

Abnormal Corn Ear Models Curriculum



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The *Abnormal Corn Ear Models Curriculum* is designed to educate high school and post-secondary students about common corn cob abnormalities caused by disease issues. The curriculum will provide hands-on learning experiences using corn cob models and detailed lessons on identifying, understanding, and preventing these abnormalities.

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Curriculum Structure

The *Abnormal Corn Ear Models Curriculum* is composed of the following lessons. Approximate lesson times are included.

Lesson	Title	Approximate Time
One	Corn Cob Abnormalities Part 1	45-50 minutes
Two	Corn Cob Abnormalities Part 2	45-50 minutes
	Total	90-100 minutes

Lesson Structure

Each lesson begins with a Lesson Overview, Lesson Objectives, and a Lesson at a Glance table, which lists lesson activities, materials required, suggested preparation steps, and approximate class time.

Lesson Sections

The actual lesson follows the overview, which contains some of the sections described below.

FOCUS

Every lesson begins with a FOCUS activity intended to capture participants' attention. This may be in the form of a small or large class discussion, a game, a demonstration, or a review of previous lesson information. During this activity, participants are introduced to the topic of the lesson.

LEARN

The LEARN activity in each lesson varies in its presentation mode. It may be a slide presentation, group activity, or demonstration.

REVIEW

The majority of lessons end with a REVIEW activity intended to briefly review the lesson's key messages or main points.

Lesson One – Corn Cob Abnormalities Part 1

Lesson Overview

In this lesson, students explore six common corn cob abnormalities: poor, incomplete kernel set, ear worm, stink bug damage, poor pollination at ear tip, tassel ear, and bird damage. They will learn how these issues occur and ways to correct or prevent them.

Lesson Objectives

After completing this lesson, participants will be able to:

- Identify and describe six corn cob abnormalities
- Understand the causes of each abnormality
- Discuss preventive measures and correction methods for each issue

Lesson at a Glance

Activity	Materials	Preparation	Approximate class time
FOCUS	• Abnormal Corn Ear Models • <i>Corn Cob Abnormalities Part 1</i> slide presentation • <i>Corn Cob Abnormalities Identification Scavenger Hunt</i> worksheet • <i>Corn Cob Abnormalities Identification Scavenger Hunt – Answer Key</i>	1. Print/photocopy the <i>Corn Cob Abnormalities Identification Scavenger Hunt</i> worksheet (one per participant). 2. Prepare the <i>Corn Cob Abnormalities Part 1</i> slide presentation for viewing. 3. Have the <i>Corn Cob Abnormalities Identification Scavenger Hunt – Answer Key</i> available for reference.	10 minutes
LEARN	• Abnormal Corn Ear Models • <i>Corn Cob Abnormalities Part 1</i> slide presentation • <i>Who Did This</i> worksheet • <i>Who Did This – Answer Key</i>	1. Print/photocopy <i>Who Did This</i> worksheet (one per participant). 2. Prepare the <i>Corn Cob Abnormalities Part 1</i> slide presentation for viewing. 3. Have the <i>Who Did This – Answer Key</i> available for reference.	30 minutes
REVIEW	• <i>Corn Cob Abnormalities Quiz</i> • <i>Corn Cob Abnormalities Quiz – Answer Key</i> • <i>Corn Cob Abnormalities Part 1</i> slide presentation	1. Print/photocopy the <i>Corn Cob Abnormalities Quiz</i> (one per participant). 2. Prepare the <i>Corn Cob Abnormalities Review</i> slide presentation. 3. Have the <i>Corn Cob Abnormalities Quiz – Answer Key</i> available for reference.	5-10 minutes

Lesson One – Corn Cob Abnormalities Part 1

FOCUS: Introduction to Corn Cob Abnormalities

10 minutes

Purpose:

Participants will begin to gain an understanding of the common corn cob abnormalities seen in agricultural settings and learn how to identify them.

