



**Agriculture & Food System  
Education Transformation Project at  
the VT Tech Randolph Campus**

**Presentation to House & Senate  
Agriculture Committees**

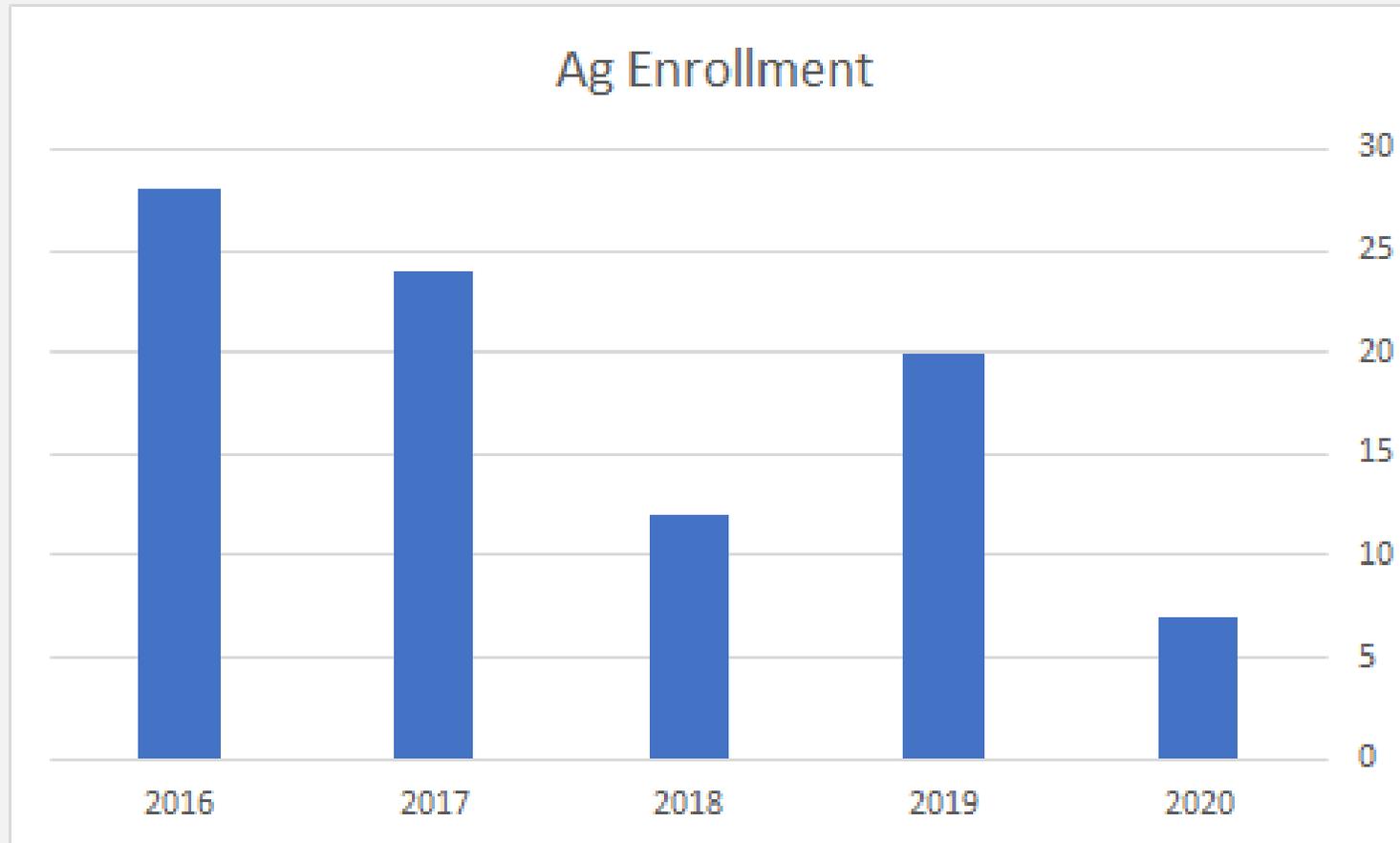
**4.8.2021**

# Presentation

1. Why we are doing this? ... finances, enrollment, etc.
2. Process to date
3. Final recommendations
4. Interim Steps
5. How you can help
6. Your Questions

