

Mr. DADDARIO. I know you cannot give us the solution to the problem in the time available, but will you give us an idea?

Dr. WADLEIGH. We have explored the effectiveness of putting these wastes into oxidation lagoons, but lagoons must have a tremendous capacity to serve a large feedlot. We must explore ways of economically putting manure back onto the land.

In the past, we have emphasized the idea that it is cheaper to get the nitrogen out of the fertilizer bag than to put it on the land. However, I think that the land is still the place for the disposal of manure. It can provide some benefit and may be the cheapest disposal.

We have any number of experiments over the United States where manure added to the soil produces benefits above any chemical addition that one can provide. In areas where it might not be feasible to put the manure in the land, then the lagoon system may have to be used. I feel there must be developed more efficient mechanized systems of getting this stuff back into the land; and incorporated so it does not smell, and does not occur in the runoff into our streams and reservoirs.

MEETING PROBLEMS OF ENVIRONMENTAL QUALITY

Agriculture and forestry have a long history of developing technology and providing technical guidance and other forms of assistance toward improving the quality of our environment.

AIR POLLUTION CONTROL

We have mentioned our concern with air pollution. The U.S. Forest Service is carefully studying the resistance or susceptibility of pine seedlings to airborne chemicals. They have made selections of ponderosa and eastern white pine that are nearly immune or highly tolerant to specific air pollutants such as sulfur dioxide, fluorine, ozone, and photochemical smog. These selections will be especially valuable for plantings in and around industrial and metropolitan areas.

We are continually developing improved varieties of cigar-wrapper tobacco that may be grown in the Connecticut Valley without significant damage from air-pollution fleck on the leaves.

The U.S. Forest Service began developing improved techniques for forest fire control in 1923. This technology has been applied with remarkable effectiveness toward reducing air pollution arising from burns in our Nation's forests. This is indicated by the fact that fire damage in the national forests has been reduced over a 40-year span from 602,000 acres in 1924 to 92,000 acres in 1963. At the average damage of \$76.45 for each acre burned, the cumulative effect of developing and using improved forest fire control technology over the past 40 years comes to \$39 million a year.

EROSION CONTROL

Conservation practices on the land have contributed importantly in reducing the threat of future "dust bowls" in the Great Plains. One of the best testimonials to this point was the experience of farmers in Kansas during the drought of the mid-1950's, which records show was