

SCC Approves Proposing Rulemaking For Nutrient Management

(Continued from Page A30)

§83.212. Identification of CAOs.

(a) A CAO is an agricultural operation where the animal density exceeds two AEU's per acre on an annualized basis. In order to determine if a particular agricultural operation is a CAO which is required to develop a nutrient management plan, the number of AEU's per acre on the agricultural operation shall be calculated using the procedure set forth below.

(1) The number of AEU's on the agricultural operation shall be calculated by using the following steps:

(i) Multiply the average number of animals on the agricultural operation on a typical production day by the standard animal weight contained in Table A to equal a total weight. Non-standard weights may be used in place of those in Table A, provided there is sufficient documentation to support the use of the non-standard weights.

(ii) Multiply the total weight reached in (i) by the number of production days per year, then divide by 365 days.

(iii) Divide the number reached in (ii) by 1,000 to equal the number of AEU's for each type of animal.

(iv) Total the number of AEU's for each type of animal to equal the total number of AEU's on the agricultural operation.

TABLE A

TYPE OF ANIMAL	STANDARD WEIGHT IN POUNDS DURING PRODUCTION (RANGE)
SWINE	
Nursery Pig	30 (15-45)
Finishing Pig	145 (45-245)
Gestating Sow	400
Sow & Litter	470
Boar	450
BEEF	
Calf - 0-8 Mo	300 (100-500)
Finishing - 8-24 Mo	850 (500-1200)
Cow	1150
VEAL	
Calf - 0-16 Wk	250 (100-400)
POULTRY	
Layer - 18-65 Wk	3.25 (2.75 - 3.76)
Layer - 18-105 Wk	3.48 Weighted Avg.
Layer Brown Egg 20-65 Wk.	4.3 (3.6-5)
Layer Brown Egg 20-105 Wk.	4.63 Weighted Avg
Pullets - 0-18 Wk	1.42 (0.08 - 2.75)
Broiler, Lg. - 0-57 Days	3.0 (0.09 - 5.9)
Broiler, Med. 0-43 Days	2.3 (0.09 - 4.5)
Roaster Male 0-8 Wk	3.54 (0.09-7)
Female - 0-10 Wk	
Turkey, Tom - 0-18 Wk	14.1 (0.12 - 28)
Turkey, Hen - 0-14 Wk	7.1 (0.12 - 14)
Duck - 0-43 Days	3.56 (0.11-7)
Guinea 0-14 to 24 Wk.	1.9 (0.06 - 3.75)
Pheasant 0-13 to 43 Wk	1.53 (0.05 - 3)
Chukar 0-13 to 43 Wk	0.52 (0.04 - 1)
Quail 0-13 to 43 Wk	0.26 (0.02 - 0.5)
DAIRY	
Holstein/Brown Swiss	
Cow	1300
Heifer - 1-2 Yr	900 (650-1150)
Calf - 0-1 Yr	375 (100-650)
Bull	1500
Ayrshire/Guernsey	
Cow	1100
Heifer - 1-2 Yr.	800 (575-1025)
Calf - 0-1 Yr	338 (100-575)
Bull	1250
Jersey	
Cow	900
Heifer - 1-2 Yr	600 (400-800)
Calf - 0-1 Yr	225 (50-400)
Bull	1000
SHEEP	
Lamb - 0-26 Wk	50 (10-90)
Ewe	150
Ram	185
GOAT	
Kid - 0-10 Mo	45 (5-85)
Doer	125
Buck	170
HORSE	
Foal - 0-6 Mo	325 (125-625)
Yearling	750 (625-875)
Non-Draft Breeds, Mature	1000
Draft Breeds, Mature	1700

(2) The number of AEU's per acre shall be calculated by dividing the total number of AEU's by the total number of acres of land suitable for the application of manure to equal the number of AEU's per acre

(i) Land suitable, for the sole purpose of determining whether an agricultural operation is a CAO, is land in the management control of the operator that meets all of the following criteria

(A) The land is cropland, hayland, or pastureland that is an integral part of the agricultural operation, as demonstrated by title, rental agreements, crop records, or form provided by the Commission

(B) The land is, or will be used, for the application of manure generated by the agricultural operation

(C) The land is located within 10 miles of the point of manure generation

(ii) The term "land suitable" shall not include farmstead areas or forest land

(b) Example AEU per acre calculation: An operation has an average number of 10,000 medium broilers on a typical production day with an average weight during production of 2.3 pounds. During the year there are six flocks with a production period of 43 days per flock. This amounts to 258 production days per year. During the remaining down time no manure is produced. The farmstead is two acres. There are three acres of woodlands and seven acres of cropland. The following is the AEU per acre calculation for this operation:

STEP 1 10,000 med broilers x 2.3 lb avg wt = 23,000 lb total weight

STEP 2 23,000 lb total weight x 258 production days per year divided by 365 days = 16,257 lbs

STEP 3 16,257 lbs divided by 1000 lbs per AEU = 16.25 AEU's

STEP 4 Total number of AEU's on the agricultural operation is 16.25

STEP 5 16.25 AEU's divided by 7 acres of land suitable = 2.3 AEU's per acre

CONTENT REQUIREMENTS FOR ALL PLANS

§83.221. Scope of Plan.

