PIMA COUNTY

Changed by Urban Growth

By M. Lee McGoogan

IN PIMA COUNTY the Extension efforts realize that with cotton and other products, families are consumers of goods as well as producers.

There's nothing so certain as change. Through the years American agriculture has adjusted to population increases, advances in science and technology, foreign trade opportunities and consumer demands. During war years or eras of peace, agriculture has adapted by producing or curtailing output.

County Agent G. E. Blackledge has watched the changing scene during his 20 year tenure in Pima County. He's seen numbers of farms sharply decrease and size increase. Fewer people live on farms. In 1950 there were 7,411 persons living on farms. This number decreased to 2,796 in 1960.

Changes in Number of Farms, Pima County

1949	1959	1960
1,950	481	421

Areas that were rural have become urban or suburban. Housing developments are polka dot areas on range landscapes. Farm lands 20 years ago are business and housing areas within Tucson city limits, according to Glenn Blackledge. There were 9.55 square miles of the city in 1950; 70.9 in 1963.

Change in Needs, Too

Increases in population have brought corresponding demands for services. He's adapted to change in program emphasis as people on the move seek help from the Pima County Extension Office in adjusting to the area's soil, vegetation and climatic conditions.

Changes in Population

	1944	1954	1963
Tucson	38,000	54,000	237,000
Pima Co.	90,000	190,000	322,000

Changed Cotton Production

Competition between fibers for consumer and industrial use has forced cotton producers to utilize every resource for economical and efficient production methods.

Mr. Blackledge has relayed to cot-

(Continued on Next Page)

The author, Miss McGoogan, is a Georgia native, who was a home demonstration agent in that state from 1934 to 1958, when she went to the University of Wisconsin for further training. After Wisconsin came experience in Maryland, as a 4-H and home economics information specialist. Miss McGoogan, who has a bachelor of science degree in home economics from the University of Georgia, and a master's degree in agricultural journalism from the University of Wisconsin, came to Arizona in the fall of 1961, as county home agent in Pima County.

A FAMILIAR SIGHT in Pima County is the county agent out in a cotton field, discussing problems of planting, irrigating, fertilizing, insect and disease control. Here Pima County Agent G. E. Blackledge (left), talks cotton with Art Pacheco.

(Continued from Previous Page)

ton producers research findings in fertilizing, varieties, irrigation, weed control, planting, cultivating and harvesting practices.

With increased costs of production, growers are meeting the cost-price squeeze by shifting from hand labor to almost complete mechanization. Playing important roles in economical and efficient production are use of chemicals to control insects, planting productive and disease resistant varieties, and increasing fertilizer.

Poultry Production High

Poultry production in Pima County represents almost half the laying birds in Arizona. Pima County is one of two counties in Arizona that produce more eggs than its population consumes.

Pima County produces 15 percent of the national copper supply. The county produced 185,000 tons in 1963, valued at $116,000,000, from five major mines. Mining and quarrying industries gave employment to 3,300 persons in Pima County during April, 1963. Taxable sales of mining output increased $28,694,000 from 1959 to 1962. This increase in production changes tax structures in rural areas.

Changes in Livestock

Emphasis on quality rather than quantity is producing more beef per cow unit in Pima County. There has been little change in the number of cattle on the range. The change is to better cattle and better ranges.

Pima County boasts some of the best desert grasslands in the country. There is marked improvement in this 20-year period in practices of herd improvement, range reseeding, brush control, parasite and insect control, related Mr. Blackledge.

Most of Pima County's water supply is from ground water produced by deep wells. Water levels drop at rates of one to two feet per year, in some areas to 10 feet where there is heavy irrigation and industrial use. Part of Tucson's supply is pumped through large pipelines for a distance of 20 miles. Land with water rights is sought by farm, industrial and urban interests.

Presently, commercial, municipal and domestic uses require 165 gallons per capita per day. Most light industry, school and recreation facilities have independent supplies. They use 40 gallons per person per day.

Tucson water engineers are aware of unprecedented present demands and are planning future needs. Their projections are based on anticipated population growth and development.

Population Estimates

	Tucson Urban Area	Pima County
1980	570,000	625,000
2000	1,400,000	1,500,000

The prediction is for 175 gallons per day per capita for domestic, municipal and commercial use; 40 gal. per capita per day for schools, recreation and light industry.

Climate Is Nearly Ideal

With marked changes in other areas, the climate of Pima County remains ideal. Sunshine is abundant with 85 percent possible sunshine in the Tucson area. There is an average rainfall of 10.9 inches. Relative humidity is low most of the year. This climatic factor makes conditions tolerable for persons with respiratory and arthritic conditions. Humidity ranges from an average low of 25 percent to an average high of 62 percent.

Winter weather conditions attract one of Pima County's treasured sources of income — tourists who boost the economic, cultural and social life of the area.

"What varieties do I plant?" "How often to water?" "When? Morning or night?" "What is this bug?" "What is this plant?" "Why is my tree dying?" These and many more questions are all in a day's work for Pima County Extension Agents.

Almost three-fourths of the county's population is confronted with unfamiliar conditions. (There are only 462,241 native born residents from a population of 1,545,000 persons in Arizona).

