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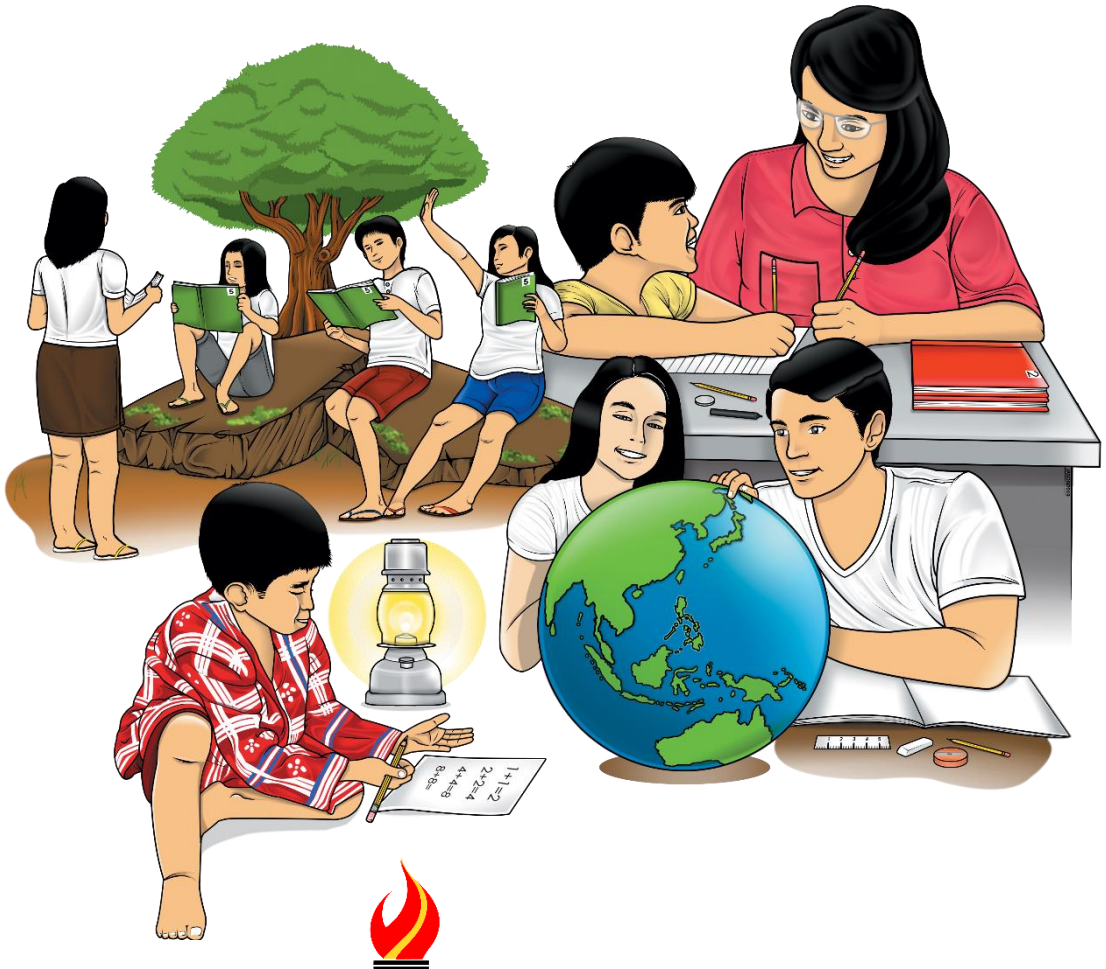
TLE

Animal Production

Quarter 1 – Module 6:

Process Farm Waste



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Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.

What I Need To Know

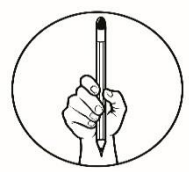
This module was designed and written with you in mind. It is here to help you master the nature of Animal Production. The scope of this module permits it to be used in many different learning situations. The language used recognizes the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using.

The module is divided into four lessons, namely:

- **Lesson 1** – Collect Farm Wastes
- **Lesson 2** – Identify and Segregate Wastes
- **Lesson 3** – Treat and Process Farm Waste
- **Lesson 4** – Perform Housekeeping

After going through this module, you are expected to:

1. Prepare tools and materials for collection of farm wastes.
2. Collect waste following Occupational Safety and Health Standard and waste collection requirements and plan.
3. Collect dangerous and hazardous wastes following the HAZMAT protocol.
4. Identify waste by categories according to industry standards and legislation.
5. Perform waste segregation according to organizational requirements and relevant legislation.
6. Place sorted waste into labelled container to avoid littering and prevent cross-contamination.
7. Obtain information on waste by asking authority to ensure correct identification.
8. Handle dangerous and hazardous waste according to organizational requirements and relevant legislation following OSHS procedures.
9. Process farm waste following environmental legislation and codes.
10. Apply principles of 3Rs (reduce, reuse and recycle) accordingly
11. Dispose processed farm waste according to environmental legislation and codes.
12. Display appropriate warning signs and labels in conspicuous places around the workplace.
13. Clean the area according to 5S principles.
14. Check, clean and stow away tools according to established industry procedures and following user's manual.
15. Perform recordkeeping according to industry requirements.