Materials:

- Abnormal Corn Ear Models Curriculum
- *Corn Cob Abnormalities Part 1* slide presentation
- *Corn Cob Abnormalities Identification Scavenger Hunt* worksheet
- *Corn Cob Abnormalities Identification Scavenger Hunt* – Answer Key

Facilitation Steps:

1. Distribute the *Corn Cob Abnormalities Identification Scavenger Hunt* worksheet to each participant.
2. Present the *Corn Cob Abnormalities Part 1* slide presentation and use it as a discussion starter with the entire class.
3. Have participants closely examine the corn cob models and fill out the identification worksheet during the presentation.
4. Facilitate a discussion in which participants share their observations and initial thoughts on the abnormalities.

Name: _____ Class: _____

Corn Cob Abnormalities Identification Scavenger Hunt

Instructions: Use the slide presentation and corn ear models to find the answers to the following questions.

1. What are three damage results from corn cob abnormalities?
2. Which four factors make corn cobs susceptible to abnormalities?
3. What are three examples of control methods for common corn cob abnormalities?
4. Poor, incomplete kernel set is caused by what factors?
5. What are the key indicators of ear worm damage on corn?
6. How does stink bug damage affect corn kernels?
7. Describe the environmental conditions that lead to poor pollination at the ear tip.
8. What is the primary cause of tassel ear in corn plants?
9. How can bird damage on corn be identified?

Corn Cob Abnormalities Identification Scavenger Hunt – Answer Key

1. What are three damage results from corn cob abnormalities?

Reduced yield, poor kernel development, increased susceptibility to disease and pest

2. Which four factors make corn cobs susceptible to abnormalities?

Environmental stress (drought, high temperatures), poor pollination, nutrient deficiencies, genetic susceptibility

3. What are three examples of control methods for common corn cob abnormalities?

Proper irrigation and nutrient management, selection of resistant hybrids, timely application of pesticides and herbicides

4. Poor, incomplete kernel set is caused by what factors?

Poor pollination, severe drought, high temperatures, nutrient deficiencies

5. What are the key indicators of ear worm damage on corn?

Feeding on silks and kernels, significant damage and yield loss, presence of larvae

6. How does stink bug damage affect corn kernels?

Piercing kernels with mouthparts, feeding on sap, discolored spots, secondary infections

7. Describe the environmental conditions that lead to poor pollination at the ear tip.

Drought, high temperatures, nutrient deficiencies, delayed silk emergence

8. What is the primary cause of tassel ear in corn plants?

Genetic mutations, herbicide damage, environmental stress

9. How can bird damage on corn be identified?

Feeding on ear tips, yield loss, entry points for fungal infections

Lesson One – Corn Cob Abnormalities Part 1

LEARN: Corn Cob Abnormalities Identification

30 minutes

Purpose:

Participants will learn about the first six corn cob abnormalities through a detailed presentation and hands-on examination of models. They will understand the causes of each abnormality and discuss methods to correct or prevent them.

Materials:

- Abnormal Corn Ear Models
- *Corn Cob Abnormalities Part 1* slide presentation
- *Who Did This?* worksheet
- *Who Did This?* – Answer Key

Facilitation Steps:

1. Distribute the *Who Did This?* worksheet to each participant.
2. Present the *Corn Cob Abnormalities Part 1* slide presentation, detailing each abnormality. For each abnormality:
 - Show the corresponding corn cob model
 - Describe how the issue occurs
 - Discuss preventive measures and correction methods
3. Instruct participants to examine the models closely and take notes on their worksheets. Facilitate a group discussion in which participants share their observations and questions.

Name: _____ Class: _____

Who Did This?

Instructions: Use the slide presentation and corn ear models to find the answers to the following questions.

Scenario 1: You are in the cornfield and notice that some ears have poor, incomplete kernel set with missing kernels or irregular rows.

What abnormality is this?

What factors cause this abnormality?

What preventive measures can be taken?

Scenario 2: You notice corn ears with significant damage where the kernels are eaten away.

What abnormality is this?

What factors cause this abnormality?

What preventive measures can be taken?

Scenario 3: You observe that some kernels have discolored spots and appear shriveled.

