



Fertilizer Workshop Press Release from STAC session held on May 1, 2007

Fertilizer for Sale

Using Fertilizer Sales Information in the Chesapeake Bay Model

In 2002, sales of agricultural products in Chesapeake Bay states had climbed to \$8 billion. With that kind of money represented by the more than 87,000 farm operations in the Bay watershed, it's not surprising that farmers are keenly interested in doing everything possible to keep their farms productive and their costs down.

In this day and age, farm crop productivity generally relies on the use of fertilizer nutrients. And, with 22 percent of the watershed land use engaged in agriculture, that can add up to a lot of nitrogen and phosphorous demand.

These fertilizer nutrients are essential for growing crops, but residual nutrients can migrate to surface and ground waters that may impair the Chesapeake Bay and its tributaries.

Improving the collection of agricultural fertilizer sales data has proved critical for the Chesapeake Bay Program's Watershed Model. This model simulates the amount of nutrients and sediments that will enter the Bay based on numerous variables.

A model, however, is only as good as the data that feed it. Knowing how much fertilizer is being applied to the land and where the farmers and landowners are applying fertilizers remains essential information for running the model.

To improve the collection of fertilizer sales data, the Chesapeake Bay Program's Scientific and Technical Advisory Committee and its Agricultural Nutrient Reduction Workgroup held a workshop in early May. Both academics and those in the business of fertilizer sales attended the gathering to investigate opportunities to collect fertilizer sales information more precisely.

During the morning, the group discussed the current means of accounting for fertilizer sales and the use of that information in the Bay model. At present, each state has its own fertilizer law and reporting requirements. States utilize the Universal Fertilizer Tonnage Reporting System (UFTRS) to compile sales reports — somewhat problematic due to the lack of consistency of reporting by fertilizer dealers from state to state.

One major problem is tracking where the fertilizer nutrients are used. Although each registrant must report all fertilizer sales to distributors or dealers, often the registrant's point of distribution shows up as the place where the fertilizer is reportedly sold when, in fact, a farmer or homeowner may use the product in another county or even another state.

Additionally, the total amount of fertilizer in tons does not reveal actual fertilizer use because the blends (the relative quantities of each nutrient in the mix) vary. Total tons of nutrients, as opposed to tons of fertilizer, may prove more valuable and accurate.

The participants discussed these persistent problems and proposed ways to make the data more precise with greater specificity in location. For the model to offer useful management information, it's important to get these numbers right. Most important is determining how the relative rates of fertilizer application have changed over the time period that the model covers.

While the early part of the meeting focused on assessing the current fertilizer sales situation, later day discussions focused on possible innovations for improving fertilizer data accuracy. To do this, participants divided possible solutions into two strata — the state/county level and the farm/field/consumer level.

At the state and county scale, several ideas emerged: reporting sales by zip code of the user; cleansing data to ensure that they make sense; legislating changes in regulations and policy in all Bay states; and gathering more distribution data from registrants (those distributing the fertilizer). In addition, improving agricultural versus non-agricultural sales information should help pinpoint suburban and urban fertilizer use.

At the farm/field/consumer level, suggestions included a baywide system of farm surveys along with a compilation of fertilizer use plans and a means to ensure that the farmer becomes responsible for reporting where fertilizer is applied. A short questionnaire at the point of sale may help in obtaining such fertilizer use information.

New or improved technology — remote sensing imagery, GIS data management, and enhanced models — may provide the means to gather more precise application data options for the future.

As usual, it all comes down to money: What precision can you afford to implement with the funds that you have? With the aim of a simple, user-friendly, and inexpensive reporting system used baywide, this workshop was a crucial step in providing more accurate fertilizer data to the watershed model.

For additional information, please contact:

Elizabeth Van Dolah, STAC

443-482-2275

vandolahe@si.edu