



ORGANIC AGRICULTURE PRODUCTION

TECHNICAL-PROFESSIONAL

Grade 12

**Three-Term Budget Of Work (BOW)
for Learning Competencies**

**TECHNICAL-PROFESSIONAL
AGRI-FISHERY BUSINESS AND FOOD INNOVATION
Grade 12**

**Three-Term Budget of Work
For Learning Competencies**

Please note that each Tech-Pro elective is completed within one term if delivered at Grade 12.

Elective	Organic Agriculture Production
Prerequisite	None

Performance Standard	The learners perform maintenance of farm tools, materials and equipment, nursery establishment, planting operation and harvest and post-harvest handling operation following safety precautions.
Content Standard	The learners demonstrate understanding of principles in overview of organic agriculture production, maintenance of farm tools, materials and equipment, establish nursery for organic vegetable production, planting, and harvest and post-harvest handling operation following industry practices.

Week	Learning Competency	Suggested Activities
1	Discuss the overview of Organic Agriculture Production	Motivation Activity - Show pictures or videos of organic farms and organic products. - Ask learners to share their ideas about organic farming practices. Interactive Discussion

Week	Learning Competency	Suggested Activities
		○ Discuss the meaning, principles, and importance of organic agriculture production. ○ Explain the benefits of organic farming to health, environment, and economy. ● Concept Mapping ○ Create a concept map showing the components of organic agriculture: ■ soil management ■ organic fertilizers ■ pest management ■ crop rotation ■ composting ● Video Viewing Activity ○ Watch educational videos about organic farming practices and sustainable agriculture. ○ Conduct a short reflection after viewing. ● Group Research Activity ○ Research common organic farming practices used in the locality. ○ Present findings through posters or reports.

Week	Learning Competency	Suggested Activities
		• Comparison Activity ○ Compare conventional farming and organic farming using a Venn diagram or chart.
2	• Perform maintenance of farm tools, materials, and equipment following safety precautions	• Interactive Discussion ○ Present damaged and well-maintained farm tools. ○ Discuss the importance of proper maintenance in farm productivity and safety. ○ Identify common farm tools, materials, and equipment and their uses. ○ Discuss proper maintenance procedures and safety precautions. ○ Tool Identification Activity - Classify farm tools and equipment according to function: ■ digging tools ■ cutting tools ■ watering tools ■ spraying equipment • Demonstration Activity ○ Demonstrate proper cleaning, sharpening, oiling, and storage of farm tools and equipment.

Week	Learning Competency	Suggested Activities
		○ Safety Precaution Activity ○ Identify personal protective equipment (PPE) used during maintenance activities. ○ Practice safe handling of tools and equipment. ● Hands-on Maintenance Activity ○ Perform actual cleaning, lubricating, and storing of farm tools following proper procedures. ○ Inspection Activity ○ Check tools and equipment for rust, damage, or defects and prepare a simple inspection report. ● Group Activity ○ Develop a maintenance schedule for farm tools and equipment. ● Role-Playing Activity ○ Simulate safe workplace practices and accident prevention during farm operations. ● Reflection Activity ○ Discuss the effects of improper maintenance and unsafe practices in farm work.

Week	Learning Competency	Suggested Activities
3	Perform nursery operations for organic vegetable production	Introduction to Nursery Operations - Discuss the importance of nursery in vegetable production. - Identify good quality seeds. - Prepare a simple organic potting mixture (soil + compost). - Short Q&A. Seed Sowing - Demonstrate proper sowing of seeds in seed trays/seedbeds. - Students perform actual seed sowing. - Water properly after sowing. - Teacher observation. Nursery Care and Management - Discuss proper watering and shading. - Identify common seedling problems. - Students monitor and water seedlings. - Reflection: Why is proper care important?