Nutrient management plans developed under the Act shall comply with the requirements of the Act and this subchapter

§83.222. Content of Plans.

(a) Nutrient management plans developed for CAOs shall, at a minimum, comply with §§83.223 through 83.234 and 83.251 through 83.281

(b) A nutrient management plan voluntarily developed for an agricultural operation pursuant to the Act shall, at a minimum, comply with §§83.223 through 83.271

(c) A plan shall be organized to correspond to the appropriate sections described in subsections (a) and (b). A plan shall have a separate section for each of these sections. The operator shall be consulted during the preparation of all sections of the plan.

§83.223. Identification of Agricultural Operations and Acreage.

(a) The plan shall include an agricultural operation identification sheet which shall include the following information:

(1) Operator name, address and telephone number

(2) County(ies) of land included in the nutrient management plan.

(3) Watershed(s) of land included in the plan. The existence of any special protection waters, as identified in the Department's regulations at 25 Pa. Code §83.9 (relating to designated water uses and water quality criteria), shall also be noted.

(4) Total acreage of the agricultural operation included in the plan.

(5) Total acreage of land on which nutrients shall be applied. The total acreage shall be separated into acres of owned land and acres of rented land.

(6) Number of AEU's per acre on the agricultural operation.

(7) Name of the nutrient management specialist that prepared the plan, date of plan preparation, and date of revisions, if any.

(b) The plan shall contain maps or aerial photographs of sufficient scale which clearly identify:

(1) The location and boundaries of the agricultural operation.

(2) Individual field boundaries under the plan.

(3) Field number and acreage of each field.

(4) The identification of all soil types and slopes on the agricultural operation. An NRCS soil survey map shall be sufficient to satisfy this requirement.

(5) The location of areas where manure application may be limited based on §83.234(5) (relating to nutrient application procedures).

§83.224. Summary of Nutrient Management Plan.

The plan shall contain a summary that identifies: nutrient application rates by field or crop group and procedures and provisions for the utilization or proper disposal of excess manure. Manure management and storage practices, storm water runoff control practices or the existence of a conservation plan, and other appropriate BMPs necessary to protect the quality of surface water and ground water may be referenced in the summary but shall be covered by the appropriate section of the plan.

NUTRIENT APPLICATION

§83.231. Determination of Available Nutrients.

(a) The plan shall include a determination of the amounts, types and sources of nutrients available to be applied to the soil of the agricultural operation. This nutrient determination shall include: manure, sludges, compost, incorporated cover crops, commercial fertilizers, and other nutrients that will be applied to the agricultural operation.

(b) The amount and nutrient content of manure to be applied on the agricultural operation shall be determined as follows:

(1) The plan shall contain a table which indicates the type and number of animals on the agricultural operation.

(2) The amount of manure produced and when it is available for spreading on the agricultural operation shall be calculated based on the average number of AEU's on the agricultural operation or actual production data. Bedding, wash water, rain and runoff shall be included, when mixed with manure, in determining the total volume of manure to be applied.

(3) The nutrient content of the manure shall be determined by using accepted manure sampling and chemical analysis methods. When sampling for analysis is not feasible, properly adjusted standard book values such as those contained in the *Manure Management Manual* or the *Pennsylvania Agronomy Guide* shall be used until sampling can be done.

(c) Nitrogen available from manure shall be based on the appropriate availability factors such as those contained in the *Manure Management Manual* or *Pennsylvania Agronomy Guide*.

(d) The capacity of manure storage facilities, if present, and the timing and rates of manure and waste generation will be used to determine when the manure will be available for spreading.

(e) The residual nitrogen from legume crops and applications of manure shall be credited when determining nutrient application rates.

(f) Soil tests shall be conducted for phosphorus (P), potassium (K), soil pH, and lime requirement. Soil testing is recommended every three years, or when crops change during the rotation.

(4) The designer of the manure storage facility required by the nutrient management plan shall address the following:

(i) Verification of the minimum manure storage period and minimum manure storage volume documented in the current nutrient management plan.

(ii) Determination of the type and dimensions of facilities considering the environmental and space limitations of the site, as well as the operator's preference.

(iii) An on-site investigation to evaluate the site suitability for a facility in accordance with the standards in the *Pennsylvania Technical Guide*.

(b) The repair of an existing manure storage facility that is part of a nutrient management plan developed under the Act shall comply with all applicable standards in the *Pennsylvania Technical Guide*. The location standards do not apply to such facility repairs.

(c) The site specific design for the construction, expansion, or major repair of a liquid or semi-solid manure storage facility covered under the Act shall be done or approved by an engineer registered in Pennsylvania. The engineer shall certify that the design complies with the applicable design standards described in the *Pennsylvania Technical Guide*, unless an alternate design has been developed and approved by the Commission. The responsible engineer and construction contractor shall certify to the Commission or delegated conservation district that construction of the manure storage facility was completed according to the design and construction standards.

