

VIII.A.

CONNECTICUT STATE BOARD OF EDUCATION Hartford

TO BE PROPOSED:

January 13, 2021

RESOLVED, That the State Board of Education, pursuant to Section 10-65a (b) of the Connecticut General Statutes, receives the Report on Agricultural Science and Technology Education Graduates Five Years after Graduation: Class of 2014.

Approved by a vote of _____, this thirteenth day of January, Two Thousand Twenty-One.

Signed: _____
Dr. Miguel A. Cardona, Secretary
State Board of Education

CONNECTICUT STATE BOARD OF EDUCATION
Hartford

TO: State Board of Education

FROM: Dr. Miguel A. Cardona, Commissioner of Education

DATE: January 13, 2021

SUBJECT: Report on Agricultural Science and Technology Education Graduates Five Years after Graduation: Class of 2014

Executive Summary

Introduction

Pursuant to Section 10-65a (b) of the Connecticut General Statutes, each local and regional board of education operating an agricultural science and technology education (ASTE) center (including aquaculture and marine-related employment programs), shall conduct an annual study to ascertain the educational and vocational activities in which graduates of such center are engaged five years after graduation and shall submit the study to the Connecticut State Board of Education (Board).

The Board's focus on equity, high academic achievement, and college and career readiness is reflected in the regional ASTE programs and evidenced by:

1. All students regardless of gender, race, ethnicity, or socioeconomic status participate in a challenging interdisciplinary agricultural curriculum supported by state-of-the-art facilities and equipment.
2. All students are provided a curriculum that is rigorous, performance-based, and aligned to the Board approved standards (e.g., Agriculture, Foods and Natural Resources [AFNR] Career Cluster Content Frameworks, Connecticut Core Standards in English Language Arts and Mathematics, and the Next Generation of Science Standards).
3. All students receive leadership training, learn personal and social responsibility, and acquire career skills through participation in the National FFA Organization (formerly known as the Future Farmers of America).
4. All students are required to engage in career activities through a Supervised Agriculture Experience (SAE) project. Students apply the knowledge and skills gained through the curriculum by exploring agricultural careers; creating agricultural business; and/or developing new knowledge and skills through agricultural career placements.

History/Background

In 1955, the Connecticut General Assembly legislated the creation of a comprehensive program for regional agricultural education which would be locally operated by regional or local boards of education and supported through a state grant process. Currently, there are 20 ASTE centers

preparing students for entry level employment, entrepreneurship, and/or postsecondary education opportunities. Areas of program concentration at the ASTE centers include: agricultural strands of Animal Systems; Aquaculture Systems; Marine and Technology Systems; Food Products and Processing Systems; Natural Resources and Environmental Systems; Plant Systems; Power, Structural and Technical Systems; and Biotechnology Science. This systems approach encompasses agricultural production and services, business management, career and leadership skills, scientific inquiry, use and conservation of land and water resources, career and environmental safety and security, global economics and the sociological and political aspects of the agricultural industry. During the 2019–20 school year, the ASTE centers enrolled 3,591 students.

Findings

The following summarizes several significant findings of the Class of 2014 survey:

- Eighty-five percent of respondents who started a four-year college degree program earned a degree.
- Seven percent of respondents own their own business;
 - Twenty percent of the businesses have employees; and
 - Eighty-five percent of the business owners operate an agriculture business.
- Ninety-five percent of respondents are employed.
 - Twenty-six percent of respondents are employed full-time in an agriculture-related field.

Conclusions

- Graduates are attending and completing college/university, along with other types of postsecondary training and other education opportunities.
- The program prepared students for the rigors of postsecondary education.
- The program provides graduates with skills and knowledge to be entrepreneurs.
- The program prepared qualified employees for career success in the agriculture, food and natural resources cluster area.
- Graduates are finding employment and remaining on the job.

Recommendation

The Connecticut State Department of Education (CSDE) recommends that the Board receives the Report on Agricultural Science and Technology Education Graduates Five Years after Graduation: Class of 2014 and continues their support of the ASTE Centers.