Suggested Performance Tasks	Individual Task: - Identification Activity: Identify organic materials and inputs used in crop production such as compost, vermicast, and botanical pesticides. - Guest Speaker or Interview Activity: Invite a local organic farmer or conduct an interview about organic agriculture practices and challenges. - Reflection Activity: Write insights on the importance of organic agriculture in
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	promoting environmental sustainability and food safety. ○ Demonstrate proper maintenance of assigned farm tools. ○ Prepare a checklist for tool inspection and maintenance. ○ Practice proper wearing of PPE during maintenance activities. ● Group Task: ○ Field Observation Activity: Observe a school garden or nearby farm practicing organic agriculture. ○ Record observations on farming methods used. ○ Develop a maintenance schedule for farm tools and equipment. ○ Conduct a tool inventory and maintenance inspection. ○ Create a poster on safety precautions in handling farm equipment. ○ Develop a maintenance plan for school farm tools and equipment.
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Performance Standard	The learners perform activities in producing organic concoctions and extracts and organic fertilizer in accordance with industry practices
Content Standard	The learners demonstrate understanding of principles in producing organic fertilizer and organic concoctions in accordance with industry practices.

Week	Learning Competency	Suggested Activities
4	● Perform planting operations	● Land Preparation ○ Discuss steps in land preparation (clearing, digging, leveling). ○ Demonstrate making planting beds. ○ Students prepare small garden plots.

Week	Learning Competency	Suggested Activities
		• Transplanting Seedlings ○ Demonstrate proper transplanting technique. ○ Students transplant seedlings with correct spacing. ○ Water plants after transplanting. ○ Performance assessment. • Direct Seeding and Basic Plant Care ○ Demonstrate direct seeding method. ○ Students practice direct seeding. ○ Discuss basic plant care (watering, weeding, organic fertilizer). ○ Short quiz or reflection activity.
5	• Perform harvest and post-harvest handling operations	• Identifying Harvest Maturity ○ Discuss signs of maturity in vegetables (size, color, age). ○ Show actual samples or pictures of ready-to-harvest crops. ○ Short Q&A and review. • Proper Harvesting Techniques ○ Demonstrate proper harvesting using appropriate tools. ○ Emphasize safety precautions while harvesting. ○ Students perform actual harvesting. ○ Teacher observation.

Week	Learning Competency	Suggested Activities
		• Sorting and Grading ○ Discuss the importance of sorting and grading. ○ Separate damage and good quality produce. ○ Classify products according to size and quality. ○ Group activity. • Packaging and Storage ○ Demonstrate proper cleaning and packaging. ○ Use appropriate containers for storage. ○ Discuss proper storage conditions to maintain freshness. ○ Performance assessment and reflection.

Performance Standard	The learners perform activities in producing organic concoctions and extracts and organic fertilizer in accordance with industry practices
Content Standard	The learners demonstrate understanding of principles in producing organic fertilizer and organic concoctions in accordance with industry practices.

Week	Learning Competency	Suggested Activities
6	Perform activities in producing organic fertilizers based on production practices	Introduction to Organic Fertilizers - Discuss the importance of organic fertilizers in crop production. - Identify common types (compost, vermicompost, fermented plant juice). - List materials needed for making organic fertilizer. - Short Q&A. Compost Preparation - Demonstrate proper composting procedure (layering of materials). - Students prepare a compost pile using available materials. - Discuss proper moisture and turning of compost. - Teacher observation. Vermicomposting or Liquid Fertilizer Preparation - Introduce vermicomposting or simple fermented plant juice (FPJ). - Demonstrate step-by-step procedure. - Students perform actual preparation in groups. - Emphasize cleanliness and safety practices. Monitoring and Application - Discuss signs of mature compost.

Week	Learning Competency	Suggested Activities
		○ Demonstrate proper application of organic fertilizer to plants. ○ Students apply compost/liquid fertilizer in garden plots. ○ Reflection and performance assessment.

Suggested Performance Tasks	● Individual Task: ○ Demonstrate proper seed sowing or transplanting techniques. ○ Prepare a planting layout for a selected crop. ○ Record observations on crop germination and early growth. ○ Demonstrate proper harvesting techniques for selected crops. ○ Prepare a post-harvest handling checklist. ○ Record harvested yield and classify products according to quality. ○ Demonstrate proper mixing and layering of compost materials. ○ Prepare a journal documenting the composting process. ○ Identify appropriate materials for organic fertilizer production. ● Group Task: ○ Conduct actual planting operations in a designated plot. ○ Develop a planting calendar for crops in the locality. ○ Create a poster showing proper planting procedures and safety practices. ○ Conduct harvesting and post-harvest handling operations in a school farm or garden. ○ Develop a flowchart of post-harvest handling procedures. ○ Create a poster promoting proper harvesting and storage practices. ○ Produce compost or another organic fertilizer using proper procedures.
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	○ Develop a compost pit or composting area in the school garden. ○ Create an infographic or poster on organic fertilizer production practices
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Performance Standard	The learners perform activities in producing organic concoctions and extracts and organic fertilizer in accordance with industry practices.
Content Standard	The learners demonstrate understanding of principles in producing organic fertilizer and organic concoctions in accordance with industry practices.

