

Aerial spraying

(Continued from Page A1)

become the focus of public concern, such as the Fayette County incident.

But rather than having an enraged urban protest group deciding on whether or not herbicide spraying is safe, Cole said "rural people and farmers should have the right to decide where management of right-of-way goes."

Cole urged farm organizations, like Pennsylvania Farmers' Association, Grange, and Farmers' Union, to bring this problem before its membership. He asked farmers to be "articulate" in their defense of pesticide use. He warned that using chemicals in agriculture and elsewhere is an "emotional issue, next to nuclear radiation as an issue in the public's minds."

The Pennsylvania Department of Agriculture's Gerard J. Florentine, pest control official, stressed that his job in regulating the sales, distribution, and use of pesticides could be boiled down to the following philosophy — making sure all pesticides are "used in a manner consistent with their label." Interpreting this law, however, can be hazy, he admitted, due to the uniqueness of each situation — the type of terrain, the type of weed being controlled.

Other representatives of DOW Chemical, Union Carbide, and Noxious Vegetation Control, Inc. reported on the safety of chemical herbicides used in spraying utility rights-of-way and the safe manner in which they are applied, with little drift.

Walter F. Grobert, area manager of NOVCO, commented that in the 18 years he has been

involved in herbicide spraying, he has never had a controversy like West Penn Power had last year.

When asked if the herbicide his company uses in spraying utility lines would affect agricultural crops, Grobert said picloram is a broadleaf weed killer and therefore would harm potatoes, tomatoes, alfalfa, tobacco and grapes. However, he said aerial applicators "stay away from these areas."

Participating in the informational program were representatives of the State Grange and PFA. Last week the State Grange voted to petition PDA to reactivate its Pesticide Advisory Board to develop and enforce standards for aerial spraying of herbicides for utility rights-of-way, a result of their involvement with the citizens and utility representatives in Fayette County.

"Careless aerial application of herbicides can result in contamination of crop and pasturelands, animal and human water sources, and marketable crops and ornamental plants both within and outside utility rights-of-way," was the policy statement adopted by the Grange.

State Grange Master Charles Wismer said, "It is urgent that we develop regulations dealing with careless use of herbicides to prevent a public outcry which could result in restriction of private and agricultural use of herbicides."

The Grange policy also stated that landowners should be allowed to elect to clear their own land with reimbursement from utilities at a rate equal to the cost of aerial spraying that land; the property owner would exempt the utility from liability.

Fertilizers pose less peril to ozone layer

WASHINGTON, D.C. — Earth's ozone layer, which screens out certain sun rays causing skin cancer, is in far less danger from farm fertilizers than had been believed, scientists at the U.S. Department of Agriculture announced.

For years, some scientists had estimated that 30 percent of the nitrogen fertilizers farmers put on crops escape into the air as nitrous oxide and damage the ozone layer about 20 miles above the surface. In the stratosphere, nitrous oxide breaks down to nitric acid which can react with ozone.

Now, five years of research show that less than two percent of nitrogen fertilizers applied to crops escapes from the fields as nitrous oxide, said research chemist Arvin R. Mosier and soil scientist Gordon L. Hutchinson of USDA's Agricultural Research Service.

They said the earlier high estimates were based on inadequate data.

These new findings come as good news because of fears that the increased use of nitrogen fertilizers during the past few decades and projected increases in the future would pose a serious threat to the ozone layer.

This layer filters out much of the sun's harmful ultraviolet radiation which, in excess, can increase the incidence of skin cancer.

Mosier and Hutchinson found that nitrous oxide emissions varied depending on such factors as kind of fertilizer, soil type, temperature and amount of water present. These factors interact to produce varying amounts of nitrous oxide, but emissions the scientists measured were always between 0.4

and 1.5 percent of the nitrogen fertilizer applied.

At Fort Collins, Colo., Mosier and Hutchinson measured emissions from corn, barley, alfalfa and sugarbeet fields after they had applied 50, 100 or 200 pounds of nitrogen fertilizer per acre.

For comparison, the researchers measured the amount of nitrous oxide coming off virgin, native shortgrass rangelands.

"Our research showed that croplands produce more nitrous oxide than a similar area of native rangeland; but since only one-tenth of the Earth's land surface is cultivated, the total contribution from uncultivated lands probably that from croplands," said Hutchinson.

"Given the fact that native rangelands probably have contributed the same amount of nitrous oxide for many millions of years, we probably are justified in lessening our concern about the ozone layer," said Mosier.

It had been thought for many years that native grasslands and forests contributed little if any, nitrous oxide to the atmosphere because they were not fertilized. The nitrogen sources for plant and tree growth in such ecosystems is from dissolved ammonia in rain and snow, nitrate adhering to dust particles, dinitrogen fixation, or nitrogen released from soil organic matter.

USDA scientists have calculated that about 10 percent of the nitrogen that accumulates from precipitation or dust on shortgrass rangelands is lost back to the atmosphere as nitrous oxide, mainly through the activity of soil-borne microorganisms.

Other scientists have now begun to report similar emissions from several cropped and native mineral soils throughout the United States and Canada. Their research also shows that native forested areas produce about the same level of nitrous oxide as native rangelands.

Larger amounts of nitrous oxide emissions have been found only in organic soils and vegetables crops that are heavily fertilized and irrigated. These atypical sites represent only a small fraction of the world's cultivated land area.

To collect meaningful data, Mosier and Hutchinson had to develop new techniques. One involved the development of a reliable soil cover to collect gases. This technique is inexpensive, quick and simple to use, portable, adaptable to a wide variety of field situations and avoids many of the pitfalls of other collecting designs.

The cover looks much like an upside-down water pail with a hole to equalize air pressure inside and outside the cover. This design allows more accurate measurements of the rate at which gases accumulate under the cover.

Many previous studies of gaseous movement in and out of soils have been based on soil covers that fail to account for errors caused by the covers themselves affecting air pressure.

Mosier and Hutchinson, along with research ecologist William J. Parton and range science professor Robert G. Woodmansee, Colorado State University, are continuing these studies to include grazed pasture lands.

INTER-STATE'S 65th ANNUAL DELEGATE MEETING



November 11 and 12, 1982

HOST FARM RESORT

Lincoln Highway East, Lancaster, Pa.

Thursday, November 11

9:45 A.M.

Opening Session & President's Report

1:30 P.M.

General Manager Report Followed By Remarks By Edward Coughlin, Dir. of Dairy Division, USDA

6:00 P.M.

Banquet And Keynote Address By Dr. Anthony Campolo, Chrm. of Sociology & Youth Ministries, Eastern College, St. Davids, Pa.

Friday, November 12

7:00 A.M.

Young Cooperator Breakfast
Speaker: Alpha Trivette, Dir. of Member Relations, Kentucky Rural Electric Cooperatives

9:00 A.M.

Delegate Resolution Session
Remarks By Paul E. Hand, New Gen. Mgr.

9:00 A.M.

Women's Session Featuring Panel Discussion

ALL MEMBERS ARE URGED TO ATTEND!