What I Know

Pre-assessment

Multiple Choice. Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

1. It is used to move heavy and/or bulky materials from one place to another.
   A. spade B. spading fork C. square nose shovel D. wheelbarrow

2. It is used to open up the ground, dig bulbs, incorporate soil amendments, and turn compost.
   A. spade B. spading fork C. square nose shovel D. wheelbarrow

3. It is used for picking up and moving loose materials.
   A. Pitchfork B. spade C. spading fork D. wheelbarrow

4. It means using materials more than once.
   A. Liquid waste B. Recyclable waste C. Reusable D. Solid waste

5. It means creating new material or product out of trash/garbage.
   A. Liquid waste B. Recyclable waste C. Reusable D. Solid waste

6. It refers to the range of garbage materials raising from animal and human activities that are disregarded as unwanted and useless.
   A. Liquid waste B. Recyclable waste C. Reusable D. Solid waste

7. It can be defined as liquid such as wastewater.
   A. Liquid waste B. Recyclable waste C. Reusable D. Solid waste

8. Which of the following steps is often called *classification or categorization* of waste?
   A. Evaluate your waste C. Plan for emergencies
   B. Label the waste D. Store your waste

9. The following are the requirements for handling of waste EXCEPT:
   A. Managing container access C. Both A and B
   b. Keeping the containers safe from elements D. None of the above.

10. Which of the following hazards in the farm can cause burns, respiratory disease or poisoning?
    A. Chemicals C. Noise Pollution
    B. Confined spaces D. Water

11. Which of the following is often called hierarchy of waste?
    A. 3R's C. 5Rs
    B. 4R's D. 6Rs

12. Which of the following is used for urgent care of cuts, bruises?
    A. Detergents C. First aid kit
    B. Disinfectants D. Sack

13. Which of the following statement is TRUE?
    A. Farm waste management includes the responsible storage, collection and disposal of all agricultural waste and the preparation and implementation of a management plan for farm waste.
    B. Non-biodegradable is a garbage or waste that can be disassembled or decomposed.
    C. Sorting of waste materials should not be undertaken for environmental and human health.
    D. None of the above.

14. The following are examples of farm waste EXCEPT:
    A. Empty woods
    B. Hay
    C. Trowel
    D. Twigs

15. The following are examples of tools used for collecting of farm wastes EXCEPT:
    A. Bolo
    B. Shovel
    C. Spading fork
    D. Wheelbarrow

Lesson 1 Collecting Farm Waste

Learning Objectives:

1. Identify tools and materials in collecting farm waste and
2. collect farm waste.

What's In

In the previous lesson, safety measures in our workplace had been discussed. Tools and materials are important in collecting farm wastes to avoid accident particularly to those hazardous substance or contaminated waste residues. In collecting farm waste there is a need to follow the OSH for the safety of individual.

This lesson covers the knowledge, skills and attitudes required to process farm wastes. It comprises functions such as preparing of tools and materials for collecting farm waste following OSHS requirements and plan.

Notes to the Teacher

This contains helpful tips or strategies that will help you in guiding the learners.

What's New

Direction. List down the tools and materials used in collecting farm waste. Write your answers under the appropriate column.

TOOLS	MATERIALS
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.

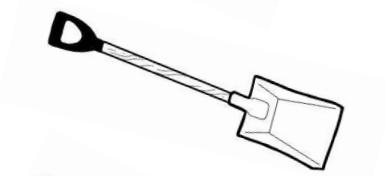
What Is It

Farm wastes are crop products that can be recycled, reused and decomposed such as hay, weeds, twigs, empty wood crates, cow manure, food waste, spoiled food, spent bedding items, empty bags, waste fish food, and other materials.

TOOLS IN COLLECTING FARM WASTE

Wheelbarrow / Cart Yard. This is used to transfer heavy and/or bulky materials such as dirt, garden waste, manure and plants. It is also used for materials such as dirt modifications and even concrete as compact mixing containers.

Spading Fork. · This is used for clearing the garden, planting bulbs, adding soil modifications and turning compost.



Square-necked Shovel. It is used for scooping up materials, leveling high ground areas, and cutting straight

Pitchfork/Manure Fork. · It is used for storage and transfer of loose materials.

MATERIALS USED IN COLLECTING FARM WASTE

- **Pail-** Used to bring waste from the field.
- **Sack**- this is where solid wastes are placed.
- **Container-**where the processed liquid wastes are stored.
- **Disinfectant-** is used to disinfect the region to avoid contamination
- **Detergents-**Used for hygienic purposes.
- **First aid kit-**is used for urgent care of cuts and bruises
- **Personal Protective Equipment-**It is used to protect oneself from harm.
  Substance chucks, deposit gloves, facial mask gummy socks

FARM WASTE MANAGEMENT

Farm waste management includes the responsible storage, collection and disposal of all agricultural wastes and the preparation and implementation of a management plan.

The Farm Waste Management Plan

The Farm Waste Management System shall take into account the collection, storage and disposal of all agricultural wastes. Implementation of the program would reduce the risk of contamination and avoid the loss of essential nutrients in slurry and manure from the farmyard.

