

# Introduction

Arizona is threatened with a polarization of interests that could impede rational solving of serious state issues. The problem centers on the use of water for crops and the public perception of the need for that use. Reasonable and unreasonable claims and questions have been aired. The intent of this issue of *Progressive Agriculture in Arizona* is to examine agriculture in Arizona in terms of its value to the state, nation, and world, to discuss its problems, and to suggest possible solutions.

Agriculture is an important source of income for the state. Depending on the year, it ranks second to fourth in cash receipts for the state. Income is about equally divided between animal and plant agriculture, with the combined total cash receipts reaching \$1.7 billion in 1979. While animal agriculture has problems, many of them related to problems in plant agriculture, this issue of *Progressive Agriculture* focuses only on plant agriculture.

Let's face it: plant agriculture would not exist in Arizona as currently practiced without supplemental water. We have mined our underground water, causing water tables to drop in many areas. The 1980 groundwater law is a direct result of concern about the long-term effect of continuing depletion of underground water.

Farmers' production costs have climbed spectacularly in recent years. Agriculture is as seriously hit by rising energy costs as any private home or car owner. Interest rates have pushed up investment costs, too. With public misunderstanding added to this list of woes, the Arizona farmer of today might well be tempted to quit. And yet, never has there been a greater need for solutions. It is important that Arizona solve its crop production problems in a way that continues agricultural income to the state and food and fiber production for the nation. What happens here soon can happen later elsewhere in this nation and abroad where groundwater is used faster than it is replaced. Solving Arizona's water problems while maintaining crop production will point the way for other areas.

Agricultural research and the dissemination of useful findings to producers have helped make this country the best-fed in the world with the lowest fraction of disposable income spent for food. Our system of research and extension has been widely copied in other countries.

We look to the future. The maximum benefit from agricultural research occurs, on the average, seven years after discovery and loses its major benefit within 13 years. However, some discoveries are accepted rapidly. Discoveries such as Pima Cotton, steam-rolled grain and insect-resistant varieties of alfalfa have had immediate, dramatic impacts on Arizona agriculture. On the other hand, decade-old research on minimum tillage is just now making a significant impact and decreasing the energy used to produce crops.

We can solve our problems if we pull together. Polarization will solve nothing. Collectively, we can grow useful agricultural products in Arizona and bring the state into a water balance at the same time.

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