TERM OF APPRENTICESHIP: The term of apprenticeship shall be Competency-based, which requires the apprentice’s successful attainment of the competencies described in these program provisions. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 3 months of the apprenticeship, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 144 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas and shall demonstrate competency, as specified herein. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<table>
<thead>
<tr>
<th>Work Process Description</th>
<th>Approximate Hours (Min - Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage fields.</td>
<td>200</td>
</tr>
<tr>
<td>A. Apply compost or fertilizer.</td>
<td></td>
</tr>
<tr>
<td>B. Perform primary tillage.</td>
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<tr>
<td>C. Prepare seed beds.</td>
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<tr>
<td>D. Lay plastic mulch.</td>
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<tr>
<td>E. Assess field and weather conditions.</td>
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<tr>
<td>F. Perform stale seed bed preparation.</td>
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<tr>
<td>G. Incorporate crop residue into soil.</td>
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<tr>
<td>H. Seed cover crop.</td>
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<tr>
<td>I. Mow cover crop.</td>
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<tr>
<td>J. Terminate cover crop.</td>
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</tr>
<tr>
<td>K. Perform deep tillage.</td>
<td></td>
</tr>
<tr>
<td>L. Maintain non-production areas</td>
<td></td>
</tr>
</tbody>
</table>

Propagate transplants. 200
A. Seed vegetable crop into trays.
B. Maintain proper temperature and moisture levels.
C. Maintain proper ventilation.
D. Prepare greenhouse growing media.
E. Harden off seedlings.
F. Maintain greenhouse equipment & structure.
G. Pot up seedlings.
H. Maintain seedling fertility.
I. Perform greenhouse sanitation.
J. Control greenhouse pests and diseases.
K. Asses germination and seedling growth.
L. Troubleshoot plant performance issues.

Seed and transplant crops. 200
A. Consult the field plan.
B. Assess field conditions and plant status.
C. Prepare equipment, supplies, seeds and transplants.
D. Sow vegetable seeds in fields.
E. Transplant crops.
F. Record seedling and planting.
G. Irrigate seeds and transplants.

Maintain crops.
A. Assess plant health.
B. Prepare equipment and supplies.
C. Determine cultural needs.
D. Prune plants.
E. Thin plants.
F. Blanch plants.
G. Hill plants.
H. Irrigate plants.
I. Apply row cover.
J. Perform side dressing and/or foliar feeding.
K. Record crop maintenance.

Control weeds.
A. Prevent weed and weed seed formation.
B. Assess weed pressure, e.g. potential or actual.
C. Identify weeds.
D. Determine weeding method.
E. Perform non-mechanical weeding.
F. Perform mulching.

Control pests and disease.
A. Perform preventative measures.
B. Assess pest and disease pressure, e.g. potential or actual.
C. Identify pests and diseases.
D. Determine control method.
E. Implement approved control methods.
F. Evaluate efficacy of control method.
G. Record control treatment.

Harvest crops.
A. Assess plant maturity for harvest.
B. Project yield.
C. Prepare harvesting equipment and supplies.
D. Harvest crop to farm standards.
E. Transport crop to processing facility.

Perform post-harvest handling.
A. Clean crop.
B. Cool crop.
C. Sort crop.
D. Pack crop.
E. Store crop.
F. Cure crop.
G. Label crop.
H. Record crop harvest.
I. Clean equipment and facility.
J. Deliver crop.
K. Maintain crop quality throughout.

Operate farm equipment and tools.
A. Operate tractors.
B. Operate tractor implements.
C. Operate hand tools.
D. Operate pack shed equipment.

Maintain equipment.
A. Follow maintenance schedules.
B. Clean equipment and tools.
C. Sharpen knives and tools.
D. Troubleshoot mechanical problems.
E. Follow equipment repair protocol.
F. Maintain irrigation system.
G. Maintain delivery vehicles and tractors.
H. Stock replacement parts.
I. Maintain farm asset list.

Review farm production plan.
A. Plan field and bed layout.
B. Plan crop rotations.
C. Conduct soil tests.
D. Create soil fertility plan.
E. Maintain organic certification.
F. Create planting schedules.
G. Order seeds and supplies.