Week	Learning Competency	Suggested Activities
7	● Perform the procedures of producing organic concoctions and extracts based on the Philippine National Standard in organic agriculture	● Introduction to Organic Concoctions ○ Discuss the importance of organic inputs in crop production. ○ Identify common organic concoctions (FPJ, FFJ, botanical extracts, fish amino acid). ○ Discuss benefits and uses. ● Understanding PNS Guidelines ○ Discuss allowed and prohibited substances under PNS. ○ Explain the importance of clean materials and containers. ○ Identify safety precautions. ○ Short quiz or oral recitation

Week	Learning Competency	Suggested Activities
		• Materials Preparation ○ Identify and prepare materials (plant parts, brown sugar, containers). ○ Demonstrate proper chopping and measuring. ○ Practice correct ratio computation (e.g., 1:1 mixture). ○ Group activity. • Preparation of Fermented Plant Juice (FPJ) ○ Demonstrate step-by-step FPJ preparation. ○ Students perform actual mixing and container setup. ○ Label with date and ingredients. ○ Teacher observation • Preparation of Fermented Fruit Juice (FFJ) ○ Demonstrate proper fruit selection and preparation. ○ Students prepare FFJ in groups. ○ Discuss fermentation period and storage. • Preparation of Botanical Extract ○ Demonstrate preparation of chili-garlic or neem extract.

Week	Learning Competency	Suggested Activities
		○ Emphasize safety in handling strong ingredients. ○ Students perform preparation and proper storage. ● Dilution and Application ○ Discuss correct dilution ratios before spraying. ○ Demonstrate proper spraying technique. ○ Students simulate applications in the garden area. ○ Safety monitoring. ● Evaluation and Documentation ○ Identify signs of properly fermented products. ○ Students present their prepared concoctions. ○ Record production details in logbook. ○ Practical performance assessment using rubric.

Performance Standard	The learners perform activities in raising organic chicken in accordance with RA 10068 and Philippine National Standards.
Content Standard	The learners demonstrate understanding of the principles of raising organic chicken in accordance with industry practices.

Week	Learning Competency	Suggested Activities
8	Perform activities in raising organic chicken	Introduction and Housing Preparation - Overview of Organic Chicken Production - Discuss organic poultry principles. - Differentiate organic and conventional chicken raising. - Identify benefits of organic chicken production. Organic Standards and Basic Requirements - Discuss basic organic livestock standards in the Philippines. - Identify allowed feeds and practices. - Explain the importance of animal welfare. Poultry Housing Design - Identify proper site selection. - Discuss space requirements and ventilation. - Draw a simple poultry house layout. Preparation and Sanitation of Housing - Clean and disinfect poultry house. - Prepare bedding materials (rice hull, sawdust). - Set up feeders and drinkers.

Week	Learning Competency	Suggested Activities
		• Chick Selection and Brooding Management ○ Selection of Healthy Chicks ○ Identify characteristics of healthy chicks. ○ Demonstrate proper chick handling. ○ Separate weak or unhealthy chicks. • Brooding Management ○ Discuss the importance of heat sources. ○ Set up a brooding area. ○ Monitor temperature and chick behavior. • Feeding Management ○ Identify organic feeds and alternatives. ○ Discuss feeding schedule. ○ Perform proper feeding. • Water Management and Sanitation ○ Demonstrate proper cleaning of drinkers. ○ Provide clean and fresh water. ○ Discuss prevention of contamination. • Health Care and Range Management ○ Identify common diseases and symptoms. ○ Discuss preventive measures.

