



**NORTHWEST  
BIOSOLIDS  
MANAGEMENT  
ASSOCIATION**

**NBMA Biosolids Quality Committee  
Survey Analysis  
September 2009**

General Information

15 Responses

Annual production of biosolids ranges from 150 to 18,000 dry ton per year

Class A products: = 3

Class B products: = 11

No biosolids product: = 1 (state agency)

1. Current means of biosolids production
  - a. Anaerobic digestion = 8
  - b. Aerobic digestion =2
  - c. Lagoons = 2
  - d. Composting (Aerated static piles) =1
  - e. Dryer =1
  - f. Other features: Dewatering: Belt Presses, Centrifuges, Drying Beds, Dryer, Composting
  
2. Ways to Improve Product:
  - a. Consistency (availability of bulking agents)
  - b. Better Volatile Reductions
  - c. Better Digester Decanting
  - d. Dust Control,
  - e. Improved Dewatering ability
  - f. Better Screening,
  - g. Better Utilization of Digester Gas
  
3. Odor Concerns
  - a. None from Class A facilities; Compost facilities report no odor problems.
  - b. Class B facilities addressed concerns at the plant, and at application sites (incorporation etc).
  
4. Customer Usage Factors
  1. Manageability/ease of application
  2. Odors
  3. Screening
  4. Product Consistency (quality)
  5. Safety
  6. Cost
  7. User Friendliness
  
5. Marketing studies (of varying form and fashion) were completed by 4 respondents

6. Most Critical Biosolids Issue
  - a. Odor
  - b. Wet Weather Application/Storage
  - c. Public Perception
  - d. Dewatering
  - e. Maintaining Consistent Quality
  - f. Weeds
  - g. Proximity of End-Use Sites
  - h. Pharmaceuticals
  - i. Outside Interest Impacts on Re-use
  - j. Technologies and Added Cost Impacts,
  - k. Less than Comprehensive Use of Biosolids Products
  - l. Costs
  
7. We could do better at producing, utilizing or managing biosolids if
  - a. We could afford to go to Class A
  - b. We could be consistent in sampling
  - c. We could reduce odors
  - d. We could improve cake loading facilities
  - e. We could improve storage
  - f. We could have better movement of site specific equipment
  - g. We could have better delivery coordination
  - h. We had better physical separation
  - i. We had digesters
  - j. We had a trade name and developed a market for our product
  - k. We could find closer land application sites; need more farmer/partners nearby.
  - l. We could use digester gas to produce a Class A product
  - m. We had more markets in our area for compost, supply is exceeding demand.
  - n. We updated equipment regularly and had a more consistent CIP program.
  
8. Trade-offs in Costs of Quality versus Costs of Efficiency of Production:
  - a. Higher end-use requirements; higher costs
  - b. Costs
  - c. No trade off
  - d. Costs will be higher to make acceptable product
  - e. Winter storage would provide needed quantity at the time application needed
  - f. Higher quality and reliability implies higher costs
  - g. Broader perspective needed to assess range of trade offs
  - h. The costs of producing a Class A product
  - i. Higher labor/production costs required to ensure customer satisfaction in product quality.

9. What's Most Important: Biosolids Production or Bio-energy Production?
  - a. Both = 2
  - b. Neither = 2
  - c. Bio-energy = 2
  - d. Biosolids = 6
  
10. Consideration of Weight versus Hauling Costs:
  - a. Winter storage needs near farmer's fields/application sites
  - b. Balance/efficiency
  - c. Dewatering efficiency
  - d. Polymer Costs
  - e. Future regulations
  - f. Application sites as close as possible
  - g. Need a drier (20%) cake to haul
  - h. Upgrade dewatering to produce a drier cake
  - i. Storage capacity at the compost facility limited, need drier cake
  
11. Facility Concerns on Land Application and/or Contracted Land Applier:
  - a. City staff applies on City land
  - b. Regular checks on applier and field applications
  - c. Ensure site monitoring and confirmation of meeting N requirements
  - d. Active and direct communication with farmers and appliers
  - e. Annual assessment with farmers and appliers to improve customer service and satisfaction
  - f. Good neighbor policy
  - g. Biosolids management and spill plans in Tech-Spec/Contract
  - h. Brochures for wholesalers to pass on to public/customers
  - i. Don't land apply
  
12. Future Concerns in your biosolids program?
  - a. Personal Care Products = 4
  - b. Endocrine Disruptors = 3
  - c. Pharmaceuticals = 6
  - d. All 3 = 3 respondents
  - e. Regulations = 4

13. What Should the BQC Track for the Future?

- a. Personal Care Products, Endocrine Disruptors, Pharmaceuticals
- b. What Europe has done
- c. Negative news articles
- d. Xenobiotics
- e. PAHs
- f. Updates on emerging issues
- g. Database of POTW solids processes, production
- h. Per unit energy consumption of processes/end uses
- i. Emerging treatment technologies such as stimulated/biological treatment for better digester efficiency, VSR etc.
- j. What others are doing to reduce costs.
- k. Keep on top of persistent organics.

14. What is the Most Useful Way for BQC to Communicate with Members?

- a. Biosolids E-Bulletin Articles = 8
- b. Workshops = 5
- c. Tours = 0
- d. Fact Sheets = 4
- e. Reports = 7
- f. All of the above = 1
- g. Other = 1 (web sites), electronic tours