Prepared by: _____
Harold Mackin, Education Consultant
Academic Office

Approved by: _____
Melissa K. Włodarczyk Hickey, Ed.D.
Reading/Literacy Director

Connecticut State Department of Education

Report on Agricultural Science and Technology Education Graduates Five Years after Graduation: Class of 2014

Submitted Pursuant to Section 10-65a (b) of the Connecticut General Statutes

Overview

Sixty-four years ago the State of Connecticut revolutionized secondary agriculture education when it created a pilot program for regional agriculture centers. Currently, Connecticut's unique approach to providing access for all students enables learners to explore and build knowledge and skills in one or more of the following agriculture pathways: Animal Systems; Aquaculture Systems; Marine and Technology Systems; Food Products and Processing Systems; Natural Resources and Environmental Systems; Plant Systems; Power, Structural and Technical Systems; and Biotechnology Science. This systems approach encompasses agricultural production and services, business management, career and leadership skills, scientific inquiry, use and conservation of land and water resources, career and environmental safety and security, global economics and the sociological and political aspects of the agricultural industry.

The Connecticut Agricultural Science and Technology Education (ASTE) centers (including aquaculture and marine-related employment programs), use a three-prong approach to preparing students:

- curricula are infused with industry recognized skills, leadership opportunities, and career-focused instruction;
- leadership is developed through the activities of the National FFA Organization; and
- career skills are acquired through a student's Supervised Agriculture Experience (SAE).

Section 10-65a (b) of the Connecticut General Statutes, enacted in 1955 and revised in 2018, states:

Each local and regional board of education which operates an agricultural science and technology education center shall conduct an annual study to ascertain the educational and vocational activities in which graduates of such center are engaged five years after graduation and shall submit the study to the State Board of Education.

The information from the graduate survey is to be used to validate the importance of, and the need for, agriculture programs and to ensure that students are prepared for the current and emerging job market in agriculture and related industries. The Report on Agricultural Science and Technology Education Graduates Five Years after Graduation is a summary of the survey responses reported to each of the respective regional ASTE centers.

The survey was designed to gather information from ASTE program graduates in the following areas:

- the adequacy of preparation in all phases of the ASTE program;
- the correlation between skills obtained in ASTE programs and those needed to be college and career ready; and
- the identification of education and work experiences since graduation.

Procedure

Each of the regional ASTE schools conducted a survey of its 2014 graduates. Staff at each ASTE center was instructed to mail the survey to ASTE graduates, then compile and return results by April 1, 2020, to the Connecticut State Department of Education (CSDE). Having the results collected and compiled at the regional level gave ASTE staff access to primary information for their immediate use. Data from the survey were submitted by each center, compiled, analyzed, and are presented in this Report on Agricultural Science and Technology Education Graduates

Five Years after Graduation: Class of 2014.

A copy of the *Agricultural Science and Technology Education Five-Year Graduate Follow-Up Summary Report* can be found in Appendix A of this report.

The Agricultural Science and Technology Education Graduate Study surveyed 693 ASTE program graduates. Sixty-five percent of those graduates completed the survey.

Findings

The following summarizes several significant findings and conclusions of the Class of 2014 survey:

- Eighty-five percent of respondents who started a four-year college degree program earned a degree.
- Seven percent of respondents own their own business;
 - Twenty percent of the businesses have employees; and
 - Eighty-five percent of the business owners operate an agriculture business.
- Ninety-five percent of respondents are employed.
 - Twenty-six percent of respondents are employed full-time in an agriculture-related field.

Conclusions

- Graduates are attending and completing college/university, along with other types of postsecondary training and other education opportunities.
- The program prepared students for the rigors of postsecondary education.
- The program provides graduates with skills and knowledge to be entrepreneurs.
- The program prepared qualified employees for career success in the agriculture, food and natural resources cluster area.
- Graduates are finding employment and remaining on the job.

Results

Reported Graduates

Nineteen regional ASTE centers reported 693 students graduating in 2014. Of that total, responses were obtained from 447 graduates for a response rate of 64.5 percent. To increase the response rate, centers made additional contacts through mailings, Facebook contacts, e-mails, and phone calls. Response rates from each of the centers are shown in Table 1.