Assist with managing employees.
A. Determine labor needs.
B. Create job descriptions.
C. Recruit job applicants.
D. Interview job applicants.
E. Hire farm employees.
F. Orient new employees.
G. Establish standard operating procedures.
H. Train employees.
I. Maintain employee records.
J. Assess employee performance and provide feedback.
K. Create employee schedules.
L. Create a daily work plan.
M. Communicate farm visions and values.

Perform Marketing and Customer Service
A. Develop marketing plan
B. Develop marketing materials
C. Plan marketing events
D. Answer customer inquiries
E. Maintain customer relationships

Paid Related Instruction

DETA-10408-E (R. 12/2010)
The above schedule is to include all operations and such other work as is customary in the trade.

**MINIMUM COMPENSATION TO BE PAID:**

1st period of 600 hours at $7.25 per hour
2nd period of 600 hours at $8.25 per hour
3rd period of 600 hours at $9.50 per hour
4th period of 700 hours at $10.50 per hour
Base skilled wage rate $11.41 per hour.

If at any time the base skilled wage rate rises or falls, the apprentice’s wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

**CREDIT PROVISIONS:** The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

- Work credit hours approved: N/A
- School credit hours approved:
  - Paid related instruction: N/A
  - Unpaid related instruction: N/A
- Total credit hours to be applied to the term of the apprenticeship: N/A

**SPECIAL PROVISIONS:**

The on-the-job learning is competency-based, i.e. there are no time requirements for the overall length of the program and the work processes. Time requirements apply to related instruction only (144 hours).

The apprentice must successfully complete the course, “Transition to Trainer,” in the final year of the program.
50-090-1 ORGANIC VEGETABLE FARM MANAGER APPRENTICE

Program Design Summary & WTCS Curriculum Standards Model [FY18]

Description
Organic Vegetable Growers specialize in certified organic, diversified vegetables serving primarily fresh markets. Occupational duties and tasks support broad areas related to organic system planning, propagation, seeding, field management, crop maintenance, weed and pest control, harvesting, post-harvesting handling, farm business management, and marketing. Organic Vegetable Growers market their produce using CSAs, farmer’s markets, farm stands, direct wholesale to restaurants and grocery stores, and other wholesale channels.

Mission
Provides related instruction for apprentices participating in an employer-sponsored Wisconsin approved apprenticeship training program.

Target Population
The following minimum qualifications for applicants:

- Be at least 18 years of age
- High school diploma, GED, or equivalent
- Valid government issued photo ID
- Be physically able to perform work with reasonable accommodation

Career/Job Titles
Crew Leader
Field Crew
Market Manager
Pack Shed Manager
Greenhouse Manager
Assistant Farmer
Production Manager
Field Operator
Farm Manager
Entry Requirements
Registered Wisconsin Apprentice

Apprenticeship Minimum Standards
Title: Organic Vegetable Farm Manager
Overall Length: 2500 hours (approximately 15 months--the length will span over at least two growing seasons)
Apprenticeship Type: Competency Based
Paid Related Instruction: 144 hours
Related Instruction Provider: WTCS
Special Provisions: None

DACUM
Related Organic Vegetable Farm Manager DACUM

Minimum Qualifications for Sponsors
Minimum qualifications for employers (farms) will include a current, valid organic certification from an accredited organization.

Work Processes
All farms with apprentices must perform the following work processes. (Contract requirements)
- Manage fields
- Propagate transplants
- Seed and transplant crops
- Maintain crops
- Control weeds
- Control pests and diseases
- Harvest crops
- Perform post-harvest handling
- Operate farm equipment and tools
- Maintain equipment
- Plan farm production
- Perform marketing and customer service
- Assist with managing employees

DACUM Information
Title Organic Vegetable Grower Farm Manager
Sponsoring Organization Wisconsin Technical College System
DACUM Date Conducted on 1/27/17. Finalized on 2/17/17.
Organized By Julie Dawson, Department of Horticulture, University of Wisconsin-Madison
Claire Strader, Small-Scale and Organic Produce Educator, Dane County UW-Extension and FairShare CSA Coalition
Nancy Nakkoul, Education Director, WTCS
Owen Smith, Program & Policy Analyst, Bureau of Apprenticeship Standards, WI Dept. of Workforce Development

