

(Continued from Previous Page)

psyllids, aphids, and thrips on potatoes. Acceptable materials are sulfur, as a dust; parathion two per cent, plus sulfur, as a dust; and Thiodan, three per cent as a dust or spray (two quarts per acre). Repeated applications may be necessary where these pesticides are used. On the other hand, properly applied granular systemic insecticides need be applied only

once, at planting time.

The authors would like to acknowledge the valuable assistance given by insecticide companies in providing insecticides, farmers for providing land and other facilities, and to The University of Arizona Mesa Branch Station personnel for their help in accomplishing cultural procedures and harvesting. Without this assistance, these studies would not have been possible.

Table IV.—Effects of granular phorate and Di-syston on potato yields, 1962.

U. S. Grade	100-POUND SACKS PER ACRE						Untreated
	10% Phorate Granular			10% Di-syston Granular			
	10 lbs./A	15 lbs./A	20 lbs./A	10 lbs./A	15 lbs./A	20 lbs./A	
No. 1-Jumbo	13	26	30	13	29	22	0
No. 1-A	173	158	164	124	186	217	3
No. 2	105	140	150	67	150	107	12
No. 1-B	30	15	15	27	19	15	57
Culls	5	7	10	5	3	2	1
Total	326	346	369	326	387	363	73

Harvested: June 6, 1962.

Prof. Thornber, Former Agric. Dean, Dies at 90

Professor Emeritus John J. Thornber, long a distinguished botanist at The University of Arizona, died Nov. 22 at his Tucson home at the age of 90.

Professor Thornber joined The U of A faculty in 1901 and served as professor of botany until 1921. In that year he became dean of The UA College of Agriculture and continued to direct the college until 1928.

Dr. Richard A. Harvill, president of The U of A, said, "Professor Thornber served The University of Arizona long and well in a number of professional roles. He was unexcelled in knowledge and understanding of the plants and plant ecology of Arizona and the Southwest. The very extensive herbarium collections at the university are largely the results of his interest and efforts."

Prof. Thornber was born in Illinois and was 11 when his parents moved to South Dakota. He attended South Dakota Agricultural College and later received the M.S. degree from the University of Nebraska.

The U of A awarded him its 75th Anniversary Medallion of Merit Nov. 24, 1959, in recognition of his "outstanding service to the state and to the development of the university's teaching and research programs." During his long period of service with The U of A, Prof. Thornber devoted a large part of his time to the study of Arizona flora and built up a herbarium of more than 100,000 plant specimens at the university.

He was the author of "The Grazing

Ranges of Arizona," a widely-known bulletin issued by The U of A Agricultural Experiment Station. It was the first comprehensive publication on grazing range management in the state and had unusually wide distribution. He was the author of many other professional publications and co-author, with Margaret Armstrong, of the "Field Book of Western Wildflowers."

For many years Prof. Thornber was active in introducing into the Southwest plants from other countries. It was once estimated that at least 75 per cent of the ornamental plantings on The U of A campus were acquired through his efforts.

In 1911-12, Prof. Thornber was granted a leave by The U of A to study at the Smithsonian Institution and the Asa Gray Herbarium. Upon his return to Arizona he continued study of the depleted grazing ranges in the Southwest. He addressed the National Livestock Association several times on the subject.

Prof. Thornber is survived by his son, John S. Thornber of San Diego; a sister, Miss Jessie Thornberg of Moscow, Idaho; and three brothers. They are Edward Thornber, Eugene, Ore.; Adam Thornber, Mt. Vernon, Wash.; and Harvey Thornber of Hamilton, Mont.

Arizona farmers, ranchmen and homemakers may have their names placed on the mailing list to receive **Progressive Agriculture** at no cost by sending a request to the College of Agriculture, University of Arizona, Tucson, Arizona.

U. S. Agricultural Exports Declining

Elmer L. Menzie and
Jimmye S. Hillman

The United States has been and is a major exporter of agricultural products. Fiscal year 1961-62 exports amounted to \$5,130 million.

However, the value of agricultural exports relative to the exports of all products has been declining, and currently makes up between 20 and 25 per cent of the total (see chart). Agricultural exports account for approximately 12 per cent of the gross farm income, or about 10 per cent of farm product utilization.

Other measures of the value of agricultural exports demonstrate the importance more dramatically. For instance, exports take from a third to half of all cotton produced and in the past have amounted to over 65 per cent. In recent years wheat exports absorbed about a third of the U. S. crop, but in 1957 were over 50 per cent. Tobacco, barley and rice exports have amounted to 20 to 30 per cent of production. These are major products in U. S. agriculture, contributing the largest share of total income.