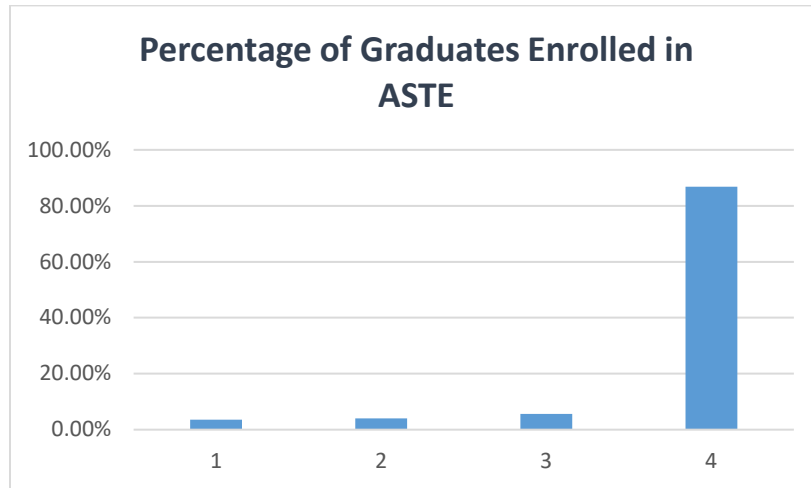
Table 1
Reported Graduates

| School Town | Response Rate 2014 | | | School Town | Response Rate 2012 | | |
|--|------------------------|------------------------|------------------|---|---------------------------|------------------------|------------------|
| | Number of Graduates | Number of Responses | % Return Rate | | Number of Graduates | Number of Responses | % Return Rate |
| Bloomfield High School Bloomfield | 22 | 16 | 73 | Wamogo High School Litchfield | 29 | 24 | 83 |
| Bridgeport Aquaculture School Bridgeport | 89 | 47 | 53 | Northwestern High School Winsted | 23 | 19 | 83 |
| Glastonbury High School Glastonbury | 25 | 4 | 16 | Nonnewaug High School Woodbury | 73 | 42 | 58 |
| Killingly High School Dayville | 17 | 12 | 71 | E. O. Smith High School Storrs | 29 | 26 | 90 |
| Ledyard High School Ledyard | 51 | 20 | 39 | Rockville High School Vernon | 19 | 8 | 42 |
| Lyman Hall High School Wallingford | 56 | 46 | 82 | Southington High School Southington | 24 | 21 | 88 |
| Lyman Memorial High School Lebanon | 17 | 16 | 94 | Suffield High School Suffield | 24 | 24 | 100 |
| Middletown High School Middletown | 25 | 23 | 92 | Trumbull High School Trumbull | 43 | 32 | 74 |
| Sound School New Haven | 79 | 27 | 34 | Westhill High School Stamford | 21 | 13 | 62 |
| Housatonic Valley High School Falls Village | 27 | 27 | 100 | Total | 693 | 447 | 64.5% |

Years of Study

Chart 1 shows the percentage, by years, Class of 2014 spent in agriculture education. Nearly ninety percent of the students in the Class of 2014 took four years of agriculture courses at their respective ASTE Center.