The strategy is composed of two elements:

Part 1 – Farm Waste Checklist Completed for Farm. The checklist aims to define the remedial work and changes in management practice that is required to ensure a high standard of farm waste management.

SAMPLE FARM WASTE CHECKLIST

Manure	Silage	Plastic	Veterinary waste
Chicken dung	hay	bottles	syringe
Goat manure	cobs	cellophane	Empty bottles
	Rice straw	Plastic container	Feeds waste

Part 2 – Completed Farm Waste Location Plan. This plan is a copy of farm map showing areas of the farm that are suitable and unsuitable for spreading agricultural wastes.

Plan of Location of the Farm Waste.

A localization plan for farm waste is a copy of your farm map color coded as follows:

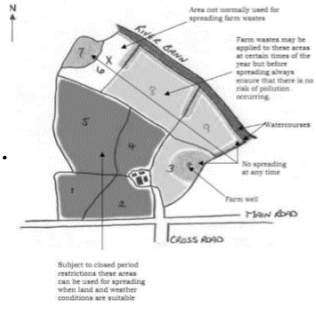
BLUE – rivers including the border of the fields.

RED – environments in which agricultural waste will never be used.

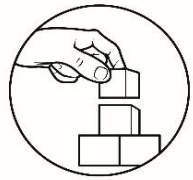
ORANGE – areas from which the risk of contamination is high (may be part or entire fields) and farm wastes can be added to certain areas.

GREEN – all remaining areas. These can be used for spreading at any time of the year when land and weather conditions are suitable.

WHITE – areas not normally used for spreading organic wastes and mark them with an X.



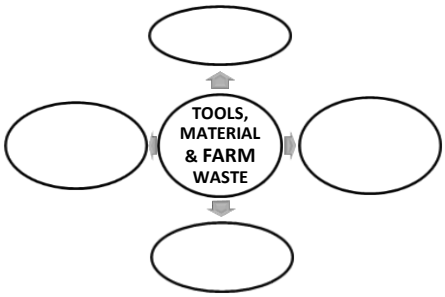
Sample of Farm Waste location map



What's More

Activity 1.1

Direction: Draw tools, materials, and farm wastes inside the brainstorming web.



What I Have Learned

Activity 1.2.

Direction: Give the importance of the following tool and material for the small farm.

1. Wheelbarrow - _____
2. Square nose shovel - _____
3. Spading fork - _____
4. Pitchfork/ManureFork_____
5. Spade - _____

What I Can Do

Activity 1.3

Direction: List down farm wastes found in the farm and describe how these will be collected.

Farm Waste	How It Will be Collected
1.	
2.	
3.	
4.	
5.	

SELF CHECK:

Directions: Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

1. It is used to move heavy and/or bulky materials.
   a. wheelbarrow b. square nose shovel c. spade d. spading fork
2. It is used to open up the ground, dig bulbs, incorporate soil amendments, and turn compost.

a. wheelbarrow b. square nose shovel c. spade d. spading fork

3. It is used for picking up and moving loose materials.
   a. wheelbarrow b. pitchfork c. spade d. spading fork
4. It is used to scoop up materials, level high spots in the soil, and cut straight lines through sod and soil.
   a. wheelbarrow b. square nose shovel c. spade d. spading fork
5. It helps to collect animal droppings and manure.
   a. wheelbarrow b. pitchfork c. spade d. spading fork
6. It is where the solid waste place.
   a. sack b. detergent c. container d. disinfectant
7. It is where the liquid form of waste being place.
   a. sack b. detergent c. container d. disinfectant
8. It is used to disinfect the area to avoid contamination.
   a. sack b. detergent c. container d. disinfectant
9. It is used for hygienic purpose
   a. sack b. detergent c. container d. disinfectant
10. it is used for immediate medication for wounds and bruises.
    a. first aid kit b. detergent c. PPE d. disinfectant

Great job! You may now proceed to the next lesson.

Lesson 2 Identify and Segregate Waste

Learning Objectives:

1. Identify wastes and categorize them according to industry standards and environmental legislation,
2. Perform waste segregation based on organizational requirements and relevant legislation,
3. Gather information about waste management from particular business entity in the locality.

What's In

In the previous lesson, safety measures in our workplace had been discussed. Tools and materials are important in collecting farm wastes to avoid accident particularly to those hazardous substance or contaminated waste residues. In collecting farm waste, there is a need to follow the OSH for the safety of individual.

This lesson covers the knowledge, skills and attitudes required to process farm wastes. It comprises functions such as preparing of tools and materials for collecting farm waste following OSHS requirements and plan.

What's New

Directions: Read and understand the poem. After reading, try to reflect and give your personal perception for what you have read then answer the question that follows.

RECYCLING IS

Recycling is…

A hungry animal, eating trash, then spitting out brand new items. It is putting an old change into something new.

Recycling is…renewing a soda can, a bottle a stack of newspapers. Breaking down today's prized possessions. It is looking at pictures of endangered animals and knowing you did the right thing. Recycling is the future of waste disposal

Victoria Tang
Edward J. Patten
Perth Amboy

What does the poem try to convey?

