agronomy lab, a computer lab and lecture classrooms for course instruction.

The proposed Agricultural Chemical Application certificate will also be complimented by faculty and equipment at the West Central Research and Extension Center at North Platte. The research center includes a state-of-the-art wind tunnel facility for measuring spray drift of pesticides and a laser system for measuring spray droplet size. These facilities and equipment have already been used in other programs at NCTA and will be directly utilized in the Pest Management course included in this program.

Instructional equipment and informational resources

There will be no need for additional instructional equipment since students will be taking courses that are currently offered using available laboratory and classroom space. The current NCTA Technology Plan would continue to be followed for regular updates and additions of new computer and technology equipment for all NCTA students and staff.

Students will have access to the NCTA library and information resources as well as access to University of Nebraska resources through the NCTA library. There is no anticipation of further library or resource information services needs with the addition of this certificate. There would potentially be a few more students using the library and related information resources but not large enough numbers to warrant hiring additional staff.

4. Evidence of Need and Demand: Enrollment Projections

Need for Program and employment and educational advancement opportunities for graduates

The purpose of this program is to provide a path for individuals to advance their education along a focused, professional course of study and to have that path acknowledged and documented. Prospective students in the workplace who have only a high school education can benefit from this certificate.

According to the Bureau of Labor Statistics, employment of pesticide handlers, sprayers and applicators is projected to grow 11.2 percent from 2012 to 2022, above the average for all occupations. The median annual wage \$30,270 in 2012.¹ The Custom Applicator career profile highlighted by MyCAERT, an online agricultural educational resource, indicates the job outlook is rated Good with annual salaries ranging from \$32,298 to \$45,050.² This data focused on Illinois and the surrounding region.

Other data over the last 5 to 10 years supports the projections from the Bureau of Labor. Sara Schafer, Farm Journal Media Business and Crops Editor, summarized data collected by AgCareers.com, an online job board for agriculture, food, biotechnology and natural resource

¹ Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2014-15 Edition*, Pesticide handlers, sprayers, and applicators on the Internet at <http://data.bls.gov/projections/occupationProj> (visited June 5, 2015).

² <http://www.mycaert.com/career-profiles/cp-custom-applicator/cp-custom-applicator.pdf> (visited June 5, 2015).

occupations. According to the report, the number of custom applicators almost doubled from 2009 to 2010 and Custom Applicators was one of the top 5 agricultural careers.³

Career Type	# of Jobs	Percentage
Sales/Marketing	8,789	25%
Management/Manager	3,638	11%
Custom Applicator	2,091	6%
Production	1,921	6%
General	1,784	5%

Additionally, in 2012, 10% of Nebraska high school students taking the ACT test and planning on attending college for two years or less indicated their intended major would be “Agriculture and Natural Resources Conservation”.⁴ This is an interesting piece of evidence that supports the importance of agriculture and agriculture programming. Agriculture as an intended major is exceeded only by health sciences and “Repair, Production, & Construction” as an intended major for Nebraska high school students planning to attend a two-year college.

A program advisory council has been established and they have reviewed and approved the certificate courses and learning outcomes. This action was taken on Friday, December 19, 2014. The industry representatives that sit on this council are:

- David Tarin, Agronomist, Agricultural Valley Coop at Maywood
- Steve Forbes, Human Resource Director, Agricultural Valley Coop
- Kip Korell, Location Manager at McCook, Crop Production Services (CPS)
- Chris Borland, Location Manager at Oxford, Cargill
- Bob Klein, Crops Specialist, West Central Research and Extension Center at North Platte
- John Scharf, farmer at Curtis

NCTA data

NCTA experienced a 3.4% annual growth rate from fall 2003 through fall 2013 resulting in an estimated 10 year enrollment growth of 39.5% (source: 2014 Nebraska Higher Education Progress Report, Nebraska’s Coordinating Commission for Postsecondary Education, March 13, 2014.) NCTA has enrolled 50% more freshmen in the incoming class as compared to fall 2013, when comparing total enrollment growth NCTA had a 28% growth from 2013 to 2014. Early estimates for fall enrollment point to another significant gain in NCTA enrollment.

Number of students expected to enroll in the program in each of the first five years of operation and basis for the estimate

³ http://www.agweb.com/article/strong_job_outlook_for_agriculture/ (visited June 5, 2015).

⁴ <http://www.act.org/newsroom/data/2012/pdf/profile/Nebraska.pdf>, page 26

Based on current and projected job needs, salary potential, industry partnerships and support and the ability to ladder into an associate's degree, we expect to reach an enrollment level of 15 to 20 students within five years growing from an initial startup enrollment of 6 to 8 students.

