

for our own companies but for local and state officials, under the mining regulations of local and State agencies, would only impede progress. It would cut down on the imaginative work now taking place, and in the end serve no useful purpose.

I mention the creative aspect of mined land reclamation. You may be interested to know that some of the seeding now is done by airplane, some by helicopter. The airplanes fly only a few feet off the ground. They can do in three days what it once took a ground crew forty days to accomplish. Aerial seeding is now being done even in the mountainous country of Kentucky and West Virginia, whereas it once was limited to the flatlands of Ohio, Indiana, and Illinois. Aerial seeding can be an especially effective way of getting ground cover quickly.

In addition to aerial seeding, we now have what is known as hydro-seeding. The hydro-seeder is mounted on a truck; it mixes the seed, fertilizer and water, then sprays the mixture over the planting area. This technique has proved especially successful in revegetating steeply-sloping mined areas.

Recently we have branched out into test-tube seedlings to try to find better ways of making the plants survive. This has been one of our major problems over the years—the mortality rate of seedlings and transplants, just as you may have trouble with the shrubs you transplant in your own yards. At the moment we are experimenting with the tubeling, or test-tube baby tree seedling. The tubeling is grown in six weeks in a three-long plastic or cardboard tube packed with native soil.

Unlike the conventional seedling, which spends a year in a nursery bed before being uprooted and replanted, the tubeling stays in a restricted area which contains its own microclimate. Thus the initial shock of transplanting, which accounts for most seedling failures, is minimized. Forestry experts say that these tubelings then can be planted throughout the entire growing season. Currently, seedling methods are limited to spring and fall planting.

In Ohio, mined land reclaimers are trying a suspended vegetation process to minimize plant losses which occur when the delicate roots of seedlings dry out during shipping, storage and field planting. By coating the seedling roots with a protective clay, we are finding that the hair roots can be kept moist, and they have a much better chance of survival.

We also are continuing to experiment with equipment to get the best possible use out of it in land reclamation. For example, we use different types of bulldozer blades, so that we can do the most effective job in the most economical way. We have to lay out each job independently because no two are alike. We are also experimenting with the use of draglines, so that they will deposit topsoil in the right places as they swing around. For the first time we are using rock-pickers to get the large rocks out of reclaimed areas. Then the seeds and ground cover will have a better chance to grow.

Needless to say, those of us who are deeply committed to reclamation can go too far. We could bankrupt a company by spending more money on reclamation than it's worth to get the coal out of the ground. We therefore must proceed with caution and planning. We have to consider not only cost, but the season, and the most important factor of all—time. Progress cannot be made overnight. We must have time to reclaim the land and to get it back into the best possible shape.

Adding another layer of authority, as I have mentioned before, is not going to do the job. In fact, it can only impede the progress we are making. As has already been pointed out, most states where there is strip mining of any consequence, already have their own laws. State officials are acquainted with local topography and local conditions. They are in the best position to deal with what we concede to be a problem—one that requires the best efforts of all of us. It is far simpler to change state regulations as we improve our techniques. This is the proper and orderly way to proceed.

Where one layer of authority is imposed on top of another, then jealousy and conflicting regulations inevitably result. In many cases those who are trying to enforce the regulations simply have not had the experience to deal with the problem. We maintain that progress only can be made if those who have had the experience and know the techniques are permitted to do the job. We must have flexibility to deal with the problems as they come up.

Gentlemen, it is to our interest to restore the land to productive use, rather than be saddled with acres of taxable but useless and unsaleable property. As the land is restored, it will continue to benefit all of our citizens.

I am a coal miner, not a legislator. I have my own ideas about some of our