# Why we are doing this? Enrollment ...

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# Task At Hand

## *In Two Charts*

FISCAL YEAR 2020 (AY 19-20)	AG	NURSING	PILOT TECH	ELEC TECH
FPE Enrollment	27	386	46	45
% Total Student Body	2%	27%	3%	3%
Administrators	3	6	1	2
Operational Cost (Net of Fees)	\$346,346	\$1,393,547	\$114,562	\$28,214
Cost Per Student	\$12,828	\$3,607	\$2,470	\$621

### VTC Farm Finances

FISCAL YEAR	2016	2017	2018	2019	2020	5YR AVG
TOTAL REVENUE	\$448,093	\$398,604	\$369,804	\$354,012	\$370,909	\$388,284
TOTAL EXPENSES	(\$733,354)	(\$594,820)	(\$602,228)	(\$714,530)	(\$575,456)	(\$644,078)
LOSS	(\$285,261)	(\$196,217)	(\$232,424)	(\$360,518)	(\$204,547)	(\$255,793)

# A wide range of jobs exist in the farm and food sector

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**farm to plate**  
STRENGTHENING VERMONT'S FOOD SYSTEM

**CAREER PROFILES  
AND PATHWAYS**

Vermont Sustainable Jobs Fund



**EXPLORING FOOD  
SYSTEM CAREERS**

# **The People & The Process**

# Stakeholder Engagement



- 40+ subject matter experts gathered with VTC faculty and staff, to identify the strengths of this long standing program and to identify a path forward that is responsive to the needs of future producers, food system businesses and regional consumers.
- 11 listening sessions with alums, community members, former and current faculty and staff, and industry experts in beef, goats, dairy heifer grazing and value added businesses.
- 191 survey responses collected from alumni, community members and food system stakeholders.
- This combined expertise was both a guide and a check on our work and the recommendations developed by the 4 Teams over the past 10 months.

# Process Leadership



## **Process Leadership Team** – met weekly since May 2020

- President Pat Moulton
- Louise Calderwood (co-chair), Echo Hill Farm Maple Products
- Regina Beidler (co-chair), Organic Valley
- Ellen Kahler, Vermont Sustainable Jobs Fund / VT Farm to Plate

## **Steering Committee** -- met monthly since June 2020

- Marc Mihaly, retired, VT Law School (established the Center for Ag & Food Systems at VLS)
- Philip Ackerman Leist, formerly of Green Mountain College and Sterling College
- Jed Davis, Cabot Cooperative Creamery, Sustainability Director
- Dan Tobin, assistant professor -- UVM CDAE
- Kate Finley Woodruff, UVM - Associate Dean of UVM CALS
- Laura Ginsburg, VT Agency of Agriculture, Section Chief, Ag Development Division
- Meg Nelson - VTC alum, Nelson Farms and Shadagee Farm (dairy) [alum]
- Steve Schubart - VTC alum, Grass Cattle Co. (grass-fed beef) [alum]
- Molly Willard -- representing VTC faculty/staff
- OBSERVER: Erica Campbell – serving in a personal capacity (but she works for US Senator Sanders)

# 1 Committee + 4 Teams

## Survey & Input Committee:

- Erica Campbell – Chair
- Diane Bothfeld, Dairy Section Chief, VAAFM
- Meredith Niles, UVM
- Amanda Chaulk, VT Tech
- Jenn Colby, formerly of UVM Extension

## Program Models Development Team: Met 7 times

- Philip Ackerman Leist – Chair
- Dan Gingue, Dehm Associates
- Dan Tobin, UVM CDAE
- Sherry Lussier, former CTE Director
- Grace Oedel, Executive Director, NOFA-VT
- Kate Duesterberg, Cedar Circle Farm
- Chuck Ross, former Secretary Agency of Ag, former director UVM Extension
- Sarah Danly, VT Farm to Plate (VSJF)
- Molly Willard, VT Tech