**DACUM Panel of Experts**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Title</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Binkley</td>
<td>Farmer</td>
<td>Equinox Community Farm</td>
</tr>
<tr>
<td>Janet Gamble</td>
<td>Farm Owner/Manager</td>
<td>Turtle Creek Gardens</td>
</tr>
<tr>
<td>Brian Gronski</td>
<td>Owner</td>
<td>Groche Organic Farms, LLC</td>
</tr>
<tr>
<td>Sheri Howard</td>
<td>Owner</td>
<td>Vintage Vittles, LLC</td>
</tr>
<tr>
<td>Kristen Kordet</td>
<td>Owner</td>
<td>Blue Moon Community Farm</td>
</tr>
<tr>
<td>Chris McGuire</td>
<td>Farmer</td>
<td>Two Onion Farm</td>
</tr>
<tr>
<td>John Middleton</td>
<td>Owner/Farmer</td>
<td>Fazenda Boa Terra</td>
</tr>
<tr>
<td>Laura Mortimore</td>
<td>Farmer</td>
<td>Orange Cat Community Farm</td>
</tr>
<tr>
<td>Mike Noltnerwyss</td>
<td>Farmer</td>
<td>Crosswords Community Farm, LLC</td>
</tr>
<tr>
<td>Peter Seely</td>
<td>Owner</td>
<td>Springdale Farm</td>
</tr>
</tbody>
</table>

**Program Outcomes**

1. Manage fields
2. Propagate transplants
3. Seed and transplant crops
4. Maintain crops
5. Control weed, pests and disease
6. Harvest crops
7. Perform post-harvest handling
8. Maintain equipment
9. Implement farm production plan
10. Conduct marketing and customer service activities
11. Assist with managing employees

**50-090-1 Organic Vegetable Farm Manager Related Instruction Model [2017-18]**

**Description**

This program configuration represents a statewide model for class cohorts in the related instruction portion of the Organic Vegetable Farm Manager apprenticeship. The model outlines related instruction for 1.5 years. It reflects a total of 144 hours of combined related instruction lecture, demonstration, and hands-on learning aligned with DWD-BAS apprenticeship training standards. The focus group recommend related instruction occur December through March. This model aligns WTCS learning outcomes with relevant industry standards as identified by an industry validated DACUM and Exhibit A work processes approved by the state trade committee. Supporting documentation may be found in the BAS related job book. This curriculum model may
be interpreted and implemented by the colleges as required to meet local needs and in support of local work processes by the steering committee and DWD-BAS.

Credits

1 - Occupation Specific 4 @ 36 hours/credit=144 hours
2 - Occupation Supportive 8 hours for Transition to Trainer course

Total Credits 4

Term 1

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-080-701</td>
<td>Organic Farm Systems</td>
<td>1.5 credits 54 hours</td>
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</tbody>
</table>

Term 2

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-080-702</td>
<td>Production Related Farm Management</td>
<td>1.5 credits 54 hours</td>
</tr>
<tr>
<td>50-090-703</td>
<td>Farm Business Management and Marketing</td>
<td>1 35 hours</td>
</tr>
</tbody>
</table>

Other Program Requirement (Last Year of Apprenticeship)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>47-455-455</td>
<td>Transition to Trainer: Your Role as a Journey Worker</td>
<td>8 hours</td>
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</tbody>
</table>