Minimum number of students to make the program viable

A course minimum of eight students would be required before the courses in this program would be offered. Although enrollment growth is anticipated, no additional enrollment growth is required to make this program viable. No additional resources are required to develop courses or equip a teaching laboratory.

5. Partnership with Business

In 2007, NCTA began a scholarship program with local cooperatives to generate well-trained individuals to meet the needs of their agronomy and custom application business. The program covered all tuition and fees required for obtaining an Associate of Applied Science degree in Agronomy, in exchange for a work commitment to the cooperative. The program continues today with two available scholarships per incoming class, one with Ag Valley Coop and one with Cargill. Initial discussions have occurred with these businesses of developing a similar scholarship for the Agricultural Chemical Application certificate once approved.

The Agricultural Chemical Applicators Certificate program presented in this proposal was developed in cooperation with the Industry Advisory Council. This advisory council included industry representatives from the nationally recognized companies Cargill and Crop Production Services (CPS) as well as the regional Agricultural Valley Coop (20 locations in Nebraska and Kansas). Additionally, the three companies pledged support to the training of the program by providing access to application equipment and tuition scholarship support to students.

Sharing of resources, particularly student access to self-propelled sprayers and other chemical application equipment was discussed and all three businesses expressed the willingness to assist as needed.

NCTA is also developing a new partnership to extend the Agricultural Chemical Application certificate through Dual Credit course offerings with York High School. Central Valley Ag Coop, a large cooperative with locations throughout central Nebraska, has pledged to assist this partnership by providing student's access to equipment and assisting with laboratory instruction.

6. Collaborations within NCTA

NCTA courses in the certificate are entirely offered by the Agriculture Production Systems Division, thus no other departments within NCTA are involved in offering the curriculum. We will advertise the availability of this certificate across campus as a relevant complementary program. Students pursuing degrees in agricultural equipment management and diversified agriculture can easily incorporate the courses into their degrees utilizing elective unit options. Students concentrating in agronomy or animal science could also expand career options through the addition of this certificate.

7. Collaborations with other University of Nebraska Campuses, other Higher Education Institutions and Agencies External to the University

Partnerships have been on-going with the West Central Research and Extension Center (WCREC) in North Platte for many years. Dr. Greg Kruger, Cropping Systems Specialist, has recently established 1 of 3 wind tunnels in the USA that effectively analyzes the dynamics of spray applications. This cutting-edge technology has assisted previous NCTA students in understanding the dynamics of spray drift and will continue to be asset for the Agricultural Chemical Application Certificate. Greg Kruger has recently established a mobile pesticide application educational laboratory and will be developing various educational modules for the pesticide application industry. Initial discussions have occurred regarding the integration of the equipment and educational modules into coursework associated with the proposed Agricultural Chemical Application certificate.

At this time no discussions have taken place with other institutions of higher learning. As appropriate, we will work to determine applicable course equivalencies with Nebraska's community colleges.

8. Centrality to the Role and Mission of the Institution

The University of Nebraska - Nebraska College of Technical Agriculture (NCTA) is a two year public college of the University of Nebraska system first serving the students and people of Nebraska, but also the nation and the world. Since its founding in 1968, NCTA has evolved into a quality institution of higher education, committed to excellence in program offerings, responsive to a dynamically changing agricultural industry and aspirations of a diverse student population.

The Nebraska College of Technical Agriculture is devoted to a statewide mission of preparing students for successful careers in agriculture, veterinary technology, food and related industries. The college provides open access to innovative technical education resulting in associate degrees, certificates, diplomas and other credentials.⁵ The Certificate in Agricultural Chemical Application supports NCTA's overall role and mission by providing a focused curriculum that contributes to workforce development and helps to bring new students into the university. Specifically, the certificate is consistent with several objectives in the same areas as are noted in the next section, including accessibility, lifelong education, student preparation, targeted programs, collaboration, and workforce development.