# Teams, cont.



## Culture & Curriculum Team:

- Marc Mihaly -- Chair
- Emily Wright, dairy nutritionist, alum
- Dr. Kim Crowe, VT Tech
- Emma Marvin, Butternut Mountain Farm
- Katie Ballard, Miner Institute
- Vern Grubinger, UVM Extension
- Steve Schubart, Grass Cattle Co, alum
- Laura Ginsburg, VAAF

## Dairy Sub-Committee of Culture & Curriculum Team:

- Laura Ginsburg – Chair
- Steph Nault, VT Tech
- Chelsea Sprague, Sprague Farms
- Henry Pearl, Hillview Farm, VT Tech alum, 2+2 program
- Ryan Andrus, Bridgman Goat Farm
- Brent Beidler, former organic dairy farmer, VT Tech adjunct prof
- Linda Dimmick, Neighborly Farms
- Jamie St. Pierre, Pleasant Valley Farms
- Meg Nelson, Nelson Farms and Shadagee Farm, alum

**Each met 6 times**

# Teams, cont.



## **Business Case Team: Met 19 times**

- Jed Davis – Chair
- Andy Wood, VEDA/VACC loan officer, alum
- Holly Fowler, Northbound Ventures
- Marty Strange, retired, Randolph resident
- Dan Gingue, Dehm Associates
- Jenn Colby, formerly of UVM Extension
- Steph Nault, VT Tech
- Lit Tyler, VT Tech
- Greg Hughes, VT Tech

## **Communications & Outreach Team: Met 7 times**

- Kate Finley Woodruff – Chair
- Megan Smith, former Commissioner, VT Department of Travel & Tourism
- Mary White, VT Farm Bureau
- Amanda Chaulk, VT Tech (Marketing & Communications)
- Jessica Van Deren, VT Tech (Admissions)

## **Our Recommendations**

# **Program Re-Brand: Create a Center for Agriculture and Food Entrepreneurship**

*within the School of Agriculture, Plant & Animal Sciences*

**Agriculture and Food Entrepreneurship Associates Degree**

(+ keep Diversified Ag BS and 2+2 Program)

**College Farm**

(Retooled based on core curriculum offerings)

**Strong Advising for Internships, Apprenticeships & Careers**

**Professional & Continuing Education Training in Agricultural & Food Entrepreneurship**

(Branded integration within CEWD)

**Allied Services Curriculum Opportunities**

Diesel Tech, Forestry, RE/Green Energy, Elec Eng Tech, Mfg Eng Tech, Entrepreneurship, HVAC, Arch Eng Tech, Computer Software Eng, Electromech Eng, Software Dev, Web Dev, Construction Mgmt

## Degree Re-Brand: Agriculture and Food Entrepreneurship, A.A.S.

*with concentrations in Dairy and Animal Science or Food Entrepreneurship*

- Lead with one Associates Degree with core coursework; BS still available
  - With 2 possible concentrations to start
- Ability to expand program by adding concentrations in additional areas in the future
- Introductory courses, workshops, short courses, etc. could be bundled and added to the curriculum
- Opportunity to incorporate credential courses to train and certify students with specific industry skills



# Proposed Curriculum For Agriculture & Food Entrepreneurship Associate Degree (60 Credits Total)



## VTC General Education Requirements (20 credits)

- English 001 (3 cr)
- Technical Communication (3 cr)
- Natural and Physical Science (4 cr)
- Information Technology (1 cr)
- Arts, Humanities or Social Sciences (6 cr) (must take specific courses below)
- Math (3 cr)

+

## Agriculture & Food Entrepreneurship Associate Degree (23 credits)

- Introduction to Agriculture Economics & Policy (3 cr) - fulfills Gen Ed requirement
- Business Skills for the Food System (3 cr)
- Emerging Issues in Food and Agriculture (4 cr) - fulfills Gen Ed requirement
- Environmental Issues (3 cr)
- Internship (15 cr over 4 semesters)
- Career Preparation Capstone (1 cr)