What abnormality is this?

What factors cause this abnormality?

What preventive measures can be taken?

Scenario 4: The ear tips of the corn have poor kernel development and appear barren.

What abnormality is this?

What factors cause this abnormality?

What preventive measures can be taken?

Abnormal Corn Ear Models Curriculum

Scenario 5: Some ears have developed on the tassels instead of the main stalk.

What abnormality is this?

What factors cause this abnormality?

What preventive measures can be taken?

Scenario 6: Birds have damaged the ear tips by feeding on the kernels.

What abnormality is this?

What factors cause this abnormality?

What preventive measures can be taken?

Who Did This? – Answer Key

Scenario 1: You are in the cornfield and notice that some ears have poor, incomplete kernel set with missing kernels or irregular rows.

What abnormality is this?

Poor, incomplete kernel set

What factors cause this abnormality?

Poor pollination, severe drought, high temperatures, and nutrient deficiencies

What preventive measures can be taken?

Minimize crop stress by maintaining proper soil fertility, using appropriate planting depths, adhering to recommended herbicide application dates, and selecting suitable hybrids

Scenario 2: You notice corn ears with significant damage where the kernels are eaten away.

What abnormality is this?

Ear worm

What factors cause this abnormality?

Corn earworms, or *Helicoverpa zea*, feeding on silks and kernels, often exacerbated by high temperatures and late planting

What preventive measures can be taken?

Monitor for earworm presence, use insecticides if thresholds are exceeded, plant early maturing hybrids, and use Bt corn varieties

Scenario 3: You observe that some kernels have discolored spots and appear shriveled.

What abnormality is this?

Stink bug damage

What factors cause this abnormality?

Stink bugs piercing kernels with mouthparts and feeding on sap, leading to secondary infections by fungi and bacteria

What preventive measures can be taken?

Regular scouting, use of insecticides when populations exceed thresholds, planting resistant hybrids, and crop rotation

Scenario 4: The ear tips of the corn have poor kernel development and appear barren.

What abnormality is this?

Poor pollination at ear tip

What factors cause this abnormality?

Environmental stress such as drought, high temperatures, or nutrient deficiencies during the silking period

What preventive measures can be taken?

Ensure adequate soil moisture and nutrient availability, plant drought-tolerant hybrids, and synchronize planting dates to avoid extreme weather

Scenario 5: Some ears have developed on the tassels instead of the main stalk.

What abnormality is this?

Tassel ear

What factors cause this abnormality?

Genetic mutations, herbicide damage, or environmental stress, particularly high temperatures or nutrient imbalances during the reproductive phase

What preventive measures can be taken?

Select hybrids less prone to this trait, manage environmental stress, and avoid herbicide injury

Scenario 6: Birds have damaged the ear tips by feeding on the kernels.

What abnormality is this?

Bird damage

What factors cause this abnormality?

Birds like blackbirds and crows feeding on developing kernels, particularly in fields near roosting sites

What preventive measures can be taken?

Use visual and auditory deterrents, plant bird-resistant hybrids, schedule planting dates to avoid peak bird activity, and manage roosting sites

Lesson One – Corn Cob Abnormalities Part 1

REVIEW: Assessment

5-10 minutes

Purpose:

Participants will assess their knowledge of corn cob abnormalities.

Materials:

- *Corn Cob Abnormalities Part 1* slide presentation
- *Corn Cob Abnormalities Quiz*
- *Corn Cob Abnormalities Quiz – Answer Key*

Facilitation Steps:

1. Review the main points from the lesson using the *Corn Cob Abnormalities Part 1* slide presentation.
2. Distribute the *Corn Cob Abnormalities Quiz* to each participant.
3. Allow 5-10 minutes for participants to complete the quiz.
4. Collect the quizzes or review the answers together using the *Corn Cob Abnormalities Quiz – Answer Key*.
5. Discuss any areas of difficulty and reinforce key concepts.