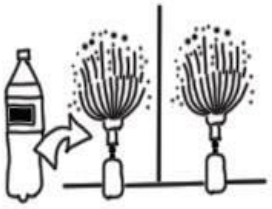
_____

_____

What Is It

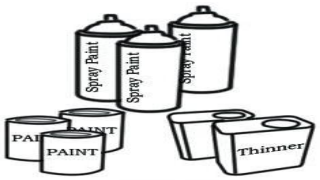
WASTE CATEGORY TO INDUSTRIAL STANDARDS

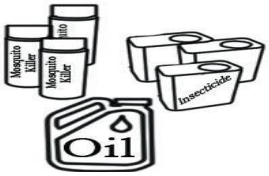
1. Reusable waste refers to material used once and can be used again.



2. Recyclable waste- means the production of new material or commodity from the waste / garbage.

3. Solid waste- garbage generated from agricultural, residential and commercial activities





PROPER SEGREGATION AND LABELING OF SORTED WASTES

Waste can be categorized into:

Biodegradable- waste that can be decomposed or disassembled.
Examples: fruits, papers, leaves

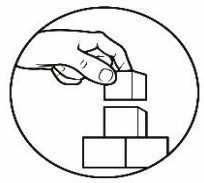
Non-biodegradable –waste that cannot be disassembled or decomposed. Examples: plastic wrappers, bottles

Sorting Waste Materials. This should be undertaken for environmental and human health. As we sort waste materials we can quickly determine if it is for recycle, reuse or toxic.

Dangerous waste should be labelled before being processed in the storage area.

What is HAZMAT?

Hazmat materials also referred to as hazardous goods will not exist unless there is a demand for them (e.g., gasoline) They are a necessary by-product of a production process (e.g. toxic waste). As such, these products must be shipped from one level to another to fulfil a demand (in the case of gasoline) or to be environmentally friendly in the case of hazardous waste disposal.



What's More

Activity 2.1

Direction: Identify the waste and write the corresponding letter on the top of the trash bin.

_____ ____ _____

A. 

B. 

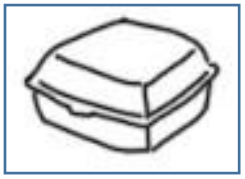
C. 

D. 

E. 

F. 

G. 

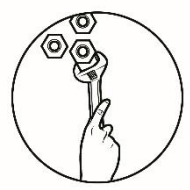
H. 

What I Have Learned

Activity 2.2

Directions: Identify the following symbols in column A and write their correct name in Colum B, then write its proper storage in column C.

Column A	Column B Name	Column C Proper Storage
		
		
		
		
		



What I Can Do

Activity 2.3

Direction: Collect and segregate wastes around the school campus and write their names under the corresponding column.

Recyclable	Reusable
1.	
2.	
3.	
4.	
5	

Great Job! You can now proceed to the next lesson.

Lesson 3 Treating and Processing Farm Waste

Learning Objectives:

1. Handle dangerous and hazardous wastes according to organizational requirements and relevant legislation following OSHS procedures,
2. Process farm waste following environmental legislation and codes,
3. Apply principles of 3Rs (Reduce, reuse and recycle) accordingly, and
4. dispose processed farm waste according to environmental legislation and codes.

What's In

Good day! You have learned in the previous module the application of safety measures in the animal production operation.

In this module covers the knowledge, skills and attitudes required to process farm and includes functions such as collecting farm waste, identifying and segregating waste, treating and processing farm waste, and performing housekeeping duties.

What's New

Direction: Read the poem about Solid Waste Management by Ananya Manhas.

Solid waste management...
A cause that should be given full encouragement
If you see garbage on the roads,
And the air smells like pollution.
When it's all piling up,
Remember, there's always a solution.
Reduce, reuse, recycle...
These are three simple words.
But when put into action,
They are mightier than swords.
The little things we do,
Make this earth a better place.
If we go on polluting like now,
Soon there'll be yes flowers to put in the vase.

What Is It

How to handle waste?

Waste management is a process involving the treatment, storage, recycling, collection and disposal of waste which requires proper disposal. It can be used to minimize usage and wastage of production in a healthy and effective manner.

STEPS IN HANDLING WASTES

1. **Evaluate the Waste**. To manage waste properly, identify first if the waste is dangerous or not, and it should be governed by law. That is also referred to as waste classification or categorization.

2. **Pack the Waste**. Place the hazardous waste according to its characteristics. It should be contained in a robust, leak-proof container which is kept closed when the waste is not added or removed.

Requirements for Handling Waste

- Manage container access.
- Containers are safe from foreign elements.
- Stack liquid waste containers on a curbed, impermeable surface.

3. **Mark the waste**. To conform with the legal requirement, supply the following information:
   - Warning: HAZARDOUS WASTE
   - Name, address, telephone number, packing date, name and surname of the person qualified to carry out the work

• Physical properties of waste: powder, firm, viscous liquids, pastes, sludge, liquid liquids

4. **Transportation and proper handling of the waste**- the person who is responsible for the transportation of hazardous waste should transport and dispose it properly.