9. Consistency with the University of Nebraska Strategic Framework

The proposed certificate builds on the University's focus on excellence in undergraduate education by implementing a series of options and certificates that addresses an important need both in the state, regionally and nationally. In relation to the University's Strategic Planning Framework,⁶ the certificate aligns well with the long-term interests of the University of

⁵ <http://ncta.unl.edu/mission-statement>

⁶ <http://nebraska.edu/docs/StrategicFramework.pdf>, University of Nebraska Strategic Planning Framework, 2014-2016

Nebraska's goal to build a talented, competitive workforce while pursuing excellence through targeted programs (strategic Goals 2b and 3). The certificate will afford many opportunities to local professionals to develop lifelong educational opportunities through preparation for success in higher education (Goal 1e). Furthermore, it aligns well with Goal 3 as we attract and build a talented and competitive workforce. The program also aligns with Goal 5 in that the faculty, staff and students in the program are already directly engaged with the business community in Nebraska through advisory councils, and professional organizations. Overall, the spirit of the following passages from the University's Strategic Planning Framework is evident in this proposal:

1. The University of Nebraska will provide the opportunity for Nebraskans to enjoy a better life through access to high quality, affordable undergraduate, graduate and professional education.

- a. The university will strive to increase affordability and ensure qualified students are not denied access based on economic circumstances.
- b. Increase the percentage of Nebraska high school graduates (the state "college-going rate") who enroll at and graduate from the university.
- e. Promote adequate student preparation for and success in higher education.

2. The University of Nebraska will build and sustain undergraduate, graduate and professional programs of high quality with an emphasis on excellent teaching.

- b. Pursue excellence through focus on targeted programs in areas of importance to Nebraska where the university can be a regional, national and/or international leader (e.g. agriculture and natural resources, life sciences, information technology and architectural engineering).

3. The University of Nebraska will play a critical role in building a talented, competitive workforce and knowledge-based economy in Nebraska in partnership with the state, private sector and other educational institutions.

- b. Increase proportion of the most talented Nebraska high school students who attend the University of Nebraska.
- c. To attract talent to the state, increase the number of nonresident students who enroll at the university.

5. The University of Nebraska will serve the entire state through strategic and effective engagement and coordination with citizens, businesses, agriculture, other educational institutions, and rural and urban communities and regions.

- a. Support economic growth, health and quality of life through policy initiatives consistent with university mission.

10. Avoidance of Unnecessary Duplication

The purpose of this proposal is to offer a credentialed certificate to help shape the skills of Nebraska's workforce in agriculture, while meeting the needs of the industry. The courses were developed in conjunction with an agricultural industry advisory council with members specializing in the field of agricultural chemical application. Students will be able to successfully complete Commercial Applicator Certification exams after completion of the certificate at NCTA; however, the combination of learning experiences in these courses goes well beyond programs focused solely on achieving Commercial Applicator Certification. No other program or credential is available at Nebraska higher education institutions to provide this

career targeted training. This is based on evaluation of the programs described by the following Nebraska community colleges:

- Central Community College
- Mid-Plains Community College
- Northeast Community College
- Southeast Community College
- Western Nebraska Community College

Some Nebraska community colleges provide courses that target the agricultural chemical application equipment and commercial applicator license preparation; however, no community college provides a comprehensive program equivalent to the one described in this proposal.

All the courses required for the certificate can be used to meet a portion of Associate of Applied Science degree requirements for the Ag Equipment Management, Diversified Agriculture or Agronomy options. Therefore students can combine the certificate credentials with other agriculturally related skills for a more complete educational experience. This laddering into a degree opportunity is a unique aspect of this program.

11. Consistency with the Comprehensive Statewide Plan for Postsecondary Education:
How this program would enhance relevant statewide goals for education

The proposed certificate is consistent with expectations of the agricultural business community and the strategic plan of the college. Students who complete the Certificate in Agricultural Chemical Application will be prepared to contribute and succeed in a highly skilled world through their knowledge and training in agricultural chemical application, which is a vital service to the field of agriculture in the state of Nebraska and surrounding region.

TABLE 1: PROJECTED EXPENSES - NEW INSTRUCTIONAL PROGRAM
Agricultural Chemical Application Undergraduate Certificate

	(FY2016)		(FY2017)		(FY2018)		(FY2019)		(FY2020)		Total	
	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost
Personnel												
Faculty ¹												
Professional												
Graduate assistants												
Support staff												
Subtotal												
Operating												
General Operating												\$0
Equipment ²		\$500		\$750		\$1,000		\$1,250		\$1,500		\$5,000
New or renovated space												\$0
Library/Information Resources												\$0
Other												\$0
Subtotal		\$500		\$750		\$1,000		\$1,250		\$1,500		\$5,000
Total Expenses	0	\$500	0	\$750	0	\$1,000	0	\$1,250	0	\$1,500	0	\$5,000

¹ This certificate is built on curriculum that already exists. There is sufficient capacity to offer the certificate without requiring additional faculty or staff resources.

² Shows anticipated expenditures for the acquisition of new or upgrades or replacement of existing equipment necessary for the implementation and/or operation of the unit.