Name: _____ Class: _____

Corn Cob Abnormalities Quiz

- 1. What are the two common causes of poor, incomplete kernel set in corn?
- 2. Using the provided information, identify three of the six common corn cob abnormalities and describe the cause for each.

Corn Cob Abnormality	Cause

- 3. Explain the preventive measures or correction methods for three of the common corn cob abnormalities.

Corn Cob Abnormality	Preventive Measures or Correction Methods

- 4. At which stage in the life cycle do corn earworms cause the most damage to corn plants?

Corn Cob Abnormalities Quiz – Answer Key

1. What are the two common causes of poor, incomplete kernel set in corn?
Poor pollination, severe drought.
2. Using the provided information, identify three of the six common corn cob abnormalities and describe how each occurs.

Corn Cob Abnormality Cause

Poor, Incomplete Kernel Set	Poor pollination, severe drought, high temperatures, nutrient deficiencies
Ear Worm	Larvae enter at the silk, feed on developing kernels, damage is more severe during high temperatures
Stink Bug Damage	Piercing kernels with mouthparts, feeding on sap, leads to shriveled kernels and secondary infections

3. Explain the preventive measures or correction methods for three of the common corn cob abnormalities.

Corn Cob Abnormality Preventive Measures or Correction Methods

Poor, Incomplete Kernel Set	Maintain proper soil fertility, appropriate planting depths, recommended herbicide application dates, select suitable hybrids
Ear Worm	Monitoring and using insecticides, planting early maturing hybrids, using genetically modified corn expressing Bt toxins
Stink Bug Damage	Regular scouting, use of insecticides, planting resistant hybrids, crop rotation, destruction of weed hosts

4. At which stage in the life cycle do corn earworms cause the most damage to corn plants?
Larvae stage.

Lesson Two – Corn Cob Abnormalities Part 2

Lesson Overview

In this lesson, students examine another set of six corn cob abnormalities: blunt ear syndrome – ear stunting, Diplodia ear rot, green snap, bouquet ears, nubbin ears, and chaffy ears. They will understand the causes of these issues and learn methods to prevent or correct them.

Lesson Objectives

After completing this lesson, participants will be able to:

- Identify and describe six more corn cob abnormalities
- Understand the causes of each abnormality
- Discuss preventive measures and correction methods for each issue

Lesson at a Glance

Activity	Materials	Preparation	Approximate Class Time
FOCUS	• Abnormal Corn Ear Models • <i>Corn Cob Abnormalities Part 2</i> slide presentation • <i>Corn Cob Abnormalities Identification Scavenger Hunt</i> • <i>Corn Cob Abnormalities Identification Scavenger Hunt – Answer Key</i>	1. Print/photocopy the <i>Corn Cob Abnormalities Identification Scavenger Hunt</i> worksheet (one per participant). 2. Prepare the <i>Corn Cob Abnormalities Part 2</i> slide presentation for viewing. 3. Have the <i>Corn Cob Abnormalities Identification Scavenger Hunt – Answer Key</i> available for reference.	10 minutes
LEARN	• Abnormal Corn Ear Models • <i>Corn Cob Abnormalities Part 2</i> slide presentation • <i>Who Did This?</i> worksheet • <i>Who Did This? – Answer Key</i>	1. Print/photocopy the <i>Who Did This?</i> worksheet (one per participant). 2. Prepare the <i>Corn Cob Abnormalities Part 2</i> slide presentation for viewing. 3. Have the <i>Who Did This? – Answer Key</i> available for reference.	30 minutes
REVIEW	• <i>Corn Cob Abnormalities Quiz</i> • <i>Corn Cob Abnormalities Quiz – Answer Key</i> • <i>Corn Cob Abnormalities Part 2</i> slide presentation	1. Print/photocopy the <i>Corn Cob Abnormalities Quiz</i> (one per participant). 2. Prepare the <i>Corn Cob Abnormalities Part 2</i> slide presentation. 3. Have the <i>Corn Cob Abnormalities Quiz – Answer Key</i> available for reference.	5-10 minutes

Lesson Two – Corn Cob Abnormalities Part 2

FOCUS: Introduction Corn Cob Abnormalities

10 minutes

Purpose:

Participants will begin to gain an understanding of the common corn cob abnormalities seen in agricultural settings and learn to identify them.

