Regenerative Agriculture Technicians

The Related and Supplemental Instruction (RSI) detailed below supports preparing for the competencies applied in on-the-job paid apprenticeship hours. The required **150 unpaid RSI per year** is delivered via a combination of online and in-person studies, activities, events, and collaborative projects with Open Source Ag.

The intent of this document is for you to consider whether work in this sector is something you're interested in exploring and practicing.

Competency Exploration and Practice = 150 hours

Regenerative Agriculture Technician Skills: 60 +- hours

- Support farm management tasks, including livestock care, pasture moves, garden harvesting, and crop planting.
- Practice farming methods that restore ecosystems while producing food, such as organic farming, permaculture principles, and agroforestry systems.
- Plan and implement holistic farm management using frameworks like Holistic Management, Keyline Design, and Permaculture principles.
- Practice small-scale vegetable production and intensive farming methods.
- Test, augment, and measure soil biology and soil health.
- Study agroforestry and woodland management including silvopasture, multi-functional riparian buffers, and integrating trees into farming systems.
- Perform daily care of livestock, moving portable fencing and housing, and feeding animals.
- Plant, harvest, and maintain vegetable gardens and orchards.
- Use tractors, mowers, and other machinery for various farm tasks.
- Set up and maintaining water systems for efficient resource use.
- Manage compost piles to create natural fertilizers.
- Plot animal movements on grazing charts and maintaining farm records.
- Harvest and pack produce for farmers' markets or other distribution.
- Keep work areas clean and organized, perform general farm maintenance tasks.
- Participate in farm team meetings to coordinate work and share knowledge.
- Record data pertaining to experimentation, research, or animal care.
- Measure or weigh ingredients used in laboratory testing.
- Prepare data summaries, reports, or analyses that include results, charts, or graphs to document research findings and results.
- Collect animal or crop samples. Examine animals or crop specimens to determine the presence of diseases or other problems.
- Respond to general inquiries or requests from the public.
- Perform crop production duties, such as tilling, hoeing, pruning, weeding, or harvesting crops.

- Perform general nursery duties, such as propagating standard varieties of plant materials, collecting and germinating seeds, maintaining cuttings of plants, or controlling environmental conditions.
- Transplant trees, vegetables, or horticultural plants.
- Prepare or present agricultural demonstrations.
- Determine the germination rates of seeds planted in specified areas.
- Assess comparative soil erosion from various planting or tillage systems, such as conservation tillage with mulch or ridge till systems, no-till systems, or conventional tillage systems with or without moldboard plows.
- Examine characteristics or behavior of living organisms.
- Research sustainable agricultural processes or practices.

O*NET

The skillsets below reflect priorities requested by employers and noted in the O*NET code for this sector: https://www.onetonline.org/link/details/19-4012.00 This O*NET code is adapted and approved for a Regenerative Agriculture focus.

Microsoft Office Suite: 15+- hours

- Project Management Software: Utilize Microsoft Teams and Outlook to schedule and attend meetings, collaborate with team members, manage project tasks, and track progress.
- Presentation software: Microsoft PowerPoint: Create engaging visualizations.
- Spreadsheet software: Use Microsoft Excel to analyze data, create spreadsheets, and perform calculations.
- Word processing software: Use Microsoft Word to create and edit professional documents, reports, and correspondence.

Technology: 15+- hours

- Support and maintain computer databases and analytical or scientific software.
- Communicate projects and progress utilizing computer aided design CAD software.
- Utilize Geographic Information Systems (GIS) and Geographic Positioning Systems (GPS) to communicate and share data.
- Utilize graphics, photo imaging, or mapping software to communicate and share information.

Communication: 20+- hours

- Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others.
- Communicating with People Outside the Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources.
- Resolving Conflicts and Negotiating with Others: Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.
- Performing for or Working Directly with the Public: Performing for people or dealing directly with the public.

- Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.

Analysis: 20+- hours

- Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
- Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
- Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
- Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
- Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
- Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
- Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

Operations: 20+- hours

- Inspecting Equipment, Structures, or Materials: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Monitoring Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
- Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information.
- Estimating the Quantifiable Characteristics of Products, Events, or Information: Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
- Repairing and Maintaining Mechanical Equipment: Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily based on mechanical (not electronic) principles.