## + choose 1 of 2 Concentrations

### **Dairy & Animal Science Concentration**

*(\*\*choose at least 18 credits below)*

- Agronomy & Soils
- Animal Management, Behavior & Welfare
- Soil Science, Health & Nutrient Management
- Livestock Nutrition
- Livestock Reproduction
- Production, Management & Marketing
- Advanced Mechanical Systems
- Use of ARCGIS
- Livestock Systems and Buildings
- Forage Crop Production & Management
- Additional Dairy Management courses (electives)
- Up to THREE 1cr Credential Courses

### **Food Entrepreneurship Concentration**

*(choose at least 18 credits below)*

- Introduction to Specialty Foods
- Soil Science, Health & Nutrient Management
- Mechanical Aspects of Food Systems
- Entrepreneurship Skills in Food Systems
- Production, Management & Marketing
- Fruit & Vegetable Production Mgmt and Marketing Specialty Foods
- Advanced Mechanical Systems
- Diversified Ag courses (maple, dairy, goats, etc.)
- Additional Business related courses (electives)
- Up to THREE 1cr Credential courses

\*Credential courses could include certifications such as tractor safety, HAACP, Pesticide Applicators, etc.

\*\* Requirements for VTFARMS 2+2 scholarship would be determined as part of the Dairy and Animal Science Concentration

# Strengthen What's Working

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The strong existing curriculum will largely be maintained, including the 2+2 program.



## Expanded Offerings

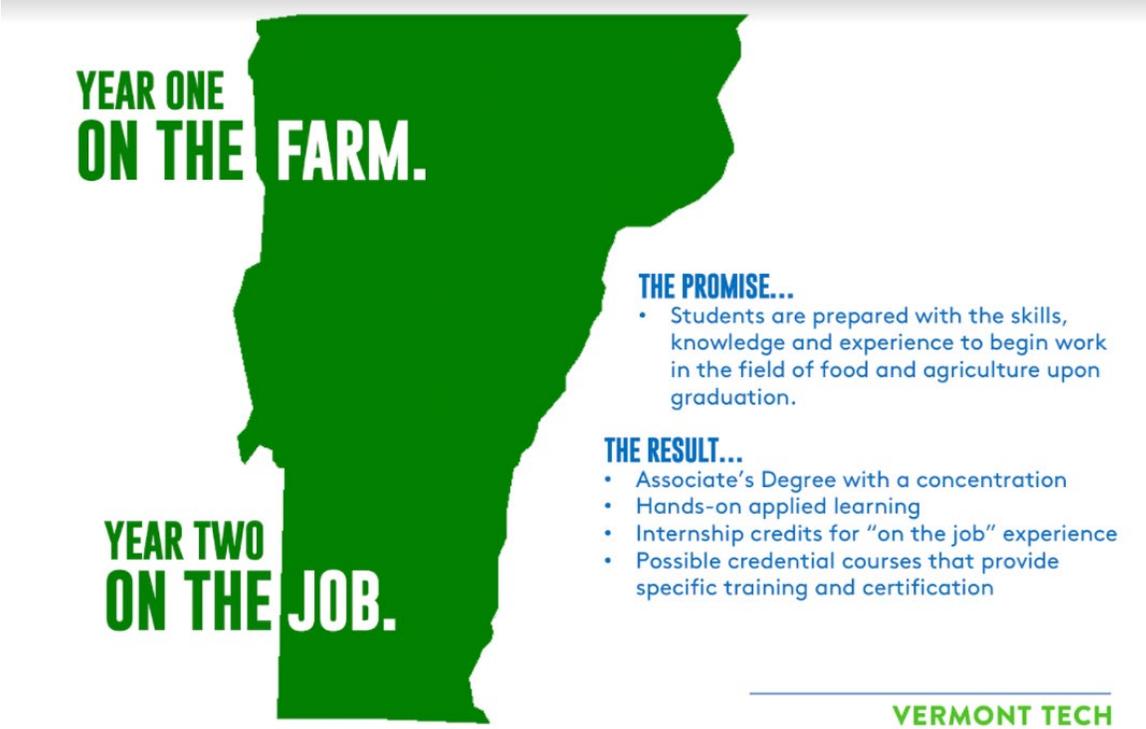
Increase the number and variety of short courses, certificates, summer program and J Term offerings with the opportunity to use more online and hybrid learning delivery.



