

ATTACHMENT 7

Section B: Nutrient Utilization Plan

B. NUTRIENT UTILIZATION PLAN

The Following is in this section:

1. Location
2. Record Keeping
3. Soil Sampling
4. Manure Sampling
5. Nutrient Budget for Land Application
6. Timing, Rate, and Frequency of Liquid and Solid Manure Applications
7. Land Application of Liquid Manure
8. Amounts of Nitrogen Applied
9. Solid Accumulation in the Retention Storage Pond
10. Check Valves/Safety Switches
11. Effluent/Solids Easement Agreement
12. Prevention of Destruction of Endangered or Threatened Species
13. Setback Requirements
14. Typical Crops Grown and Crop Yields for the Land Application Areas
15. Nutrient Utilization Plan Amendments

- a. Liquid manure will typically be applied at agronomic rates for nitrogen, however, the phosphorus application will follow the Arkansas Nutrient Management Planner phosphorous index risk assessment to ensure that the phosphorus levels are not becoming a risk to surface water pollution.
- b. Calculations for quantity of liquid manure that can be applied to agronomic rates to crop production land are performed by the staff soil scientist or or land application formulas prepared by University of Arkansas Extension.
- c. $\text{Max. application (lbs/ac)/Manure N Content (lbs/ac-in)} = \text{Max. manure application (ac-in)}$.
- d. $\text{Acres for application} \times \text{Max. manure application (ac-in)} \times 27154 = \text{Max. pumping volume (gallons)}$.
- e. The spreadsheet log for land application can be utilized for land application calculations.

9. Solid Accumulation in the Retention Storage Pond.

- a. The design and operation of the waste storage pond at the facility provides for desludging during each waste removal.
- b. If or when pond desludging becomes necessary, Jason Henson- will land apply the solids at agronomic rates and in accordance with local, state, and federal regulations.

- c. Solids will be land farmed utilizing available technology at the time of application.
10. **Check Valves/Safety Switches**
 - With the utilization of subsoil land application equipment, the use of check valves/safety switches are not necessary.
11. **Effluent/Solids Easement Agreement.**

Easements are found in Section G
12. **Prevention of Destruction of Endangered or Threatened Species.**
 - a. Animal manure handling, treatment and management plans are designed with the intention of reducing any harm or destruction of endangered or threatened species or contribute to the taking of any federally endangered or threatened species of plant, fish, or wildlife; nor interfere with or cause harm to migratory birds.
 - b. C&H Hog Farms will notify the appropriate fish and wildlife agency in the event of any significant fish, wildlife, or migratory bird/endangered species kill or die-off on or near a retention pond or in the field where waste has been applied and which could reasonably have resulted from waste management at the facility.
13. **Setback Requirements.**
 - a. Manure shall not be applied any closer than a 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads or other conduits to surface waters.
 - b. Incorporate surface applications of solid forms of manure or some commercial fertilizer nitrogen formulations (i.e. Urea) into the soil within 24 hours of application.
 - c. When applying liquid forms of manure with irrigation equipment select application conditions when there is high humidity, little/no wind blowing, a forth coming rainfall event, and or other conditions that will minimize volatilization losses into the atmosphere. The basis for applying manure under these conditions shall be documented in the nutrient management plans.
14. **Typical Crops Grown and Crop Yields for the Land Application Areas:**
 - a. Pasture – 6.5 tons/acre
 - b. Hay - 6.5 tons/acres