Materials:

- Abnormal Corn Ear Models
- *Corn Cob Abnormalities Part 2* slide presentation
- *Corn Cob Abnormalities Identification Scavenger Hunt*
- *Corn Cob Abnormalities Identification Scavenger Hunt – Answer Key*

Facilitation Steps:

1. Distribute the *Corn Cob Abnormalities Identification Scavenger Hunt* to each participant.
2. Present the *Corn Cob Abnormalities Part 2* slide presentation and use it as a discussion starter with the entire class.
3. Have participants closely examine the corn cob models and fill out the identification worksheet during the presentation.
4. Facilitate a discussion in which participants share their observations and initial thoughts on the abnormalities.

Name: _____ Class: _____

Corn Cob Abnormalities Identification Scavenger Hunt

Instructions: Use the slide presentation and corn cob models to find the answers to the following questions:

1. Describe how green snap occurs.
2. What are the preventive measures for green snap?
3. What are bouquet ears and what causes them?
4. How can bouquet ears be managed?
5. What are nubbin ears and what leads to their formation?
6. How can nubbin ears be prevented?
7. What are chaffy ears and what causes them?

8. What are the methods to correct or prevent chaffy ears?
9. Blunt ear syndrome, also known as “_____ ear” syndrome, is characterized by significantly shortened ears with normal kernel rows abruptly stopping.
10. Diplodia ear rot, caused by the fungus _____ *maydis*, infects corn ears through the silks or directly through wounds in the ear.
11. Green snap, or _____ snap, occurs when corn stalks break due to high wind speeds, often during rapid growth phases.
12. Bouquet ears occur when multiple ears develop at the same _____, often resulting from genetic mutations or excessive plant density.
13. Implement crop rotation with _____ crops and ensure proper field drainage to reduce humidity for managing Diplodia ear rot.
14. Selecting hybrids with better resistance to stalk _____ can help prevent green snap.
15. Proper irrigation, balanced fertilization, and selecting _____-tolerant hybrids can help prevent chaffy ears.

Corn Cob Abnormalities Identification

Scavenger Hunt – Answer Key

1. Describe how green snap occurs.
Corn stalks break due to high wind speeds during rapid growth phases, typically between the V10 and VT stages.
2. What are the preventive measures for green snap?
Select hybrids with better stalk strength, plant at recommended populations, and monitor weather forecasts to avoid stress during vulnerable stages.
3. What are bouquet ears and what causes them?
Multiple ears develop at the same node, often due to genetic mutations or excessive plant density.
4. How can bouquet ears be managed?
Use less prone hybrids, avoid dense planting, ensure adequate spacing, and manage nutrient supply.
5. What are nubbin ears and what leads to their formation?
Small, poorly filled ears caused by stress factors such as drought, poor pollination, or nutrient deficiencies.
6. How can nubbin ears be prevented?
Ensure adequate water supply and nutrients, select suitable hybrids, and avoid stress during pollination.
7. What are chaffy ears and what causes them?
Underdeveloped, shriveled kernels due to poor pollination, severe drought, or nutrient imbalances.
8. What are the methods to correct or prevent chaffy ears?
Ensure adequate pollination, avoid environmental stress, use proper irrigation, balanced fertilization, and select drought-tolerant hybrids.
9. Blunt ear syndrome, also known as “**beer can** ear” syndrome, is characterized by significantly shortened ears with normal kernel rows abruptly stopping.
10. Diplodia ear rot, caused by the fungus ***Stenocarpella*** *maydis*, infects corn ears through the silks or directly through wounds in the ear.
11. Green snap, or **brittle** snap, occurs when corn stalks break due to high wind speeds, often during rapid growth phases.