Week	Learning Competency	Suggested Activities
		○ Emphasize cleanliness. ● Organic Health Care Practices ○ Discuss herbal or natural remedies. ○ Demonstrate proper isolation of sick birds. ○ Practice biosecurity measures. ● Free-Range Management ○ Discuss benefits of free-range systems. ○ Demonstrate safe release of chickens. ○ Monitor chicken behavior outdoors. ● Animal Welfare and Handling ○ Demonstrate humane handling. ○ Avoid overcrowding. ○ Discuss stress reduction practices. ● Production Monitoring and Harvesting ○ Weigh chickens (if possible). ○ Record growth performance. ○ Observe feeding efficiency. ● Record Keeping ○ Prepare a simple production record sheet. ○ Record feed consumption and mortality. ○ Explain the importance of documentation.

Week	Learning Competency	Suggested Activities
		• Harvesting or Egg Collection ○ Demonstrate proper egg collection. ○ Discuss proper handling of market-ready chickens. ○ Observe sanitation during harvesting. • Evaluation and Performance Assessment ○ Practical performance test. ○ Oral questioning. ○ Reflection and discussion of challenges.

Performance Standard	The learners perform activities in raising organic hogs in accordance with industry practices.
Content Standard	The learners demonstrate understanding of principles in raising organic hogs in accordance with industry practices.

Week	Learning Competency	Suggested Activities
9	• Perform activities in raising organic hogs based on industry practices.	• Introduction and Housing Preparation ○ Overview of Organic Hog Production ○ Discuss organic hog raising and its benefits. ○ Differentiate organic and conventional hog production.

Week	Learning Competency	Suggested Activities
	Note: Learners may take either of the options or both: • Option 1 - Raising Organic Hogs • Option 2 - Raising Organic Ruminant	○ Identify basic industry practices. • Organic and Industry Standards ○ Discuss basic organic livestock standards in the Philippines. ○ Identify allowed feeds and prohibited inputs. ○ Emphasize animal welfare principles. • Hog Housing Design and Site Selection ○ Identify the proper site (elevated, well-drained area). ○ Discuss space requirements and ventilation. ○ Draw a simple housing layout (pen design). • Preparation and Sanitation of Facilities ○ Clean and disinfect hog pens. ○ Prepare bedding (if a deep litter system is used). ○ Set up feeders and water systems. • Selection and Feeding Management and Selection of Healthy Piglets ○ Identify characteristics of healthy piglets. ○ Demonstrate proper handling. ○ Separate weak or sick animals.

Week	Learning Competency	Suggested Activities
		• Feeding Management ○ Identify organic feed ingredients (corn, rice bran, root crops). ○ Discuss feeding schedule. ○ Perform proper feed mixing and feeding. • Water Management ○ Provide clean and adequate water supply. ○ Clean water containers. ○ Discuss the importance of hydration. • Growth Monitoring ○ Weigh hogs (if possible). ○ Record feed consumption. ○ Monitor growth rate. • Health Care and Biosecurity and Common Swine Diseases ○ Identify common diseases and symptoms. ○ Discuss prevention measures. ○ Emphasize sanitation. • Organic Health Care Practices ○ Discuss herbal or natural supplements. ○ Demonstrate isolation of sick animals. ○ Practice biosecurity measures.

Week	Learning Competency	Suggested Activities
		• Waste Management ○ Discuss proper manure disposal. ○ Demonstrate composting of manure. ○ Emphasize environmental protection. • Animal Welfare Practices ○ Demonstrate proper handling to reduce stress. ○ Avoid overcrowding. ○ Ensure proper ventilation and comfort. • Production Management and Marketing • Record Keeping ○ Prepare a simple record sheet (feed, growth, health). ○ Practice recording daily activities. • Cost and Return Analysis ○ Identify production costs (feeds, housing, labor). ○ Estimate possible income. ○ Simple computation activity. • Harvesting or Market Preparation ○ Identify market-ready weight. ○ Discuss proper handling before transport. ○ Observe sanitation practices.

Week	Learning Competency	Suggested Activities
		• Evaluation and Performance Assessment ○ Practical performance test. ○ Oral questioning. ○ Reflection on learning. ○ The learners perform activities in organic small ruminants in accordance with industry practices.

Performance Standard	The learners perform activities in organic small ruminants in accordance with industry practices.
Content Standard	The learners demonstrate understanding principles in raising organic small ruminants in accordance with industry practices.