The transporter will have to meet the following requirements:

•Has identification number
•Must secure approval to move hazardous waste from local authorities
• Educational requirements
• Carries ample liability insurance
• Emergency plan. Provide emergency plan to mitigate unusual incident to happen.
Getting Emergency Response Ways:
• Maintain spill equipment and necessary emergency response services in an accessible environment.
• Train workers on emergency response protocols which are suitable for the location.

5. **Train staff. Educate staff/workers of their responsibilities on**:
a. Basic waste management procedures.
b. Threats of malpractice to persons and environment.
c. Catastrophe precautionary measures, and
d. Accountability to government.

6. **Keep records**. The purpose of record keeping is to provide proof that the wastes are handled in compliance with the procedures.

3 R's

These 3 Rs are often called the "hierarchy of waste." These are actions to be done in order to reduce the amount of waste produced. Enhancement of overall waste management system and services is the order of priority. The hierarchy of waste consists of 3 Rs.

*** Reduce * Reuse * Recycle**

The concept of reducing what is produced and what is consumed is very essential. If there is less waste, then less recycling or reusing is required.

REDUCE.

Here are some points to remember to reduce the wastes:

1. Minimize paper wastage. Print on both sides of the page.
2. Instead of sending paper mail, use the electronic mail to reach people.
3. Remove your name from the mailing lists you do not wish to receive any more.
4. Use fabric serviette instead of table napkins.
5. Do not use plastic tiles, spoons, bottles, cups, and serviettes.
6. Stop purchasing packaged products of foil, paper, and plastics.
7. Purchase products that are robust and have long warranties.

REUSE. In waste hierarchy, learning to reuse objects, or re-using them for a different use than what they are intended for, is important. One of the best examples is the modular design of homes and office buildings created from recycled containers of shipping.

Here are few things you can do to recycle the wastes:

1. Old jars and pots to store kitchen products and to keep loose items like computer wires.
2. Tires for tire-swinging, landscaping and decorating.
3. Used timber as firewood, or wood crafts.
4. Newspaper for wrapping or packaging of items.
5. Envelopes for short notes.
6. Waste paper to make notes and drawings.

RECYCLING. Recycling is the last step of the waste hierarchy. The waste are used as raw materials to develop new object.

Some ways to recycle waste materials:

1. Be creative and innovative. Create new things out of spared materials in your home like old clothes.
2. Recycle used papers in handicrafts making.

PROCESS FARM WASTE TO PRODUCE ORGANIC FERTILIZER

1. Bed Preparation

Prepare the bed by selecting the site that is shaded, free from predators and near to the water source. Arrange the hollow blocks making a bed of 1m x 3m and put bamboo stakes to strengthen the bed used sacks and nylon net could be used a matting. Other materials maybe needed in the stocking of the bed are:

- Water and water sprinkler
- Plastic sheets to cover the bed

2. Size of the materials

The smaller the materials being composted, the faster the process. While shredding is not absolutely necessary, it is a vital factor in speeding up the process. After gathering the raw materials, mix well and shred. Wet the mixture so it feels like a damp sponge.

3. Raw Materials and Sample Combinations

- Worm
- Worm bin
- Substrate
  - Manure + Ipil-Ipil/ Kakawate Leaves (2:1)
  - Rice straw + manure (1:1)
  - Grasses + chicken manure (3:1)
  - Sawdust + Ipil-Ipil (3:1)
  - Compost/ rice straw + corn bran (1:1)
  - Cardboard and paper pulp

4. Source and Quality

In sourcing raw materials, care should be taken that one is sure of the quality of raw materials. If using animal manure, be sure that the animals were not dewormed as this would also deworm your project. On the other hand, the plant source should free from harmful insecticide, fungicide herbicide, which may also decimate your worm population.

FARM WASTE DISPOSAL

A. Waste from the General Farm

General farm waste are garbage and waste materials produced by normal production processes, including vegetable culls, broken eggs and wash water from vegetables and barns.

a. Storage.

- Locate farm waste storage areas away from food processing, input storage and livestock housing areas to prevent cross-contamination, and prevent pest attraction.
- Ensure that farm waste storage areas and containers are sufficient for the quantity of waste produced between the time of disposal.
- Clean agricultural waste storage areas often enough to avoid creating conditions that could cause cross-contamination or attract pests.
- Using containers with lids, whenever possible, to store farm waste before removal.

b. Disposal

- Regularly eliminate waste from agriculture to prevent cross-contamination and reduce pest attraction.
- Dispose all products in compliance with municipal and provincial standard.
- If other industries will use farm waste, store and ship it so as not to pose a food safety threat. Vehicles used to transport agricultural waste should not be used to transport food products and agricultural inputs unless properly sanitized.

B. Medical Wastes. Examples of medical wastes are medical devices such as needles and syringes, expired medicines and unused animal health products stored for a long period of time.

a. Storage

- Store used needles, syringes, empty medicine containers and unused or expired animal health items in secure, leak-proof containers and mark NON-HAZARDOUS WASTE (medicine bottles) or BIOMEDICAL WASTE (needles, scalpels, and other "clean" equipment).

b**. Disposal**

- Follow directions of retailers or manufacturers for the disposal of syringes, medications and other products as well as overdue medical supplies.
- Do not dispose on your land or in burn barrels.
- Ensure the disposal of medicated feed and water in a manner that does not contaminate the environment;

C. Fatality - Sources of deadstock involve all mortality from livestock on-farm.

. a. Storage

- Remove, compost or bury any dead animals regulated by provincial regulations.
- Locate burial pit for deadstock and composting site away from animal shelter, areas of fruit and vegetables production, high-farm or human trafficking areas, and water sources. Protect all stored litter from other livestock, poultry and predators and from public viewpoints.

b. Disposal

- Put up compost area at least 15 m from any watercourse, and 30 m from any domestic water source.
- Dig grave, at least 30 m from every source of water and pits.