# Focus on Hands-on Experience at VTC Farm in Year 1 and Off-Site Internship in Year 2

VTC is known for applied, hands-on educational experiences. By focusing the **first year** on learning basic farm and food production skills at the **VTC Farm** and through field trips and guest speakers, students will be provided with a strong foundation for an agriculture and food education.

An introductory internship in the fall semester of **year two**, followed by an advanced **off-site internship** with more responsibility within the same placement will provide an opportunity for students to not only understand multiple aspects of the business, but also focus on a project with a valuable outcome to the mentor.



**YEAR ONE  
ON THE FARM.**

#### THE PROMISE...

- Students are prepared with the skills, knowledge and experience to begin work in the field of food and agriculture upon graduation.

#### THE RESULT...

- Associate's Degree with a concentration
- Hands-on applied learning
- Internship credits for "on the job" experience
- Possible credential courses that provide specific training and certification

## **Sell the Milking Herd and Expand Diversity of Experiences on the VTC Farm**

### **Diverse Enterprises on the VTC Campus Farm**

**Beef**

**Custom  
Dairy Heifer  
Grazing**

**Deep  
Bedded  
Hogs**

**Vegetable  
Production**

**Maple**

**Apple  
Orchard**

**Program Re-Branding Needed +  
Expansion of Marketing Approaches to  
Significantly Increase Enrollment**



**Vermont  
Tech's  
CAFE**  
Center for Agriculture  
and Food  
Entrepreneurship



**Program Financial & Enterprise Analysis**  
**Additional Challenges**  
**Interim Steps**

## Multiple Scenarios Explored: Enrollment and Financial Realities

		ESTIMATED "STEADY STATE" ANNUAL REVENUE & EXPENSE, FY2021 DOLLARS					
		SCENARIO #1			SCENARIO #2		SCENARIO #3
		Status Quo			Revised Ent.; No Ctr		Revised Ent.; w/Ctr
		Current		Breakeven		Breakeven	Breakeven
REVENUE		\$729,746		\$2,061,926		\$1,149,557	\$1,709,811
EXPENSE		\$887,247		\$1,185,015		\$660,665	\$982,650
NET REVENUE		(\$157,501)		\$876,911		\$488,892	\$727,161
MARGIN		-18%		74%		74%	74%
NET REVENUE AFTER MARGIN		(\$814,064)		\$0		\$0	\$0
<b>Enrolled Students</b>		<b>22</b>		<b>135</b>		<b>77</b>	<b>125</b>

# Stand Up 6 New Enterprises

VTC Summary  
INCOME STATEMENT

	Feeder Beef	Dairy Heifers	Feeder Pigs	Potatoes	Maple	Orchard	Overhd
NET INCOME	\$ 9,633	\$ 15,115	\$ (3,640)	\$ 1,291	\$ 8,470	\$ 980	
LABOR TOTAL	\$ 9,802	\$ 29,361	\$ 10,684	\$ 2,658	\$ 7,865	\$ -	\$58,042
NET AFTER LABOR	\$ (169)	\$ (14,246)	\$ (14,324)	\$ (1,367)	\$ 605	\$ 980	<b>\$(86,564)</b>

Academics/Students first, with Enterprises in support

# Additional Challenges To Address

**Teach out of the current program  
and majors**



**Special funds needed to transform  
existing program and launch CAFE, set  
up internship sites, increase marketing  
and recruitment on path to 'steady  
state' (w/ many go/no go gates)**



# Interim Steps to Steady State

For the next year, short-term, PT contractors for additional capacity to:

- Sign up farms and food businesses for the 4 semesters of off-campus internship learning
- Seek out additional employer partners to build CEWD offerings to meet workforce needs
  - Set up the meat cutting “lab” and program (assuming funding)
- Assist Molly Willard with additional short course development and offerings
- Assist Dr. Crowe by providing feedback as she reworks the curriculum and moves it through the internal VTC Process
- Assist Steph Nault in moving forward with changes at the VTC Farm and with new ag enterprises
- Help fundraise for the desired “steady state” (fill short-term gaps)
- Assist with increasing enrollment and overall program re-branding / marketing

# We've Been Here Before!

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Around 1866, the University of Vermont was appointed “land grant” college status for the purpose of teaching practical agriculture curriculum. After 25 years of never granting a degree in agriculture from UVM, the Vermont State Grange pressed for the development of a state agriculture school, focused on the practical application of agricultural education. Thus the **Vermont School of Agriculture was born in 1910 at the Normal School site**. The school opened with 56 students. We served to educate farmers for Vermont.