Week	Learning Competency	Suggested Activities
10	• Perform activities in raising organic small ruminants	• Introduction to Organic Small Ruminant Production ○ Lecture-discussion on organic farming principles ○ Discuss the Organic Agriculture Act (RA 10068)

Week	Learning Competency	Suggested Activities
		○ Group activity: Compare conventional vs organic livestock raising ● Overview of Small Ruminants ○ Identify types of small ruminants (goat and sheep breeds) ○ Show pictures/videos of common local breeds ○ Activity: Breed identification worksheet ● Characteristics of Healthy Animals ○ Discuss signs of healthy vs sick animals ○ Demonstration: Physical examination (eyes, coat, hooves, body condition) ○ Activity: Checklist assessment ● Organic Standards and Certification ○ Discuss organic livestock standards ○ Identify allowed and prohibited practices ○ Group reporting on organic compliance requirements ● Housing and Feeding Management ○ Discuss proper housing design (ventilation, flooring, space allowance) ○ Drawing activity: Design a simple organic goat house

Week	Learning Competency	Suggested Activities
		• Construction Materials and Sanitation ○ Identify appropriate local materials ○ Demonstration on cleaning and disinfecting using organic methods ○ Activity: Prepare sanitation checklist • Organic Feeding Principles ○ Discuss types of organic feeds (pasture, legumes, hay) ○ Field visit (if possible) to observe pasture area ○ Activity: Identify available forage in the locality • Feed Preparation and Ration Planning ○ Demonstration: Preparing simple feed mixtures ○ Compute basic feed requirements ○ Hands-on: Prepare sample organic feed • Health, Breeding, and Pasture Management ○ Discuss rotational grazing ○ Draw grazing layout plan ○ Activity: Create pasture rotation schedule • Preventive Health Care ○ Discuss common diseases of goats/sheep

Week	Learning Competency	Suggested Activities
		○ Demonstration: Hoof trimming, deworming (organic methods) ○ Activity: Prepare health calendar ○ ● Breeding Management ○ Discuss natural mating system ○ Identify signs of heat ○ Activity: Breeding record template preparation ● Care of Pregnant and Young Animals ○ Discuss gestation and kidding/lambing ○ Demonstration: Proper handling of newborns ○ Group discussion: Management problems and solutions ● Waste Management, Record Keeping, and Enterprise Planning, Waste Management and Composting ○ Demonstration: Composting manure ○ Activity: Prepare simple compost pit plan ● Record Keeping ○ Discuss importance of production records ○ Activity: Create sample record forms (health, breeding, feeding)

Week	Learning Competency	Suggested Activities
		• Marketing Organic Products ◦ Discuss pricing and market opportunities ◦ Group activity: Create marketing plan • Practical Assessment ◦ Demonstrate proper feeding ◦ Identify healthy animal ◦ Prepare housing plan ◦ Present mini project proposal

Suggested Performance Tasks	Individual Task: • Demonstrate proper preparation of one organic concoction or extract. • Prepare a process documentation with pictures or illustrations. • Identify appropriate materials and procedures used in organic concoction production. • Demonstrate proper feeding and handling of organic chicken. • Prepare a daily poultry management checklist. • Record observations on chicken growth and health. • Demonstrate proper feeding and handling of organic hogs. • Prepare a simple swine production record. • Perform cleaning and sanitation of hog pens following safety procedures. • Demonstrate proper feeding and handling of goats or sheep. • Prepare a simple health and feeding record for small ruminants. • Perform cleaning and sanitation of animal housing.
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	Group Task • Produce organic concoctions following PNS guidelines. • Create a flowchart or infographic of the preparation procedures. • Conduct a demonstration on the proper application of organic extracts in crop production. • Group Tasks • Prepare and maintain an organic poultry house. • Develop a simple organic chicken production plan. • Create a poster or infographic promoting organic poultry farming practices. • Develop a simple organic hog production plan. • Construct or improve a model organic hog pen. • Create a poster or infographic on organic swine raising practices. • Develop a simple organic small ruminant production plan. • Construct a model shelter for goats or sheep. • Create a poster or infographic on organic small ruminant management practices.
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