SAFE DISPOSAL PROCEDURES FOR AGRICHEMICALS

Always follow the manufacturer's directions for proper handling of chemicals. Rinse empty containers and puncture holes in order to avoid further reuse. Return empty containers to the retailer or check correct disposal methods. and regularly inspect the stored chemicals. Dispose any unused or expired chemicals in the correct manner.

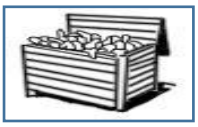
What's More

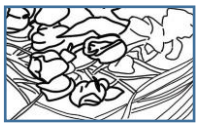
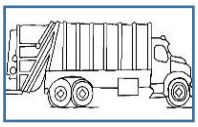
Activity 3.1

Direction: Give me at least two words to describe the following images and answer your answer by using the hashtag "#." symbol







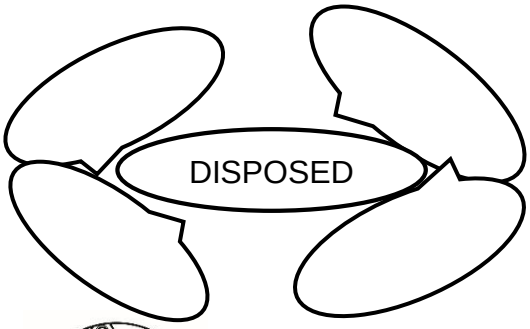



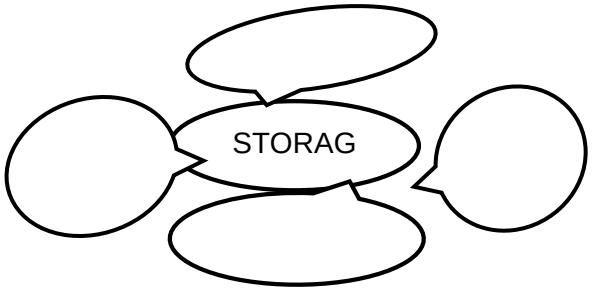

What I Have Learned

Activity 3.2

Direction. List all farm waste that needs to be stored and disposed of from the map below.

EXAMPLE: Stored – Recycled paper Disposed- Broken glasses





What I Can Do

Activity 3.3

Direction. Draw an object that is described in each R.

REDUCE	REUSE	RECYCLE

Great work! You did a good job in applying what you have learned!

Keep up the Good Work! You may proceed to the next lesson.

Lesson 4 Perform Housekeeping

Learning Objectives:

1. Display appropriate warning signs and labels in conspicuous place around
   the work place.
2. Clean work area according to 5S principles.

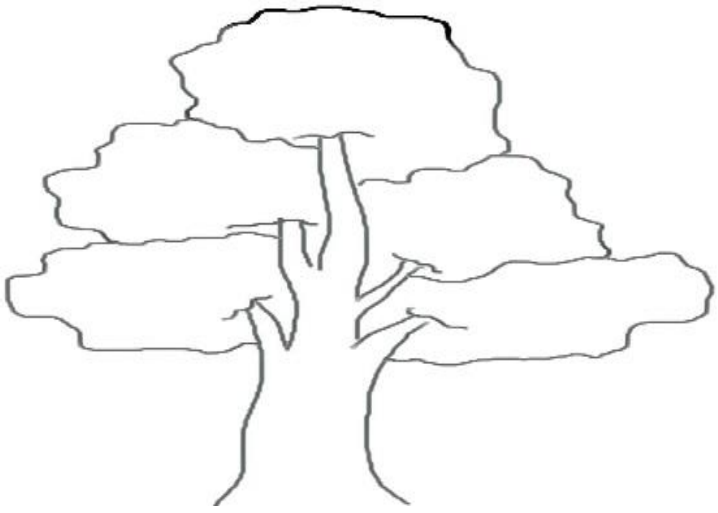
What's In

Healthy housekeeping provides a cleaner and safer workplace. It prevents disease and promotes healthy practices, habits and attitudes. Employers are responsible for assessing each workplace, identifying potential hazards and determining ways to mitigate the hazards.

A successful housekeeping program is an essential component of occupational safety and health management programs. In the workplace, warning signs play an important role in alerting workers to potential hazards.

What's New

Directions: Give at least 5 warning signs and label. Put them in the leaves of tree



What Is It

WARNING SIGN AND LABELS

Signs, signals, labels and barricades are important, if not crucial, for the agricultural workers' health.

General

Required signs and symbols shall be visible at all times while the work is ongoing, and shall be immediately removed or covered when the danger no longer exists or the work is done.

Danger Signs

Danger signs should be visible and dominant.