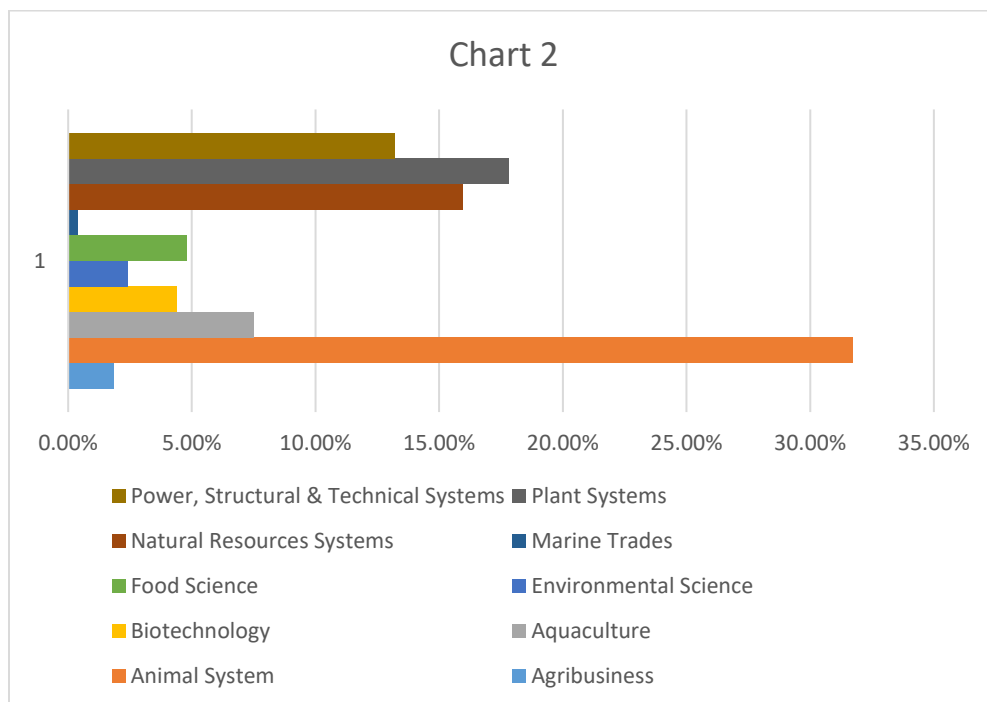
Chart 1: Percentage of Graduates Enrolled in ASTE



Graduates in the Five Pathways

Chart 2 summarizes the percentage of those graduates reporting their majors in the agriculture pathways studied. These totals may represent duplicate counts as graduates may have taken more than one major course of study. Animal science was the most frequent reported major of those responding to the survey.

Chart 2: Pathway Majors for the Class of 2014



College and Career Experiences of Graduates

College and Career Experience of Agricultural Science and Technology Education Program Graduates

Table 2 provides the college and career experience of the ASTE program graduates. These totals may represent duplicate counts as graduates may have selected more than one of the available selections. The Class of 2014 report:

- Eighty-one percent have postsecondary degrees and/or certificates.
- Fifty-six percent have a degree from a four-year college or university.
- Ninety percent of respondents who started a four-year college degree program earned a degree.
- Nine percent own a business;
 - Twenty percent of the business have employees other than the owner; and
 - Sixty percent of the business owners, operate an agriculture business.
- Ninety-four percent are employed;
 - Twenty-five percent are employed full-time in an agriculture-related field.

Graduates' Current Employment

Graduates were asked to provide their current employer and specific job title at the time they completed the survey. Table 3 provides a sampling of the job titles respondents provided.

Table 3

Representative Job Titles of Respondents

| Company | Job Title | Agricultural Related Yes/No |
|--|---|-----------------------------|
| Tractor Supply | Store Manager | Yes |
| PetCo | Groomer | Yes |
| Paw Play Doggie Day Care and Grooming Services | Groomer | Yes |
| SDIX | Animal Research Staff | Yes |
| Pratt and Whitney | Machinist | No |
| Victoria University | Sustainable Development Project Manager | Yes |
| The Maritime Aquarium | Visitor Services | Yes |
| University Rhode Island | Lead Research Technician | Yes |
| Marine Corps | Lead Gunner | No |
| Morgan Manors | Barn Manager | Yes |
| Pine Meadow Enterprises | Owner | Yes |
| Blue Seal Feeds | Customer Service Representative | Yes |
| Berkshire Bank | Financial Service Representative | No |
| Townes Farm | Owner | Yes |
| Michaels Jewelers | Diamond Consultant | No |
| Arethusa Farms | Assistant Herd Manager | Yes |

| | | |
|-------------------------|---------------------------------|-----|
| Lewis Tree Service | Laborer | Yes |
| Walt Disney World | Plant Science Intern | No |
| Oakhill Landscaping | Owner | Yes |
| Botany Lawn care | Purchasing Manager | Yes |
| Saddleview Farms | Assistant Barn Manager | Yes |
| Eclectic | Herbal Technician | No |
| University Rhode Island | Naturalist Field Teacher | Yes |
| McDonalds | General Manager | No |
| Putnam Bank | Customer Service representative | No |
| Perry Home Improvements | Owner | Yes |
| Petco | Small Animal & Bird Husbandry | Yes |
| Florist | Floral Designer | Yes |

Conclusions

The purpose of the Agricultural Science and Technology Education Graduates Five Years after Graduation: Class of 2014 study was to ascertain the educational and vocational activities in which graduates of ASTE centers have engaged in five years after graduation. In analyzing the 2016 results, the following conclusions have been drawn:

- graduates are attending and completing college/university, along with other types of postsecondary training and other education opportunities;
- the program prepares students for the rigors of postsecondary education;
- the program prepares qualified employees for career success in the agriculture, food and natural resources cluster area; and
- graduates are finding employment and remaining on the job.