**In the 50's, the Vermont School of Agriculture almost closed its doors.** Our history could have ended there at a time when nearly 300 farms were going out of business each year and the school's enrollments were low. Then governor, Joseph Johnson, noted in his inaugural address of 1957 that, “We still need trained young [men] on our farms, but we also need trained workers in industry. Until such a time as a program can be developed for greater use of the facilities of this school, not only in agriculture but in other fields, I would recommend its closing.”

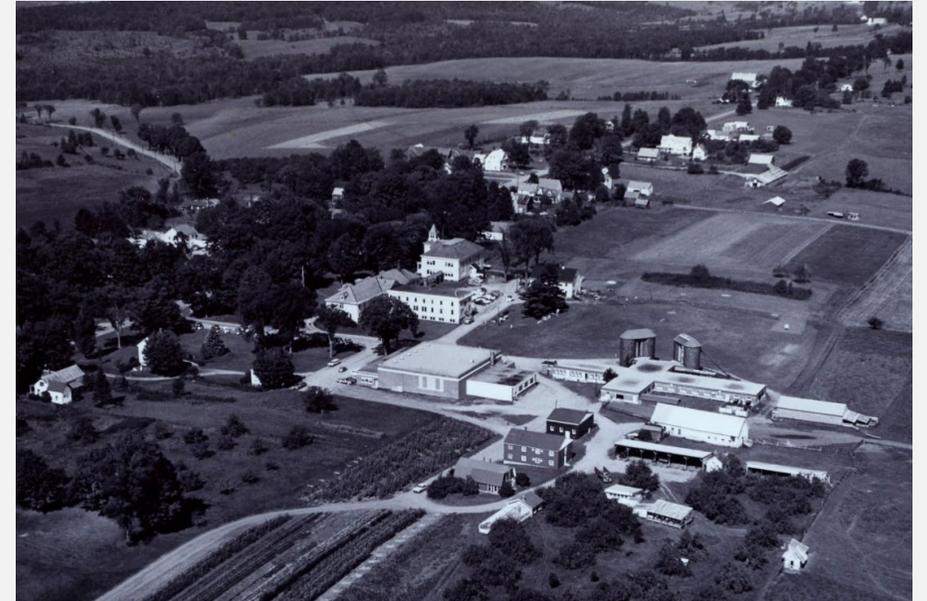


# We've Been Here Before!

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But at the same time, the Commissioner of Agriculture was reporting, “a mechanical technical revolution in Vermont agriculture,” in his biennial report of 1957-1958. In response to evolving educational needs of Vermont’s workforce, technical courses were added to the offerings of the school in 1957 and the institution was given a new name reflecting this expanding mission: **Vermont Agricultural and Technical Institute (VATI)**. It was the first and only technical institute in Vermont, with an initial enrollment of approximately 75 students. It was then that we educated not only the farmers, but the highway engineers and electrical engineers for Vermont’s growing industrial production.

**The College continues to evolve.** But throughout its evolution, one thing remains the same. The grand purpose, the mission, the strategic intent of Vermont Tech is to meet the educational needs of Vermont’s workforce. To educate its citizens in the industries that are relevant and needed for our society and economy -- and in particular -- **Vermont’s agriculture and food system!**



# How Can You Help?

- Advocate for this program's transformation overall, including funding for the meat cutting lab in existing \$ and workforce related bills
- Continued support for the overall VSC transformation
- Spread the word with juniors and seniors in H.S. and encourage them to enroll at VT Tech
- Follow up by email if you have questions

**What are your questions?**