Caution Signs. Signs of warning shall be visible to alert or advise workers and people in the workplace or area where the threat may occur. The background of the signs must be yellow and the column is black with yellow letters. Any letter that is used against a yellow background is black.

Exit Signs. When needed, exit signs must be lettered in legible red letters, not less than 6 inches high, on a white field and the letters' main stroke must be at least three fourths in width.

Safety Instructions Signs

When used, health warning signs shall be green. White lettered upper panel will be used to express the principal text. Some more wording on the sign should be black letters with white backdrop.

Directional Signs

Directional signs shall be white with a black panel and a white directional symbol other than the automotive traffic signs listed in the paragraph below. The words on the sign on the white background will be black letters.

Traffic Signs

Building areas should have legible post signs. Any signal should shield workers from accident and must comply with occupational health and safety standard.

Accident Prevention Tags

Accident prevention tags are used as a temporary means of warning against an existing hazard, such as defective tools, equipment, etc. Accident prevention tag specifications similar to the ones shown below will apply.

Biological Hazard signs

Biological hazard warning must be used to signify the actual or probable existence of a biohazard.

Notice Signs

This is to provide general information that is important or relevant to a building, an area, a machine, or equipment. Notice signs address practices not related to personal injury. The heading "NOTICE" should be in white italic letters on a blue background. Notice signs can include information about procedures, operating instructions, maintenance information, rules, or directions.

General Safety Sign

Signs that are used to provide general safety standard procedure guidelines and regulations relating to fitness, medical supplies, first aid, sanitation, housekeeping, and relating to general safeguards.

Signs to admit. Admissions messages can be used with any header on a board. You can choose to put "Unauthorized Staff, Keep Out" on a sign of threat, alert, alarm or note.

Signaling

Flagmen

Do not provide the requisite security when operating these signs, symbols and barricades on or adjacent to the highway or street. It shall provide for effective traffic control. Flagmen should wear red or orange uniform when flagging.

Barricades

Barricades to shield workers. They are in compliance with OSHA norms.

What is 5'S?

5S is a concept and a way to organize and control the workspace and work flow with the goal of increasing productivity by removing waste, improving performance and minimizing unreasonableness of the operation. It helps to provide the foundation for good organizational management.

Principle of 5'S

5S is the working environment principle Improvement from the Japanese viewpoint The seiri, seiton , seiso , seiketsu, and Shitsuke. In English, the Five Ss are Sort, Set, Shine, Standardize, and sustain.

5S comprises five key practices. The following are:

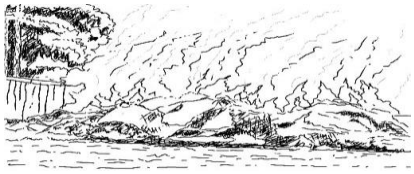
Japanese Term	American Term	Definition
Seiri	Sort	This procedure includes going through all of a workspace 's contents to decide which ones are required and can be removed.
Seiton	Set in Order	Be sure all products are arranged and every item has a designated location.
Seiso	Sweep	That ensures the newly designed workspace is cleaned and preserved. It may entail daily tasks like mopping, dusting and so on.
Seiketsu	Standardize	Establish a set of criteria for all processes and organizations.
Shitsuke	Sustain	Help new policies and perform audits to ensure accountability is maintained.

5'S TASKS AND ACTUAL WORK SERIES

1. Sort: eliminate discarded objects from the from and the clutter (removal/organization)

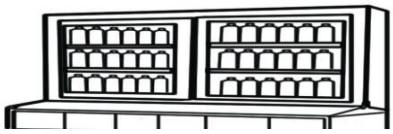
Example:


A site dumping disposal before


Discarding unnecessary items in "Sort" of

A site dumping disposal before "SORT" A site dumping disposal in the process of IMPROVEMENT

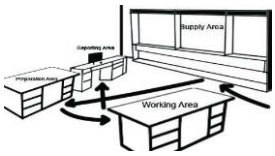
2. **Set:** arrange anything needed to be easy to use (Orderliness)



Example:

3. **Sweep**· Uphold high cleanliness levels (Cleanliness)

4. **Standardize:** In each section of your place set the above three S's as standar (Standardize)Example:



5. **Sustain**: Train and retain the staff engaged indiscipline. (Self-disciplinary action)

What's More

Activity 4.1

Direction: Describe what type of warning signs and label each photo expresses. Write the correct answer in your flash card.

What I Have Learned

Activity 4.2

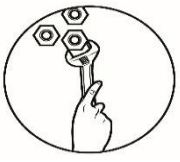
A. Identify what word represents each given activity. Choose your answer on the box.

Sort Set Sweep Standard Sustain

_____ 1. Washing of plate.
_____ 2. Sweeping the floor.
_____ 3. Washing of clothes.
_____ 4. Respect to elders.
_____ 5. Placing kitchen utensils in appropriate places.

B. Identify the English term for the following Japanese language.

_____ 6. Seiri
_____ 7. Seiton
_____ 8. Seiso
_____ 9. Seiketsu
_____ 10. Shitsuke



What I Can Do

Activity 4.3

Draw example of each 5's inside the box

Sort	Sweep	Standardize	Sustain	Set

Assessment

Multiple Choice.