These conclusions validate Connecticut's investment of resources to ASTE centers and programs. The CSDE will ensure that all ASTE centers continue to implement rigorous standards-based curricula to prepare students to meet the changing needs of college, workplace, technology, and the global economy.

APPENDIX A

FOLLOW-UP REPORT

ED 503, REVISED 06/2019

STATUTORY REF: C.G.S. 10-64 through 10-65b;

10-65; REG. 10-65-1 TO 10-65-8

Rev. 06/2019

CONNECTICUT STATE DEPARTMENT OF EDUCATION

Agricultural Science and Technology Education

Five-year Graduate Follow-Up Summary Report

SECTION 1

| Town/Agency: <i>Double Click Name</i> | | Town Code: | Address: | |
|---|--|-------------------|---------------------|------------|
| Name of Person Completing Form: | | Title: E-mail: | Date: | Telephone: |
| Agricultural Science and Technology Education Center Address: | | | | Telephone: |
| <p>Directions:</p> <p>Each Agricultural Science and Technology Education (ASTE) operating center is to:</p> <ul style="list-style-type: none"> • Survey the graduates from the class of 2014. • Record the tabulated data from the Agricultural Science and Technology Five-Year Follow-Up Survey in the spaces provided below and return by April 1, 2020. <p>Mail or e-mail to: Harold Mackin, Education Consultant, Agricultural Science and Technology Education, Connecticut State Department of Education, Academic Office, P.O. Box 2219, Hartford, CT 06145-2219. E-mail: Harold.Mackin@ct.gov</p> | | | | |
| Graduating year for which survey was conducted: | | | 2014 | |
| Number of graduates in 2014 : | | | | |
| Number of graduates surveyed: | | | | |
| Total number of graduates responding: | | | | |
| Program Information | | | | |
| Number of years of agricultural science and technology education completed by graduates: | | | Number of Graduates | |
| 1 year | | | | |
| 2 years | | | | |
| 3 years | | | | |
| 4 years | | | | |
| Number of graduates from each area of study: | | | Number of Graduates | |
| Agribusiness Systems | | | | |
| Animal Systems | | | | |
| Aquaculture Systems | | | | |
| Biotechnology Systems | | | | |
| Environmental Service Systems | | | | |
| Food Products & Processing Systems | | | | |
| Marine Trades | | | | |
| Natural Resources Systems | | | | |
| Plant Systems | | | | |
| Power, Structural & Technical Systems | | | | |

