

Water and the Future

WATER, LIKE AIR, is one of the gifts with which we are naturally endowed. Probably for this reason both are often taken too much for granted. Certainly we are coming to realize that the maintenance of a sufficient supply of water is going to take effort on our part.

This fact was called sharply to the attention of the New York Section of the AMERICAN CHEMICAL SOCIETY recently by Fairfield Osborn, President of the Conservation Foundation. Calling the rapid increase in the use of water an interesting phenomenon of the modern age, he pointed out that today our per capita withdrawal of water is approximately 1100 gallons per day, about double that of the year 1900. Furthermore, our population has doubled in that time. The President's Material Policy Commission Report (the Paley Report) expressed the opinion that the constantly rising standard of living and the increasing consumption of raw materials may require that the nation's water supply be doubled by 1975.

One of the dominant uses of water has been irrigation. At present this accounts for something near 90% of the total used in the western states where a total area of about 24 million acres now is irrigated. But this supply is not inexhaustible and demands for irrigation plus those for industry may even force a reduction of irrigated land in some areas. Even now it is estimated that another 20 million acres of land is of irrigable quality, but the cost of irrigation development is prohibitive.

Mr. Osborn stated that in many places in the West, water is being taken out of the ground at a rate greater than that at which it is replenished. In the southwestern part of the United States, ground-water overdraft is estimated at about 5 billion gallons a day, or one third of the total ground-water withdrawals.

In the eastern half of the country, industry is the dominant water user. Previous to World War II, extensive irrigation in the East was relatively rare. But awareness of the value of supplementary irrigation, in regions where there is normally a sufficiency of rainfall, is growing. As much as a year ago, the total amount of land being irrigated was estimated at nearly a million acres.

The growth of supplementary irrigation offers both promise and a problem. Drought has been one scourge of the farm which remains unconquered as we can see by the devastation in certain areas during the past two years. Even in those areas which are classed as humid, it is not rare to find important crop failures which probably could have been prevented had a moderate amount of supplementary irrigation been available at the right time. In the light of this knowledge, we are interested to note that there appears not to be a single chair of soil and water

WALTER J. MURPHY, Editor

conservation in an American college or university. Again referring to the Paley Report we find "our knowledge of the factors of the supply and utilization of water is pitifully inadequate. We know relatively little of the intimate details of the hydrologic cycle whereby the sun daily extracts 4,300 billion gallons of pure water from the oceans and distributes it over the land mass of the United States."

The problems involved are neither small nor simple. Nearly half the boundary lines of our country touch on water which is not directly usable for irrigation. If it were, the expense of transporting it to the points of use would be prohibitive. What are the answers? Are we learning enough about the harnessing of solar energy to hope for significant assistance within the next decade? The problem may seem so great as to be hopeless but we cannot quietly accept such an idea, for something near a quarter of our population is being deprived of water in satisfactory supply or quality. There is probably no other single problem short of the strictly political which offers such a huge challenge to the agriculture of the next half-century.

NFA — APFC Amalgamation

WE LOOK UPON the announcement of plans for consolidation of the National Fertilizer Association and the American Plant Food Council as good news. Before World War II a part of the membership of the NFA split off to form the APFC. Since that time the fertilizer industry has been represented by two trade associations, both of which have been valuable and among the most effective of organizations of their types. But there has been some duplication in membership and in types of activity. This has meant a division of energies and a multiplication of expenses. There has been a very great change in the fertilizer industry since the second of these organizations came into existence and that change is continuing at a rapid rate. For the future, the fertilizer industry needs the most efficient possible organization and utilization of resources. It is to be expected that full cooperation within a single organization will give best results. We extend our best wishes to the two organizations in the voting actions of their members and boards in coming weeks. May those actions lead to a successful and effective National Plant Food Institute.