Abnormal Corn Ear Models Curriculum

12. Bouquet ears occur when multiple ears develop at the same **node**, often resulting from genetic mutations or excessive plant density.
13. Implement crop rotation with **non-host** crops and ensure proper field drainage to reduce humidity for managing Diplodia ear rot.
14. Selecting hybrids with better resistance to stalk **breakage** can help prevent green snap.
15. Proper irrigation, balanced fertilization, and selecting **drought-tolerant** hybrids can help prevent chaffy ears.

Lesson Two – Corn Cob Abnormalities Part 2

LEARN: Corn Cob Abnormalities Identification

30 minutes

Purpose:

Participants will learn about the corn cob abnormalities through a detailed presentation and hands-on examination of models. They will understand the causes of each abnormality and discuss methods to correct or prevent them.

Materials:

- Abnormal Corn Ear Models
- *Corn Cob Abnormalities Part 2* slide presentation
- *Who Did This?*
- *Who Did This?* – Answer Key

Facilitation Steps:

1. Distribute the *Who Did This?* worksheet to each participant.
2. Present the *Corn Cob Abnormalities Part 2* slide presentation, detailing each abnormality.
3. For each abnormality:
 - Show the corresponding corn cob model
 - Describe how the issue occurs
 - Discuss preventive measures and correction methods
4. Encourage participants to examine the models closely and take notes on their worksheets. Facilitate a group discussion in which participants share their observations and questions.

Name: _____ Class: _____

Who Did This?

Instructions: Use the clues below, along with the slide presentation and corn cob models, to identify the culprit to each mystery, then learn more about each abnormality through the “questions to consider.”

Scenario 1: You are in the field and notice that some corn ears have significantly shortened ears with normal kernel rows abruptly stopping. This is often associated with environmental stress during specific growth stages.

What abnormality is this?

What about this description helped you to identify the culprit?

Research the life cycle and identify the best way to stop the issue.

Scenario 2: Some corn ears are infected with a fungus, leading to brown and shrunken kernels, often covered with white mold.

What abnormality is this?

What about this description helped you to identify the culprit?

How can this issue be prevented or managed?

Scenario 3: You observe corn stalks broken due to high wind speeds, typically during rapid growth phases.

What abnormality is this?

What about this description helped you to identify the culprit?

How can this issue be prevented?

Scenario 4: Multiple ears develop at the same node, leading to poorly filled ears due to competition for nutrients and space.

What abnormality is this?

What about this description helped you to identify the culprit?

How can this issue be managed?

Scenario 5: Some ears are small and poorly filled, often resulting from drought, poor pollination, or nutrient deficiencies during critical growth stages.

What abnormality is this?

What about this description helped you to identify the culprit?

How can this issue be prevented?

Scenario 6: Kernels are underdeveloped and appear shriveled, often due to poor pollination, severe drought, or nutrient imbalances.

What abnormality is this?

What about this description helped you to identify the culprit?

How can this issue be corrected or prevented?

Who Did This? – Answer Key

Scenario 1: You are in the field and notice that some corn ears have significantly shortened ears with normal kernel rows abruptly stopping. This is often associated with environmental stress during specific growth stages.

What abnormality is this?

Blunt ear syndrome

What about this description helped you to identify the culprit?

Significantly shortened ears with normal kernel rows abruptly stopping during specific growth stages (V8 to V12).

Research the life cycle and identify the best way to stop the issue.

Avoid planting susceptible hybrids and manage environmental stress during the V8 to V12 growth stages.

Scenario 2: Some corn ears are infected with a fungus, leading to brown and shrunken kernels, often covered with white mold.

What abnormality is this?

Diplodia ear rot

What about this description helped you to identify the culprit?

Infected kernels appear brown and shrunken with white mold on the husks.

How can this issue be prevented or managed?

Implement crop rotation, ensure proper field drainage, select resistant hybrids, and apply fungicides timely.

Scenario 3: You observe corn stalks broken due to high wind speeds, typically during rapid growth phases.

What abnormality is this?

Green snap

What about this description helped you to identify the culprit?

Corn stalks break due to high wind speeds during rapid growth phases (V10 to VT stages).

How can this issue be prevented?