Pima County Agent in Charge, Garrett E. Blackwell, Jr., says, "Population explosion has more than tripled the population in the past 21 years. Over 60 percent of my phone calls and 50 percent of my time is spent in providing information to help urban and suburban people solve their home-plant-care problems. Adjustment to our Southwestern desert situation creates questions from newcomers.

"The fact that people ask for information in agriculturally related areas is proof positive that the Agricultural Extension Service can help people live happier and more rewarding lives in their changing world," says Blackwell.

Family Living Changes

Families are now consumers of

(Continued on Next Page)

MRS. JAMES LARSEN, a 4-H leader in Pima County, instructs her daughters, Cindy and Jody, (in photo below) that you must determine best buys by figuring cost per egg.

Maier Tapped For Executive Training

Dr. Robert H. Maier of The University of Arizona Department of Agricultural Chemistry and Soils, has been named as one of the first 25 participants in a new program to train college administrators.

He will spend the next academic year working in administrative offices at the University of North Carolina, Chapel Hill.

Selection of the professor of agricultural chemistry and soils was announced in Washington by the American Council on Education, which runs the program with Ford Foundation financing.

He had been nominated by UA President Richard A. Harvill. Maier, 37, joined the university here in 1956.

Earlier, he had earned a bachelor's degree in chemistry and botany from the University of Miami and master's and doctor's degrees at the University of Illinois.

(Continued from Previous Page)

goods rather than producers. With a greater variety of goods to consume, there is constant demand from the Pima County Extension Office for consumer information. People want immediately the information they need to make decisions.

With families on the move, there is less stable volunteer leadership. Locating leadership potential and training are the challenges in Pima County.

There is little community interest or unity because neighbors are strangers. They come to Pima County from varying cultural backgrounds for permanent or short time residence.

Many schools run double shifts, complicating management of the home. Within a small family activities, interests and schedules vary widely. Family unity is sacrificed unless parents make a real effort to preserve it.

Accepting the Challenge

Fitting 4-H into urban and suburban situations means new projects, more area clubs that demand more and better trained leaders. With a steady increase in numbers of 4-H members in the Tucson area and a decrease of those with farm backgrounds, projects requiring limited space are in demand. This is reflected through the increase of 4-H members carrying horse and dog projects. Extension Agents working with the 4-H Club program in Pima County are Ellen Kightlinger and Howard Jones.

Homemaker club programs are directed mainly toward consumer education. While they continue to give opportunity for developing homemaking skills, they include "buymanship" for family needs. Decision making is an educational process and increasingly important.

The broad family living program includes beautification of community and state, study of Arizona laws concerning wills, child development and family relations. Other areas are clothing, housing, management and feeding the family with least possible financial stress. Leadership development is high on the priority list.

Dr. Massengale Chosen Professor of the Year

Dr. Martin A. Massengale, associate professor of agronomy, was selected as the "Outstanding Professor of the Year" by the Agricultural Student Council, of which Kenny Evans is president.

"Each club represented on the council is eligible to nominate one professor for the award. Nominations are based on classroom teaching, work with students, research projects and community activities," Evans explained.

Dr. Massengale's name will be inscribed on a permanent plaque in a trophy case in the lobby of the Agriculture Building.

Dr. Massengale received his Bachelor of Science degree from Western Kentucky State College in 1952, and his Ph.D. from the University of Wisconsin in 1956. He came to the University in 1958 as an assistant professor. In 1962 he was appointed associate professor of agronomy, and he has just been advanced to full professor.

Dr. Massengale is faculty advisor to several graduate and undergraduate students and student organizations in the College of Agriculture, including the Agriculture Student Council. He is also head resident of Hopi Lodge.

Dr. Massengale is a member of Phi Kappa Phi, Gamma Sigma Delta, Sigma Xi, Alpha Gamma Rho, Phi Sigma, Gamma Alpha, American Society of Agronomy, Western Society of Crop Science, American Grassland Council, American Society of Plant Physiology and the Arizona Academy of Science.

Schwalen, on UA Staff Nearly 50 Years, Retires

It is typical of Harold C. Schwalen that July 1, when he completes 48 years on this university's staff, he'll keep right on working in the Department of Agricultural Engineering. "It'll take me another month, after July 1, to complete the work I'm on now, a water study," he says. Prof. Schwalen, who reaches the compulsory retirement age of 70 this summer, has had a lifetime concern with water, it scarcity, its use and its quality.

He was just a little tike when his family moved here from St. Paul, Minn., in 1904, and at that time fields along the west bank of the Santa Cruz river, in Tucson, were irrigated by the almost constant flow of the river. Those fields are subdivisions today, and the river now runs only for a few hours or days a year after an occasional rain.

But the memory of a boy of nine has been the lifetime concern of the man now 69. Only the water table has lessened.

Prof. Schwalen went to work for The University of Arizona when he got out of the artillery, after serving in World War I. And Pres. Harvill notes that he has served this university "longer than any other person" save the late Dr. A. E. Douglass, famed astronomer and tree ring specialist.

Prof. Schwalen, for many years head of the Department of Agricultural Engineering, has a quick alertness of thought and action which belies his age. And after retirement he'll still be active in this community, handling his own business affairs and taking on occasional engineering assignments. In these activities his colleagues wish him well.

Another retirement July 1 from this sector of the U of A is that of Miss Ethel Thompson, professor of Home Economics since 1938, who has produced an important list of research accomplishments in the field of human health and physiology.