

V GENERAL

Estimated Use of Plant Nutrients in Arizona, by Crops*

Research was conducted in 1959 to develop information on fertilizer usage for various crops. Results applicable to vegetables are shown in the following two tables:

Table 1. Estimated percentage of acreage of various crops fertilized with principal plant nutrients and estimated average rate of fertilization, Arizona, 1959.

Crop and Group of Counties ^{a/}	Percentage of Acreage Fertilized			Rate per Acre Fertilized		
	With N	With P ₂ O ₅	With K ₂ O	N	P ₂ O ₅	K ₂ O
	%	%	%	Lbs.	Lbs.	Lbs.
<u>Vegetables and Potatoes</u>						
Potatoes						
Yuma	100	100	95	180	80	40
Maricopa - Pinal	100	100	95	160	145	50
Northern Arizona	67	67	25	60	45	40
State Average	99	99	93	162	133	48
Sweet potatoes						
Maricopa - Pinal	90	92	65	60	85	30
Lettuce						
Yuma	100	99	75	160	120	50
Maricopa - Pinal	100	98	47	150	95	50
Southeast Arizona	100	98	47	150	95	50
State Average	100	98	51	152	99	50
Melons ^{f/}						
Yuma	99	99	65	120	110	40
Maricopa - Pinal	95	95	50	100	80	40
Southeast Arizona	95	95	50	100	80	40
State Average	98	98	60	113	100	40
Average, other vegetables						
Yuma	99	95	43	120	60	40
Maricopa - Pinal	98	68	43	100	55	40
Southeast Arizona	98	68	43	100	55	40
Northern Arizona	60	25	--	50	22	--
State Average	97	70	42	102	56	40
Average, all vegetables and potatoes						
Yuma	99	99	69	137	110	44
Maricopa - Pinal	99	94	51	138	94	48
Southeast Arizona	99	96	47	147	93	49
Northern Arizona	64	46	12	55	43	40
State Average	99	95	55	138	98	46

* These estimates were prepared by the following committee: W. W. Pawson, C. O. Stanberry, W. H. Fuller, T. C. Tucker, W. D. Pew and J. S. Hillman.
^{a/} "Southeast Arizona" includes Pima, Graham, Greenlee, Cochise and Santa Cruz counties. "Northern Arizona" includes Yavapai, Coconino, Navajo, Apache and Gila counties. Crops are grown under irrigation unless otherwise specified.
^{f/} "Melons" include cantaloups, watermelons, honeydews, etc.

Table 2. Estimated quantity of plant nutrients applied on crops and for nonfarm uses in Arizona, 1959.

Crop	Acres Grown	Acres Fertilized	Quantity of Plant Nutrients Applied		
			N	P ₂ O ₅	K ₂ O
	<u>Acres</u>	<u>Acres</u>	<u>Tons</u>	<u>Tons</u>	<u>Tons</u>
Vegetables and Potatoes					
Potatoes and sweet potatoes	8,500	8,382	645	537	182
Lettuce	66,600	66,600	5,045	3,215	853
Melons	25,900	25,273	1,429	1,259	309
Other vegetables	10,000	9,737	497	196	84
Total	111,000	109,992	7,616	5,207	1,428

Feasibility of Protective Cropping (Plastic Greenhouse Production) in Central Arizona

(B. R. Foerman)

Abstract: After commercial production on a trial basis during a four-year period (1961-65), protective cropping of tomatoes and possibly a few other higher return vegetable crops shows a promising alternative enterprise for local production whose risks are intensified. Better adapted varieties, disease control and market development are primary objectives to be overcome.

Introduction

During 1960 and 1961 as many as a half dozen different growers and others consulted Agricultural Extension Service agents and specialists regarding the possibilities of growing tomatoes locally in temporary plastic greenhouses. Resource information on which to base counsel was very limited.

Method and Procedure

In March of 1961 a meeting was called by this agent to coordinate thinking of resource personnel of the University of Arizona and to provide a few pioneering growers with the best local authoritative counsel. Such U. of A. personnel as Ted Welchert, Extension Agricultural Engineer, Dr. N. F. Oebker, Extension Vegetable Specialist, Drs. W. D. Pew and Paul Bessey of the Mesa Experiment Station as well as Dr. Ivan Shields and this agent followed closely the construction of the first commercial scale house that enclosed approximately 1/3 acre, and the growing of the first year's crop.

These frequent consultations were mutually beneficial -- all concerned had much to learn. Considerable out-of-state information was necessarily gathered and interpreted for local application.