Agricultural Science and Technology Five-Year Graduate Follow-up Summary Report

| Postsecondary Education, Training, Work Experience and Employment History | Totals |
|---|---------------|
| Agriculture or agricultural related education information. Number of graduates who: | |
| attended postsecondary agricultural related training, (any formal training that is not part of a Baccalaureate or higher degree program)*; | |
| completed postsecondary agricultural related training, (any formal training that is not part of a Baccalaureate or higher degree program)*; | |
| are currently enrolled in postsecondary agricultural related training, (any formal training that is not part of a Baccalaureate or higher degree program)*; | |
| attended college and majored in an agriculture program or an agricultural related field that leads to a Baccalaureate or higher degree; | |
| completed an agriculture college degree program or a program in an agricultural related field that leads to a Baccalaureate or higher degree; | |
| are currently enrolled in college and are majoring in an agriculture program or in an agricultural related field that leads to a Baccalaureate or higher degree; | |
| Non-agriculture education information. Number of graduates who: | |
| attended postsecondary nonagricultural related training, (any formal training that is not part of a Baccalaureate or higher degree program)*; | |
| completed postsecondary nonagricultural related training, (any formal training that is not part of a Baccalaureate or higher degree program)*; | |
| attended college and majored in a nonagricultural program or a nonagricultural-related field that leads to a Baccalaureate or higher degree; | |
| completed a nonagricultural college degree program or a program in a nonagricultural related field that leads to a Baccalaureate or higher degree; | |
| are currently enrolled in college and are majoring in a nonagricultural program or in a nonagricultural related field that leads to a Baccalaureate or higher degree; | |
| Agriculture or agricultural related career information. Number of graduates who: | |
| own an agriculture or agriculturally related business; | |
| own an agriculture or agriculturally related business and have employees besides themselves; Number of employees in the business not counting the owner; | |
| are considered employed full-time in an agricultural related field*; | |
| are currently seeking employment in agriculture or in an agricultural-related field; | |
| are currently unemployed and seeking gainful employment*; | |
| Non-agriculture career information. Number of graduates who: | |
| own a nonagricultural business; | |
| own a nonagricultural business and have employees besides themselves; Number of employees in the business not counting the owner; | |
| are considered employed full-time in a nonagricultural related field*; | |
| entered the armed services; and | |
| are currently unemployed and seeking gainful employment*. | |

*Count a graduate only once for this line.

Agricultural Science/Technology Five-Year Graduate Follow-up Summary Report

For each graduate currently employed, indicate in the chart below their employer and their current position (if known) and whether or not their employment is agricultural-related. If necessary, add additional pages.

Example: Pfizer, Inc., Groton – Laboratory Technician-Yes

| Current Employer | Position Within Company | Agricultural Related, yes/no |
|-------------------------|--------------------------------|-------------------------------------|
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Agricultural Science and Technology Five-Year Graduate Follow-up Summary Report

SECTION 2

Other Statutory and Regulatory Certification for the Program

For specific legislative and regulatory language, please refer to the Connecticut General Statutes Section 10-64 through 10-65b and Regulation Sections 10-65-1 to 10-65-8, inclusive.

The Superintendent of Schools for the operating district is to verify compliance with the following legislative requirements by checking the “YES” box for each item. ***A narrative MUST be attached for each “NO” item explaining specific measures the district will use to bring them into compliance with current legislation and regulations.***

| YES | NO | Legislative and Regulatory Requirements for the 2016-17 school term. |
|-----|----|--|
| | | The facility and equipment funded by the State of Connecticut for the Regional Agricultural Science and Technology Center is used exclusively by the agriculture program. |
| | | A certified staff member is designated as administrator for the program. |
| | | All students in the program have a planned, supervised agricultural experience program which relates to the student’s goals and abilities and is in addition to regularly scheduled classes. |
| | | The student leadership organization, FFA, is an integral part of the program. |
| | | An inventory of equipment purchased with state funds is maintained and is available upon request. |
| | | Support staff such as school nurse, clerical, custodial and teacher substitutes are provided to ensure purposes of the program and standards of health and safety are maintained. |
| | | A racial and ethnic diversity plan, pursuant to Section 10-65a is accurate, on file and available upon request. |
| | | A local advisory committee has met at least twice over the past year. |
| | | A copy of the program of studies, classroom schedules and other supportive materials which will indicate no less than 320 minutes per week being provided for classroom instruction for Grades 10-12, time blocked to allow for laboratory, shop and fieldwork, and student/teacher ratios for the overall program and laboratory situations are available upon request. |
| | | An admissions application for the program is available upon request. |
| | | Certified agriculture and/or aquaculture staff are scheduled for proper coverage of the 12 month program. |

Data on the recruitment process conducted for the 2016-17 school term, including:

- number of students who applied ;
- number of students accepted ;
- number of students that enrolled in the program ;
- number of students not accepted because of lack of space availability in program ; and
- number of students rejected for other than space availability .

I hereby certify that the information covered by Section 2, Form ED 503, is proper and valid in connection with the Regional Agricultural Science and Technology Program.

| | |
|--|--------|
| (Signature of ASTE Director\Department Head) | (Date) |
| (Print Name ASTE Director\Department Head) | (Date) |
| (Signature Superintendent of Schools) | (Date) |
| (Print Name Superintendent of Schools) | (Date) |