

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 _____

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? _____ gal/day
2. What is the concentration of nitrogen (N)? _____ lb/1000 gallons
3. What is the concentration of phosphorus (P₂O₅)? _____ lb/1000 gallons
4. What is the concentration of potassium (K₂O)? _____ lb/1000 gallons
5. What volume of manure is produced by the 1,100 head in a year? _____ 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 _____ gallons
7. Pit size in cubic feet _____ cubic feet
8. If the pit is 40 feet wide, how long should it be? _____ 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