

Iowa FFA Agricultural Mechanics Career Development Event - 2006

State of Iowa
DEPARTMENT OF EDUCATION
Career Education Division
Grimes State Office Building
Des Moines, IA 50319

CONTESTANT NAME: ANSWER KEY

CONTESTANT SCHOOL _____

ENVIRONMENTAL/NATURAL RESOURCES SYSTEM
MANURE MANAGEMENT

(15 minutes)

You, as a livestock producer, are going to build a new 1,100-head swine finishing building. Assume that the average animal weight will be 150 pounds. The building will be totally slatted with wet/dry feeders and curtains on both sides. Refer to Table 2 of "Managing Manure Nutrients for Crop Production" (Pm-1811) to answer the following questions:

1. How much manure is produced per pig each day? __0.9__ gal/day
2. What is the concentration of nitrogen (N)? __58__ lb/1000 gallons
3. What is the concentration of phosphorus (P₂O₅)? __40__ lb/1000 gallons
4. What is the concentration of potassium (K₂O)? __45__ lb/1000 gallons
5. What volume of manure is produced by the 1,100 head in a year? __361,350__ gallons

Calculate the pit size needed to provide storage for one year of manure production. Assume the pit will be 8 feet deep. (Note: 1 cubic foot = 7.48 gallons)

6. Pit size in gallons __361,350__ gallons
7. Pit size in cubic feet __48,309__ cubic feet
8. If the pit is 40 feet wide, how long should it be? __151__ feet

EVALUATION SCORE SHEET

ITEM	POINTS	
	<u>POSSIBLE</u>	<u>EARNED</u>
#1	3	_____
#2	3	_____
#3	3	_____
#4	3	_____
#5	3	_____
#6	3	_____
#7	3	_____
#8	4	_____
TOTAL.....	25	