

# 4-H Dairy

Henry County  
B  
Grade 12

Name: \_\_\_\_\_ 4-H Club \_\_\_\_\_

Leader Signature: \_\_\_\_\_

**Reproduction Critical Thinking Problem: Use the information below to complete the Punnett Square on polled traits using PP or Pp.**

Given information: The cow is heterozygous with the polled trait.

The bull is heterozygous with the polled trait.

What percentage of the offspring will be polled? \_\_\_\_\_

What will be the genotype of the polled offspring? \_\_\_\_\_

What percentage of the offspring will have horns? \_\_\_\_\_

What will be the genotype of the horned offspring? \_\_\_\_\_


**Nutrition, Reproduction & Manure Management - Fill in the blanks: Please write the correct answer on the line provided to correctly complete the statement.**

1. Differentiate genotype from phenotype. \_\_\_\_\_

2. What are the 4 compartments of the cows' stomach and what happens in each compartment?

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3. What does the Clean Air Act of 1990 do? \_\_\_\_\_

4. A lactating dairy cow excretes how much feces and urine per day? \_\_\_\_\_

**Nutrition, Reproduction and Manure Management Cross Word Puzzle: Write the correct answer in the spaces provided for each phrase.**

**Across**

1. manure and water mixture with less than 10% of solids

3. bacterial infection

which causes  
abortion

4. feeds with forages and  
concentrates

5. land areas that catch  
rain or snow and  
drain to specific water  
sources

8. animals confined for  
45 days or more  
within a twelve month  
period

11. geographic area  
responsible for  
emitting 75% air  
pollution reaching a  
body of water

12. enforces the clean  
water act

13. handle complaints  
against agricultural  
operations impacting  
water quality

14. relating the size to  
the land base to  
protect the water  
supply

15. live in the rumen

**Down**

2. scraping of manure  
and stockpiling for  
compost

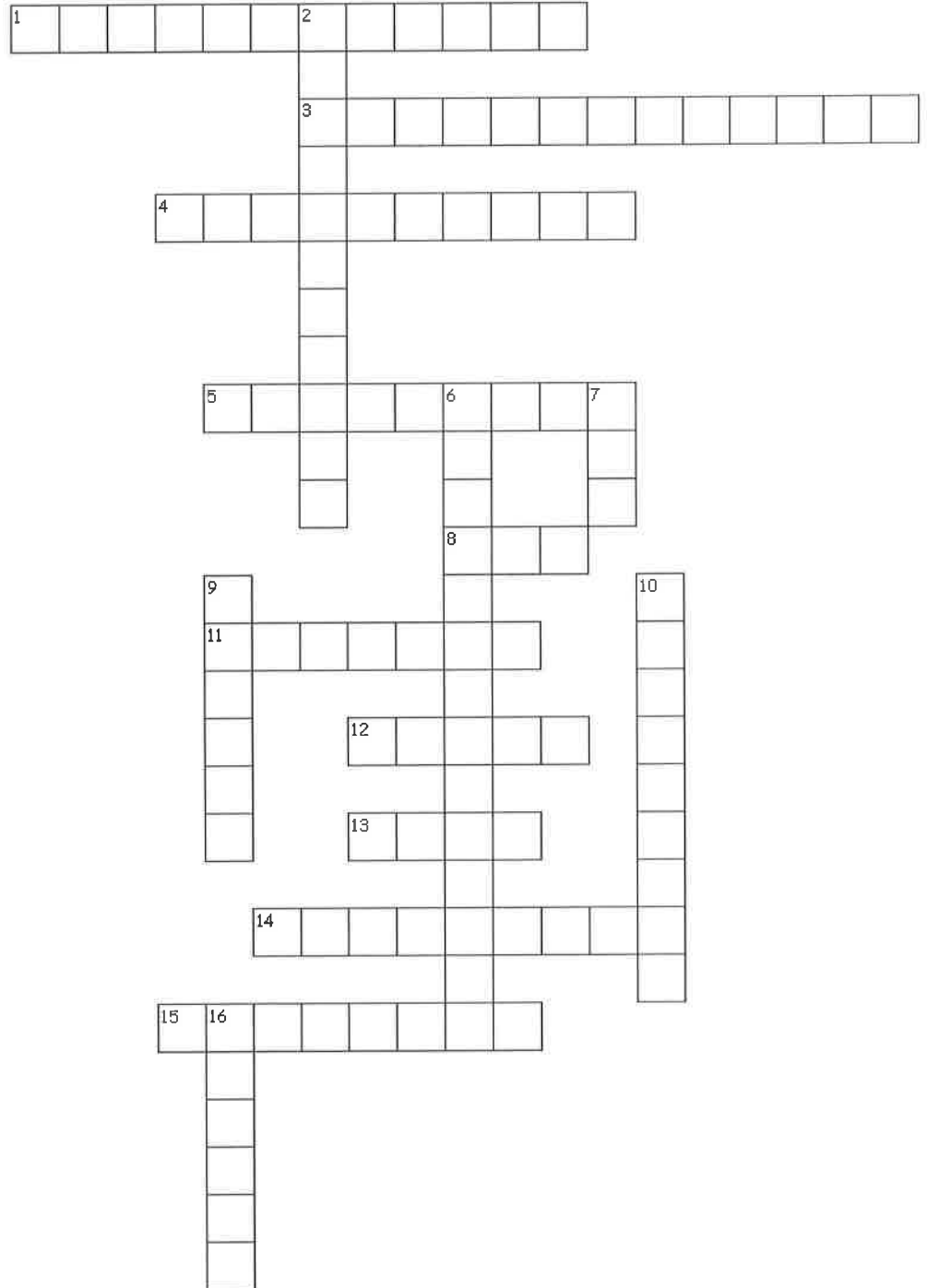
6. seepage from silage  
storage areas

7. handles fish kill and  
stream litter

9. daily food amount  
nutritionally balanced

10. synthesized by  
rumen  
microorganisms and water-soluble

16. prevent surface runoff with liquid manure



Answers to these questions can be found in the "Dairy Resource Handbook" 4-H 127R