Program Course List

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Credits &amp; Hours</th>
<th>Description</th>
<th>Pre/Corequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-080-701</td>
<td>Organic Farm Systems</td>
<td>1.5 credits 54 hours</td>
<td>Introduces organic and systems approach to vegetable farming. Examines crop rotation plans; weed, pest, and disease plans; soil fertility and conservation plans; and organic certification paperwork. In addition, apprentices examine career pathways in organic vegetable farming and begin a career plan.</td>
<td></td>
</tr>
<tr>
<td>50-080-702</td>
<td>Production Related Farm Management</td>
<td>1.5 credits 54 hours</td>
<td>Provides an overview of production related farm management activities and processes. Emphasis is placed on types of plants, designing</td>
<td>Organic Farm Systems</td>
</tr>
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<td>Number</td>
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</tr>
<tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td>a planting plan, growing seedlings, greenhouse management systems, plant health indicators, irrigation methods, weed, pest and disease control methods, harvest handling, and equipment types and maintenance.</td>
<td></td>
</tr>
<tr>
<td>50-090-703</td>
<td>Farm Business Management and Marketing</td>
<td>1 credit 35 hours</td>
<td>Introduces apprentices to the farm business management and marketing processes and tasks needed for Organic Vegetable Farm Managers. Emphasis is placed on developing a farm marketing plan, evaluating a farm business plan, exploring farm recordkeeping systems, and interpreting farm financial information.</td>
<td>Organic Farm Systems Production Related Farm Management</td>
</tr>
<tr>
<td>47-455-455</td>
<td>Transition to Trainer: Your Role as a Journey Worker</td>
<td>8 hours</td>
<td>Apprenticeship training is a collaborative partnership: employer and employee associations, government, and educational institutions each play a part. In reality, most learning takes place through the daily interaction between an apprentice and his/her co-workers. Surveys have shown that the apprentices are least satisfied with the on-the-job portion of their training--particularly the ability of journey level workers and supervisors to pass on their knowledge of the trade. You have already learned to use the tools of your chosen trade. In this workshop you will be introduced to a new set of basic tools--the tools of a jobsite trainer. You will explore the skills that are necessary to be an effective trainer, discover how to deliver hands-on training, and examine the process for giving useful feedback. During the workshop you will build a Training Toolkit to take back to your work on the job.</td>
<td></td>
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</tbody>
</table>
50-080-701  Organic Farm Systems

Course Outcome Summary

Course Information

Alternate Title  Organic Vegetable Farm Manager Apprenticeship Related Instruction
Description  Introduces organic and systems approach to vegetable farming. Examines crop rotation plans; weed, pest, and disease plans; soil fertility and conservation plans; and organic certification paperwork. In addition, apprentices examine career pathways in organic vegetable farming and begin a career plan.
Career Cluster  Agriculture, Food and Natural Resources
Instructional Level  Technical Diploma
Total Credits  1.5
Total Hours  54

Course Competencies

1.  Examine the organic and systems approach to vegetable farming
Learning Objectives
1.a.  Explore how treating the farm as an ecosystem is fundamental to organic management strategies
1.b.  Explain the history and philosophy of organic vegetable growing
1.c.  Trace the growth of organic vegetable farming in WI and the US
1.d.  Define terms related to organic vegetable farming
1.e.  Identify certifications required for organic farms
1.f.  Describe organic practices used on farms
1.g.  Outline the benefits and challenges of organic vegetable farming in WI

2.  Develop a career plan
Learning Objectives
2.a.  Explore career pathways in organic vegetable farming
2.b.  Compare the benefits and challenges of being a farm owner vs. a farm manager
2.c.  Examine work preferences and work values
2.d.  Explain how to maintain a work-life balance
2.e.  Describe the project management skills necessary for working as a farm manager

3.  Characterize soil health: physical, chemical, and biological properties
Learning Objectives
3.a.  Describe soil properties normally used in evaluating soil health
3.b.  Illustrate soil formation properties
3.c.  Appreciate soil as a complex system in organic agriculture
3.d.  Recognize biological organisms and their role in building soil
3.e. Outline the aspects of soil that can be altered through organic management
3.f. Describe common agricultural practices that impact soil quality
3.g. Infer how differently managed soils impact soil quality and plant growth

4. Create a soil fertility and conservation plan

Learning Objectives
4.a. Examine soil nutrients
4.b. Explore organic soil fertilizer inputs and amendments
4.c. Describe the role of compost and organic matter in soil fertility
4.d. Explain how soil tests are used to manage soil fertility
4.e. Interpret soil testing results
4.f. Compare organic vs. conventional soil fertility inputs
4.g. Differentiate between long-term and seasonal soil fertility management

5. Plan crop rotations

Learning Objectives
5.a. Describe why crops are rotated
5.b. Define cover crops
5.c. Explore species of cover crops
5.d. Compare the advantages and disadvantages between crop rotations and continuous cropping
5.e. Examine sample crop rotation schedules
5.f. Layout a procedure for crop rotation planning