TABLE 2: REVENUE SOURCES FOR PROJECTED EXPENSES - NEW INSTRUCTIONAL PROGRAM
Agricultural Chemical Application Undergraduate Certificate

	FY(2016)	(FY2017)	(FY2018)	(FY2019)	(FY2020)	Total
	Year 1	Year 2	Year 3	Year 4	Year 5	
Reallocation of Existing Funds						\$0
Required New Public Funds						\$0
1. State Funds						\$0
2. Local Tax Funds (community colleges)						\$0
Tuition and Fees ¹	\$16,992	\$21,780	\$27,000	\$32,508	\$40,698	\$138,978
Other Funding						\$0
Total Revenue ²	\$16,992	\$21,780	\$27,000	\$32,508	\$40,698	\$138,978

¹ Projection is for 8 students in the first year, each of whom are projected to take 18 credit hours in the certificate over the course of a year, with a growth of ~20% per year. NCTA tuition used for the calculation is \$118 per credit hour for FY2016, \$121 for FY2017, and for the purposes of these projections is incremented by 3% yearly thereafter. University Program and Facilities fees are excluded from the calculation for simplicity. Tuition income does not directly accrue to the proposed academic program, but is used to partially fund overall instructional capacity at NCTA. In addition, tuition income projections do not consider internal shifts in enrollment and therefore are likely to overestimate the income generated to support overall instructional capacity.

² The certificate's curriculum uses preexisting instructional capacity not exclusively dedicated to this program; this curriculum is required to deliver other programs and thus these expenses are not allocated to this certificate (table 1). As the full potential tuition revenue and programmatic fees are enumerated in table 2, revenues are not expected to match expenses.

Dec

October 12, 2015

Dr. Michael Baumgartner
Executive Director
Coordinating Commission for
Postsecondary Education
140 N. 8th Street, Suite 300
Lincoln, NE 68509

RECEIVED
OCT 15 2015
Coordinating Commission
for Postsecondary Ed.

Dear Michael:

Enclosed is a copy of the proposal to create an Agricultural Chemical Application undergraduate certificate within the Agriculture Production Systems Division at NCTA. The proposal was approved by the Board of Regents at the October 9, 2015 meeting. Also enclosed is the Proposal for New Instructional Program Form 92-40.

Please do not hesitate to contact me if you have any questions.

Sincerely,



Susan M. Fritz
Executive Vice President and Provost

Enclosure

c: Vice President, Interim Senior Vice Chancellor, and Harlan Vice Chancellor Ronnie Green
Dean Ronald Rosati, NCTA

TO: The Board of Regents
Academic Affairs

MEETING DATE: October 9, 2015

SUBJECT: Creation of an Agricultural Chemical Application undergraduate certificate within the Agriculture Production Systems Division at the Nebraska College of Technical Agriculture (NCTA)

RECOMMENDED ACTION: Approval is requested to create an Agricultural Chemical Application undergraduate certificate within the Agriculture Production Systems Division at NCTA

PREVIOUS ACTION: The Associate of Applied Science degree at NCTA was established prior to modern records of Board approvals.

EXPLANATION: The proposed certificate is designed to provide the learner applied knowledge and skills that meet agricultural chemical application industry requirements. This certificate will consist of 18 credit hours of hands-on courses, covering areas such as Pest Management, Pesticide Certification, Agricultural Chemical Application, Precision Farming, Equipment Principles and Preventative Maintenance. Students will have the opportunity to complete Commercial Applicator Certification exams after completion of the certificate at NCTA; however, the combination of learning experiences in these courses goes well beyond programs focused solely on achieving Commercial Applicator Certification.

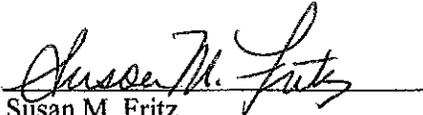
This proposal has been reviewed by the Council of Academic Officers. This proposal also has been reviewed and recommended for approval by the Academic Affairs Committee.

PROGRAM COST: \$500 first year (\$5,000 over five years) (see page 11)

SOURCE OF FUNDS: Tuition revenue and existing funds

SPONSORS: Ronald Rosati
Dean, Nebraska College of Technical Agriculture

Ronnie D. Green
Vice President, Agriculture and Natural Resources, University of Nebraska
Interim Senior Vice Chancellor for Academic Affairs
Harlan Vice Chancellor, Institute of Agriculture and Natural Resources,
University of Nebraska-Lincoln

RECOMMENDED: 
Susan M. Fritz
Executive Vice President and Provost

DATE: September 16, 2015