Select hybrids with better stalk strength, plant at recommended populations, and monitor weather forecasts.

Scenario 4: Multiple ears develop at the same node, leading to poorly filled ears due to competition for nutrients and space.

What abnormality is this?

Bouquet ears

What about this description helped you to identify the culprit?

Multiple ears at the same node resulting in poorly filled ears.

How can this issue be managed?

Use less prone hybrids, avoid dense planting, ensure adequate spacing, and manage nutrient supply.

Scenario 5: Some ears are small and poorly filled, often resulting from drought, poor pollination, or nutrient deficiencies during critical growth stages.

What abnormality is this?

Nubbin ears

What about this description helped you to identify the culprit?

Small, poorly filled ears caused by drought, poor pollination, or nutrient deficiencies.

How can this issue be prevented?

Ensure adequate water supply and nutrients, select suitable hybrids, and avoid stress during pollination.

Scenario 6: Kernels are underdeveloped and appear shriveled, often due to poor pollination, severe drought, or nutrient imbalances.

What abnormality is this?

Chaffy ears

What about this description helped you to identify the culprit?

Underdeveloped, shriveled kernels due to poor pollination, severe drought, or nutrient imbalances.

How can this issue be corrected or prevented?

Ensure adequate pollination, avoid environmental stress, use proper irrigation, balanced fertilization, and select drought-tolerant hybrids.

Lesson Two – Corn Cob Abnormalities Part 2

REVIEW: Assessment

5-10 minutes

Purpose:

Participants will assess their knowledge of corn cob abnormalities.

Materials:

- *Corn Cob Abnormalities Part 2* slide presentation
- *Corn Cob Abnormalities Quiz*
- *Corn Cob Abnormalities Quiz – Answer Key*

Facilitation Steps:

1. Review the main points from the lesson using the *Corn Cob Abnormalities Part 2* slide presentation.
2. Distribute the *Corn Cob Abnormalities Quiz* to each participant.
3. Allow 5-10 minutes for participants to complete the quiz.
4. Collect the quizzes or review the answers together using the *Corn Cob Abnormalities Quiz – Answer Key*.
5. Discuss any areas of difficulty and reinforce key concepts.

Name: _____ Class: _____

Corn Cob Abnormalities Quiz

1. What are the two main factors that can cause corn cob abnormalities?
2. Using the corn cob replicas, identify five of the six common corn cob abnormalities and describe each briefly.

Corn Cob Abnormality	Description
Blunt Ear Syndrome	
Diplodia Ear Rot	
Green Snap	
Bouquet Ears	
Nubbin Ears	
Chaffy Ears	

3. Explain the damage done to corn by three of the common corn cob abnormalities.

Corn Cob Abnormality	Damage Done
Blunt Ear Syndrome	
Diplodia Ear Rot	
Green Snap	

4. At which stage in the growth cycle does green snap typically occur?

Corn Cob Abnormalities Quiz – Answer Key

1. What are the two main factors that can cause corn cob abnormalities?

Environmental stress, genetic factors

2. Using the corn cob replicas, identify five of the six common corn cob abnormalities and describe each briefly.

Corn Cob Abnormality	Description
Blunt Ear Syndrome	Shortened ears with normal kernel rows abruptly stopping
Diplodia Ear Rot	Brown and shrunken kernels with white mold on husks
Green Snap	Corn stalks break due to high wind speeds during rapid growth phases
Bouquet Ears	Multiple ears develop at the same node
Nubbin Ears	Small, poorly filled ears due to stress factors
Chaffy Ears	Underdeveloped, shriveled kernels due to poor pollination

3. Explain the damage done to corn by three of the common corn cob abnormalities.

Corn Cob Abnormality	Damage Done
Blunt Ear Syndrome	Shortened ears, incomplete kernel rows
Diplodia Ear Rot	Infected kernels appear brown, shrunken, and moldy
Green Snap	Stalk breakage leading to reduced yield

4. At which stage in the growth cycle does green snap typically occur?

Between the V10 and VT stages

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