

TODAY'S CITIZEN

UA Scientist Owes Career To His Allergy To Horses

By NYLA CRONE
Citizen Staff Writer

Were it not for his allergy to horses, Carl N. Hodges would not have become a scientist. And there would be no environmental research laboratory at the University of Arizona.

"Instead of being in Tucson, where it's hot," he said, "I'd be somewhere like Raton, N.M., sitting in the shade of a tall pine."

The men in his family have been horse breeders or trainers ever since the time of his great-grandfather, who also was a Texas Ranger, and Hodges undoubtedly would have followed their hoofpaths.

As a small boy, he was so sickly that his parents moved from Texas to Phoenix for his health — when he was a third grader. It was later that the cause of his allergy was determined, and he has had no difficulty since then — so long as he stays away from horses.

Hodges planned to become a mathematician. He became enamored of meteorology and switched majors after taking a course under Dr. James E. McDonald, University of Arizona atmospheric physicist.

While a graduate assistant in the UA Institute of Atmospheric Physics, he attended a seminar on desert survival. It was during that seminar that he first heard of the problems of desalting seawater.

He pondered these problems so much that one night he dreamed he had been shipwrecked and was dying of thirst.

The next day, he went seriously to work on what became his theory for humidity-cycle desalting.

He first tested this theory with a small model that he built at his home, using a vacuum cleaner and odd parts he could scrounge.

Hodges' theoretical models led to the establishment in 1963 of a



Carl N. Hodges

pilot desalting plant that still is in operation at Puerto Penasco, Son. That same year, he was named supervisor of the Solar Energy Laboratory (later changed to the Environmental Research Lab), a unit of the UA Institute of Atmospheric Physics.

Those experiments in Mexico evolved into a search for the best possible utilization of the still relatively expensive desalted water.

A result was the present integrated system that can provide power, water and food on desert seacoasts. With this approach, waste heat from engine-driven electric generators is used to desalt seawater. The fresh water then is piped to vegetables inside controlled-environment plastic greenhouses.

Construction of a large-scale installation now is nearing completion on the Arabian Peninsula Sheikhdom of Abu Dhabi.

An Arizona team, which will number at least nine (plus their families) by autumn, already is on hand to oversee the Middle East project. By the end of the year it should be producing a variety of vegetables under five acres of plastic.

Hodges despises the phrase, "make the deserts bloom," partly because it is a cliché and in part because it is, in many specific cases, plainly improbable.

Sure enough, the first national publicity he received was a full-page photograph in the Saturday Evening Post captioned "Young Scientist Hopes to Make the Deserts Bloom." In the picture, an embarrassingly posed one, Hodges sat in a rocking chair in the desert, wearing a white lab jacket and holding a glass of water.

"The results were amazing, though," he remembers. "A couple from Maine wrote me and offered to send me their life's savings to invest in this great new process. A lady from Los Angeles made me an honorary member of the Good Morning Sunshine Club and sent me a letter every week for about a year to wish me good morning."