6. Design a systems approach to preventing weeds, pests and diseases

Learning Objectives
6.a. Describe the unique challenges of weeds, pests and diseases for the organic farmer
6.b. Identify common categories of crop pests
6.c. Identify common categories of weeds
6.d. Identify common categories of diseases
6.e. Identify common organic management practices for weeds
6.f. Identify common organic management practices for diseases
6.g. Identify common organic management practices for pests

7. Complete organic certification paperwork

Learning Objectives
7.a. Explain the value of organic certification
7.b. Compare organic certifying agencies
7.c. Describe the process of organic certification
7.d. Identify perceived barriers to organic certification
7.e. Examine the organic certification application
7.f. Describe the requirements for organic certification
7.g. Answer commonly asked questions about certification
7.h. Determine which inputs and practices are acceptable to organic certifiers
50-080-702  Production Related Farm Management

Course Outcome Summary

Course Information

<table>
<thead>
<tr>
<th>Alternate Title</th>
<th>Organic Vegetable Farm Manager Apprenticeship Related Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Provides an overview of production related farm management activities and processes. Emphasis is placed on types of plants, designing a planting plan, growing seedlings, greenhouse management systems, plant health indicators, irrigation methods, weed, pest and disease control methods, harvest handling, and equipment types and maintenance.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instructional Level</th>
<th>Technical Diploma</th>
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<table>
<thead>
<tr>
<th>Total Credits</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hours</td>
<td>54</td>
</tr>
</tbody>
</table>

Pre/Corequisites

Prerequisite  Organic Farm Systems 

Course Competencies

1. Characterize types of plants

Learning Objectives

1.a. Explain the plant classification system
1.b. Identify the major characteristics of plant families
1.c. Identify the families of common crops and weeds
1.d. Identify plant life cycle categories: summer annual, winter annual, biennial, and perennial
1.e. Explain the importance of understanding a plant’s family

2. Design a planting plan

Learning Objectives

2.a. Identify tools for creating a planting plan
2.b. Outline the steps in creating a planting plan
2.c. Describe information needed for the plan
2.d. Coordinate with marketing plan to estimate volumes needed
2.e. Review plant spacing, row spacing and bed size
2.f. Estimate area (square feet) needed
2.g. Review desired plant characteristics; days to maturity, disease resistance, etc.
2.h. Recommend planting dates to allow for continual harvest
2.i. Explore season extending strategies

3. Explain the process for growing seedlings

Learning Objectives
3.a. Identify the characteristics of starting media
3.b. Describe how seedling cells and tray sizes are determined
3.c. Explain the factors that affect germination
3.d. Relate seeding equipment to a farm's size and scale
3.e. Explain why and how seedlings are hardened off
3.f. Troubleshoot plant performance issues
3.g. Describe the benefits of using transplants
3.h. Identify why some plants are more sensitive to transplanting than others

4. **Summarize greenhouse management systems**

   **Learning Objectives**
   4.a. Explain the benefits of greenhouses to organic vegetable farms
   4.b. Describe pest management systems
   4.c. Differentiate between passive and active environment management
   4.d. Characterize the benefits of different types of greenhouses
   4.e. Describe irrigation management and delivery in the greenhouse
   4.f. Identify the principal heating and cooling systems in the greenhouse
   4.g. Examine greenhouse air circulation

5. **Assess plant health**

   **Learning Objectives**
   5.a. Identify common problems in the plant
   5.b. Compare healthy and unhealthy plant characteristics
   5.c. Review when to fertilize a plant
   5.d. Explore morphology and physiology of plants
   5.e. Identify the parts of a plant
   5.f. Identify resources for diagnosing plant problems
   5.g. Define terminology related to plant development from germination to senescence

6. **Explore irrigation methods**

   **Learning Objectives**
   6.a. List types of irrigation systems
   6.b. Explain the importance of drainage
   6.c. Determine when irrigation is needed
   6.d. Relate the need for irrigation to specific crops
   6.e. Explain how irrigation interacts with other methods of plant health

7. **Explore cultural practices of organic vegetable production**

   **Learning Objectives**
   7.a. Identify the cultural needs of plants related to sunlight, drainage, water and soil fertility
   7.b. Describe good farm practices in field management
   7.c. Explain the use of crop specific cultural practices: pruning, trellising, mulching, hilling, etc.