Direction: Read and understand the questions carefully. Choose and write the **letter** of the correct answer in your answer sheet.

1. Which of the following is used for handling heavy and/or bulky materials?
   a. wheelbarrow b. square nose shovel c. spade d. spading fork

2. Which of the following is used for clearing the garden, digging bulbs, making soil adjustments and turning compost?
   a. wheelbarrow b. square nose shovel l c. spade d. spading fork

3. Which of the following is used to collect and displace loose material?
   a. wheelbarrow b. Pitchfork c. spade d. spading fork

4. Which of the following is applied to use more than once of the materials?
   a. Recyclable waste b. Solid waste c. Reusable d. Liquid waste

5. Which of the following is the creation of new material or product from the waste / garbage.
   a. Recyclable waste b. Solid waste c. Reusable d. Liquid waste

6. Which of the following can be defined liquid as wastewater.
   a. Recyclable waste b. Solid waste c. Reusable d. Liquid waste

7. Which of the following refers to the range of garbage material raising from animal and human activities that are disregarded as unwanted and useless?
   a. Recyclable waste b. Solid waste c. Reusable d. Liquid waste.

8. The following are the requirements for handling of waste EXCEPT:
   a. Managing container access c. Both A and B
   b. The containers are safe from elements d. None of the above.

9. Which of the following is often called hierarchy of waste?
   a. 3R's c. 5Rs
   b. 4R's d. 6Rs

10. Which of the following hazards most in the farm can cause burns, respiratory diseases or poisoning?
    a. Chemicals c. Noise Pollution
    b. Confined spaces d. Water

11. Which of the following steps is often called classification or categorization of the waste?
    a. Evaluate your waste c. Plan for emergencies
    b. Label the waste d. Store your waste

12.Which farm waste management includes the responsible storage, collection and disposal of all agricultural waste and the preparation and implementation of a management plan for farm waste.

a. Non-biodegradable is a garbage or waste that can be disassembled or decomposed.
b. Sorting of waste materials should not be undertaken for environmental and human health.
c. None of the above.

13. The following are the example of tools used for collecting of farm wastes EXCEPT:

a. Bolo b. Spading fork c. Shovel d. Wheelbarrow

14. Which of the following is used for urgent care of cuts and bruises?

a. First aid kit b. Disinfectant c. Detergent d. Sack

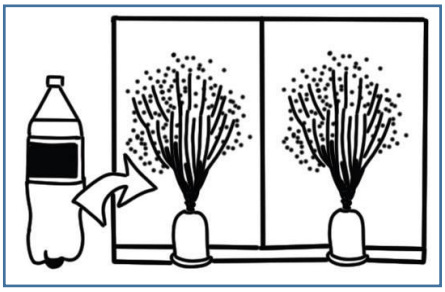
15. The following are the examples of farm waste EXCEPT:

a. Empty woods b. Hay c. Twigs d. Trowel

Additional Activities

The student will create a new product using recycled or reused materials available in the farm.

Example:



JOB ENTREPRENEURSHIP (Week 7 to 8)

In the remaining 15 days, student will produce organic fertilizer in their respective farms.

1. Prepare the materials and weigh following the recommended carbon-nitrogen ratio.
2. Sanitize the bed by introducing beneficial microorganisms through spraying IMO following the appropriate dilution rate.
3. Add the substrate by making two layers top with cattle manure where the carbon sources goes together same with nitrogen sources.
4. Introduce again beneficial microorganisms through spraying IMO following the appropriate dilution rate.
5. Cover the bed with plastic cover and let the substrate undergo anaerobic decomposition.
6. After one (1) week, remove the plastic cover and stock the vermi worms following the appropriate stocking density.
7. Cover the substrate stocked with vermi using coconut leaves and let it undergo aerobic decomposition for four (4) weeks.
8. Maintain the vermicompost by maintaining humidity and add water when needed.

Criteria	Excellent 5points	Very Satisfactory 4 points	Satisfactory 3 points	Need Improvement 2 points
Steps in producing Organic Fertilizer	If all 8 the steps are performed well	7-6 steps are followed	5-4 step are followed	3 step and below are followed
Preparation of materials	Follows the proper ratio of materials	Sometimes observe	Rarely observed	Proper ratio of materials are not follows
Introduction of the ANC	Introduce the ANC in right day	Introduction of ANC are not well followed	EARLY introduction of ANC	LATE introduction of ANC
Total Score				

Answer Key

POST-ASSESSMENT	WHAT I CAN DO LESSON 4	WHAT I CAN DO LESSON 2	WHAT I KNOW LESSON 1
A. A	A.	A. Disinfectant	A. A
B. D	1. Set	B. Detergents	B. D
C. B	2. Sweep	C. Reusable	C. BB
D. C	3. Set	D. Biodegradable	D. C
E. A	4. Sustain	Spading fork	E. A
F. D	5. Standard		F. D
G. B	B.		G. B
H. C	6. Sort		H. A
I. A	7. Set		I. C
J. A	8. Sweep		J. A
K. A	9. Standardiz e		K. A
L. C	10. Sustain		L. B
M. A			M. C
N. B			N. A
O. A			O. A

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