(d) In the case of a leak or spill from any manure storage facility covered under the Act, the operator shall be responsible for implementation of the site specific contingency plan developed for the facility. Any leak or spill event which would result in pollution or create a danger of pollution to surface water or ground water shall be immediately reported by telephone to the Department, and if reasonably possible to do so, reported to known downstream users. It is recommended that contingency plans be reviewed with the local emergency management team that would assist during a major leak or spill event.

§83.232. Determination of Nutrients Needed for Crop Production.

(a) The plan shall contain a table which includes the acreage and realistic expected crop yields for each crop group.

(b) Realistic expected crop yields shall be based on an average of the three highest yielding years for a given field or crop group. Expected crop yields higher than historically achieved may be used if the operator provides sufficient justification for the use of the higher yields.

(c) If the information in paragraph (b) is unavailable, soil productivity information specific to the soil series in the field, or the average yield from nearby fields with similar soil type shall be used to determine crop nutrient needs.

(d) The plan shall include a determination of the amount of nutrients necessary for realistic expected crop yields.

(e) The *Pennsylvania Agronomy Guide* or *Manure Management Manual* may be used to assist in determining the amount of nutrients necessary for achieving realistic expected crop yields.

§83.233. Determination of Nutrient Application Rates.

(a) Nitrogen shall be applied only in the amounts necessary to achieve realistic expected crop yields or at a rate not exceeding what the crop will utilize for an individual crop year.

(b) The actual planned manure application rate may be any rate equal to or less than the balanced manure application rate based on nitrogen. The balanced manure application rate based on nitrogen shall be determined by first subtracting the amount of available residual nitrogen and any other applied nitrogen, such as nitrogen applied in the starter fertilizer, from the amount of nitrogen necessary for realistic expected yields and then dividing this by the available nitrogen content of the manure as determined by standard methods.

(c) The plan shall include calculations demonstrating the difference between the recommended nitrogen necessary for realistic expected crop yields and any nitrogen added including, but not limited to, manure, sludge, starter fertilizer and other fertilizer. A deficit may be made up with supplemental nitrogen applications. A recommended nitrogen availability test may also be used to determine supplemental nitrogen needs.

§83.234. Nutrient Application Procedures.

The plan shall include nutrient application procedures that meet the following criteria:

(1) Nutrients shall be uniformly applied to fields during times and conditions that will hold the nutrients in place for crop growth, and protect surface water and ground water in accordance with the approved manure management practices as described in the *Manure Management Manual*.

(2) Intended target spreading periods for the application of manure shall be included in the plan.

(3) Application rates and procedures shall be consistent with the capabilities, including capacity and calibration range of available application equipment.

(4) Application rates for liquid manure irrigation shall be based on the lesser of either the nutrient plan application rates determined in accordance with §83.233(a) and (b) (relating to determination of nutrient application rates), or the rates determined to be within infiltration capabilities of the soil such as those contained in the NRCS *Pennsylvania Irrigation Guide* or the *Mid West Plan Service, Livestock Waste Facilities Handbook*.

(5) Manure may not be applied in the following situations:

(i) Within 100 feet of an open sinkhole where surface water flow is toward the sinkhole

(ii) Within 100 feet of private drinking water sources such as wells and springs, where surface water flow is toward the water source

(iii) Within 100 feet of an active public drinking water source, unless other state or federal laws or regulations specify a greater isolation distance

(iv) Within concentrated water flow areas, such as ditches, waterways, gullies, and swales, during times when soil is frozen, snow covered, or saturated

(v) Within 200 feet of streams, lakes, ponds, or other types of surface water conveyance where the slope is toward the channel and greater than 8% as measured within the 200 feet, during times when soil is frozen, snow covered, or saturated.

(vi) Within 100 feet of streams, lakes, ponds or other types of surface water conveyance, when soil is frozen, snow covered, or saturated.

(6) If winter spreading of manure is anticipated, the application procedures for the winter spreading of manure shall be described in the plan. The procedures described in the plan shall be consistent with those contained in the *Manure Management Manual*. If procedures other than those in the *Manure Management Manual* shall be used, approval must be obtained from the Department or delegated conservation district.

ALTERNATIVE USES FOR EXCESS MANURE

§83.241. Alternative Manure Utilization Plans

For agricultural operations other than CAOs, the plan shall contain a description of the following:

(1) The estimated amount of the manure to be utilized.

(2) The intended season(s) for the utilization.

(3) The alternative manure utilization method such as:

(i) Land application by known importers.

(ii) Transfer through a manure broker.

(iii) Use on the agricultural operation in a manner other than land application

(iv) Marketing through an open advertising system.

MANURE MANAGEMENT

§83.251. Manure Management.

(a) In the preparation of a plan, the nutrient management specialist shall conduct a review of the existence of or potential for water contamination sources due to the inadequacy of existing manure handling, collection, storage and spreading practices. These sources include, but are not limited to, the following:

(Turn to Page A34)