Scientists Should Express Thoughts Says Physics Expert

In addition to the scientific courses which they are given, it is important that students preparing for a carrer in science should be taught to express themselves, says Dr. Saul Dushmannn, assistant director of the General Electric Research Laboratory in the American Journal of Physics.

Writing on the subject of "Postwas Training of Physicists for Industry," Dr. Dushman says it is often forgotten in connection with the training of physicists, and of scientists in general, that "progress in science as well as other brannches of human endeavor depends ultimately upon the ability to communicate ideas to others by means of language. Whether it be the exposition of an idea by word of mouth, or the description of experimental observations in a paper for publication, clarity of expression and logical presentation of data and conclusions are prime requisites. It is not required of the scientist that he be either an orator or a clever wielder of $64 words, only that he express himself clearly in evryday language and use this language correctly."

The role of the physicist in wartime developments has shown that he can be very practical, Dr. Dushman declares.

"Industry has learned through the experience of the past few years,' he writs, "the fact that physicists are capable of contributing to, and initiating, fairly complex engineering developments. The design and operation of a cyclotron requires a technical skill such as compares very well with that required to design and operate a high-voltage generating equipment. The physicist has indeed demonstrated by his activities in the war effort that he is not the theoretical recluse intent only upon some abstract objective, that, in fact, he can become under proper conditions just as practical and just as hardboiled as any industrial engineer. In view of these conditions, it would seem reasonable to suppose that in the postwar world there will be a much greater demand for physicists in industry than in the past."

Such industrial physicists must know other subjects besides their basic physics and mathematics. "The physicist in industry," Dr. Dusman continues, "must be versatile and adaptable. In view of the increasing complexity of materials and operations used in industry the physicist should also know considerably more chemistry that he has been the sace in the past. Indeed, I would like to suggest that the proper course of training for an industrial physicist should be one that would comprise almost as much chemistry as physics."

Comparison of 1944 with 1914 may help us to appreciate some of the coming changes in our world. "In 1914 the tungsten vacuum lamp was the best source of illumination available," he says. "Ductle tungsten filaments had been introduced to replace the brittle filaments used in the earlier lamps. The cost of electric power to the householder was high. In 1944 even the gas-filled tungsten lamy, operating at twice the efficiency of the old vacuum lamp, is gradually receding before the flourescent lamp, which operates at an efficiency four to six times that of the latter. The cost of power has decreased considerably.

"Electric refrigerators, washing machines, dishwashers and similar devices were available only to the wealthiest. The vacuum cleaner was an imperfect device. Radio broadcasting was not even dreamed of. Movies were emerging from the nickelodeon stage and talking movies seemed quite remote.

"Is it not highly probable" he asks, "that the industrial progress made during this period which has just ended will be duplicated and even exceeded during the next thirty-year period?"

Among these new developments he foresees television as a complementary industry to radio; air-conditioning of homes and the more general use of electrical appliances for the elimination of household drudgery; new developments and applications in the field of plastics and light metals which will be realized more fully when conditions permit; ust of the airplane so extensively for commercial and pleasure purposes that it will rival the automobile and truck in popularity; and new achievements in medicine and surgery, which are bound to affect profoundly our health and length of life.

Student Employment

"All students who wish part-time employment during the coming term are urged to file either an application renewal or an application with the Placement Office between now and the end of the term. Renewals will be accepted beginning, Monday, September 4th."

—Attend San Antonio Aggie Dance—

One good way to get rid of a lot of troubles is to fire your ambition and discharge your duties.

Government Aids Pasture Improvement

Control of noxious shrubs in Texas grasslands is the foremost pasture problem on many millions o facres. This says Robert R. Lancaster, pasture specialist for the A. and M. College Extension Service, is second only to lower rate of stocking on many other millions. Still other millions, located along streams and branches and covered by brush, shrubs and trees of low value, are the most potentially productive land available for future pastures.

Shrub removal and other improvements for Victory pastures are eligible for government payment through the Agricultural Adjustment Agency of the U. S. Department of Agriculture, Lancaster says. Other improvement practices within the AAA program are controlling gullies, rodents, poisonous plants and other weeds; applying manures and commercial fertilizers, lime and seed; harvesting grass and clover seed; deferred grazing; and digging of tanks for stock water and drilling wells.

Lancaster explains that as many as 25,000 Texas stockmen in one year have benefited through the program and the area affected has been about 87,000,000 acres, or 87 per cent of all pasture land.

Nearly 8,000,000 acres of prickly pear, or cactus, have been grubbed under AAA payments in the past seven years. In the same period 3,000,000 acres of cedar were cleared and a quarter of a million acres of mesquite killed. Removal of the cedar did not represent the destruction of a potential cedar forest because the bushy Mexican and Pinchot species which infest Texas ranges are less valuable as timber than the Virginia red cedar, Lancaster explains.

Clearing other kinds of underbrush has been doubled and trabled from 10,000 acres yearly before 1941, to 20,000, then 30,000 and 39,000 acres annually for the past three years. Payments vary according to the necessary costs. Permanent cutting depends upon sprouting control. New methods of treatment, including sprays not poisonous to livestock, to prevent stumps sprouting are being explored and tested by the Texas Agricultural Experiment Station. Branches on small stock farms still are being cleared by hand. But large scale shrub eradication is most commonly done by power machinery which uproots trees and large shrubs.

Cotton Labor Will Be Sufficient

Cotton picking in southernmost Texas at mid-August had reached its peak with about two-thirds of the crop in the Lower Valley and the Corpus Christi area gathered. About 20,000 bales had been ginned in Nueces County.

According to C. Hohn, Extension Service farm labor supervisor, the labor supply was adequate to somplete the work unless a tropical storm interferred. However, no unfavorable weather was forecast. A steady dribble of migratory labor through the quarantine state gave the situation a further favorable aspect.

Meanwhile, labor was beginning to drift slowly eastward where picking was beginning in Victoria, Jackson, Calhoun, Matagorda, Fort Bend, Wharton and Brazoria counties. The yields in Calhoun and Fort Bend counties are expected to be large, while in some of the other couties the crop is late and not as good as ususal. Picking in Bee, Karnes, Live Oak and Goliad counties also was stepping up. The current labor supply in all of this area appeared to be adequate for present needs, Hohn said, except in Karnes where there was some demand for pickers.

The migratory field assistants placed 5,303 pickers from August 7to August 13, inclusive. Their total placements to date are 16,693.

Elsewhere over the state there was an indicated need for labor for a variety of purposes. Castro County, for instance, was seeking help for shocking sudan grass, plowing and year-round work. Plow hands and year-round workers wer needed in Gray, Hansford, Hartley, Hutchinson, Ochiltree. and Parmer counties. Hoe hands and help for the vegetable harvest were in demand in Bailey County, and Travis County was in need of dairy, farm and ranch hands.

On the other hand, there is no marked farm activity in the low rolling plains excepting the grain sorghum harvest. In east Texas farmers whose harvests have been completed temporarily were seeking employment in defense plants or the cotton fields in the southern part of the state.