8. **Summarize weed, pest, and disease control methods used on organic vegetable farms**

   **Learning Objectives**
   8.a. Identify methods for controlling weeds on organic farms
   8.b. Describe methods for controlling pests and disease on organic farms
   8.c. Illustrate the life cycles of common agricultural pests and the basic transmission of pathogens
   8.d. Describe when control measures should be taken for pests and pathogens
   8.e. Identify allowed and prohibited substances for controlling pests and weeds on organic farms

9. **Analyze harvest handling processes**

   **Learning Objectives**
   9.a. Relate the importance of post-harvest handling to maintaining crop quality
   9.b. Outline basic harvest techniques
   9.c. Describe strategies used to maintain harvest quality
9.d. Identify cooling methods for crop storage
9.e. Explain how to maintain food safety and control spoilage during post-harvest
9.f. Recommend optimal crop storage and shipping temperatures
9.g. Troubleshoot common post-harvest issues
9.h. Outline GAP (Good Agricultural Practices) requirements

10. Examine types and maintenance of farm equipment

Learning Objectives
10.a. Identify common farm equipment and their uses
10.b. Review safety protocols
10.c. Describe the importance and use of the equipment manuals
10.d. Explore basic equipment maintenance: oil changes, checking fluid levels, breakdown prevention
10.e. Explain how to troubleshoot common equipment problems
10.f. Compare repairing vs. buying new
10.g. Discuss what to consider when buying new or hiring out for repair work

50-090-703 Farm Business Management and Marketing

Course Outcome Summary

Course Information
Alternate Title Organic Vegetable Farm Manager Apprenticeship Related Instruction
Description Introduces apprentices to the farm business management and marketing processes and tasks needed for Organic Vegetable Farm Managers. Emphasis is placed on developing a farm marketing plan, evaluating a farm business plan, exploring farm recordkeeping systems, and interpreting farm financial information.
Instructional Level Technical Diploma
Total Credits 1
Total Hours 36

Pre/Corequisites
Prerequisite Organic Farm Systems
Pre/Corequisite Production Related Farm Management

Course Competencies
1. Develop a farm marketing plan

Learning Objectives
1.a. Differentiate among scale appropriate market channels
1.b. Identify future markets/customers
1.c. Evaluate current markets and trends
1.d. Examine a model marketing plan
1.e. Create a marketing budget
1.f. Review prices typical for the industry
1.g. Explore differences between marketing and sales

2. **Evaluate a farm business plan**

**Learning Objectives**
2.a. Outline the typical components of a business plan
2.b. Explain the importance of goal setting in the farm business
2.c. Describe the purpose of a mission statement
2.d. Identify sources of capital (short term, long term, loans, grants, etc.)
2.e. Identify costs on the farm
2.f. Describe types of business structures: LLC, Sole Proprietor, etc.
2.g. Examine farm budget options
2.h. Describe how to manage risk on the farm

3. **Summarize requirements for a farm recordkeeping system**

**Learning Objectives**
3.a. Describe the importance of categorizing expenses for tax purposes
3.b. Review Quickbooks as a tool for recordkeeping
3.c. Review Excel spreadsheets as a tool for recordkeeping
3.d. Identify other tools for recordkeeping (financial and production)
3.e. Identify capital expenses
3.f. Explain depreciation
3.g. Examine the recordkeeping associated with human resource management
3.h. Differentiate between fixed and variable costs

4. **Interpret farm financial information**

**Learning Objectives**
4.a. Explain the farm business management cycle (plan, implement, control)
4.b. Describe the data necessary for a business analysis
4.c. Explore typical pro-forma financial statements (balance sheet, profit/loss or income statement, statement of cash flows)
4.d. Use ratios to assess the farm's financial situation
4.e. Identify factors that improve profits
4.f. Describe a farm investment analysis
4.g. Examine how to work with farm lenders
4.h. Examine enterprise budgets
4.i. Perform comparisons: partial budgets
4.j. Plan cash flow
4.k. Monitor cash flow