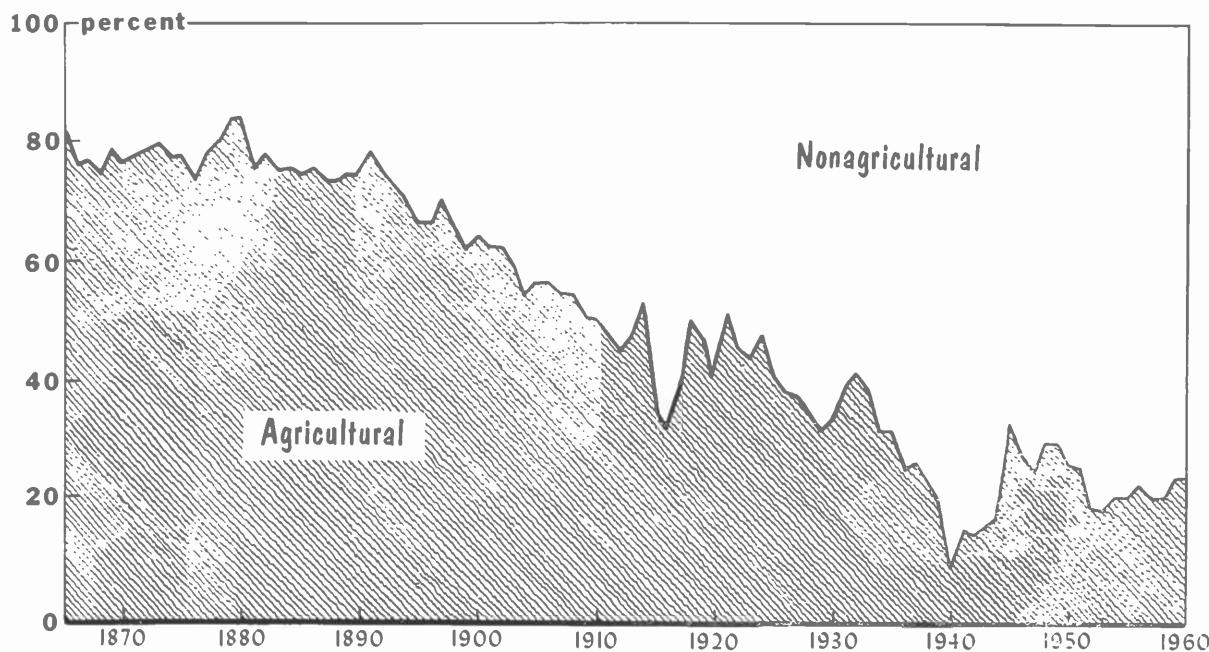
Many Resources Employed

On the basis of acreage harvested, the U. S. Department of Agriculture estimated that 17.2 per cent was used for export production in 1960. Production of these exports requires numerous other resources such as labor, machinery, petroleum, chemicals and services. The use of these resources in turn creates employment for their production, all of which makes an important contribution to the economic welfare of the nation.

While the export of agricultural products has been large, and valuable both to agriculture and the economy in general, it has not been sustained without cost. Government action has been required,

(Continued on Next Page)

The authors are assistant professor and professor of Agricultural Economics, respectively.



VALUE OF AGRICULTURAL exports as a percentage of all domestic exports, United States, 1835-1960 (Years beginning July 1). Source: U. S. Foreign Agricultural Service.

(Continued from Previous Page)

through payment of export subsidies and the establishment of special programs.

The subsidy on cotton exports in 1961-62 was 8.5 cents per pound, or about 25 per cent of the price received by growers. Export payments on wheat, in recent years, have varied between 50 and 90 cents per bushel. Subsidies are also paid on exports of a number of other agricultural products.

Special Export Programs

Since 1954 over 25 per cent of all U. S. farm exports have been made under special arrangements provided for in the Agricultural Trade Development and Assistance Act, commonly known as PL 480. This provides for sales or gifts to foreign countries by: (1) Acceptance of local

currencies, which can be used for specified purposes within the country; (2) Making grants of surplus farm products for famine relief and other assistance; (3) Authorizing domestic and foreign donations and providing for barter of commodities for strategic or other materials; and (4), Sales on long term credit intended to be used for development purposes.

While a number of commodities have been involved, the major transactions under this law have been in cotton and wheat, and sales have been made largely for foreign currencies. For fiscal 1962, 70 per cent of wheat exports, 24 per cent of cotton, and 44 per cent of the milled rice were shipped under PL 480.

There have been problems associated

with export programs. Competing countries have complained of unfair competition. There is still much discussion and disagreement as to the real value to receiving nations. Costs to the United States have been relatively large. As of June 1962, the total value of PL 480 programs for eight years of operation amounted to over \$17 billion, a large part of which must be written off as either surplus disposal or foreign aid. Debate, therefore, continues over the merit of continuing these programs and for what purpose or goal they should be charged.

Where To From Here?

Undoubtedly agricultural exports will continue to play an important role in the U. S. and world trade. There is a real question, however, as to the level at which these exports should be maintained. Should the U. S. pursue a more positive approach and use its food production capacity to help underdeveloped areas of the world, as has been the indicated direction in recent years?

Alternatively, should a major adjustment be made in resource use and direction of energies? Economics would appear to suggest the latter as the better course of action. However, moral, social and political implications, which must be taken into account, complicate the solution and up to now have produced no apparent clear cut solution.

For a detailed study of special export programs and associated problems see IRM-1 study by Menzie, Witt, Eicher and Hillman entitled *Policy for United States Agricultural Export Surplus Disposal*, Technical Bull. 150, The University of Arizona, August, 1962.

EL FRACASO DEL AGRICOLA RUSA

Los fracasos comunistas en su sistema son evidentes. Tras la pantalla de las promesas demagógicas rusas aparece el caos que se ha venido enseñoreando, no sólo de la maquinaria de la propaganda, sino también de la agricultura soviética.

El fracaso de la colectivización agraria rusa lo demuestran sus desastrosos resultados. Los directores políticos de Moscú se han preocupado más por el aspecto propagandístico y demagógico, que por resolver eficazmente el problema de la agricultura. Han abundado las eternas promesas de "una vida mejor" para dentro de veinte años, y se han áchacado los fracasos de la agricultura a condiciones naturales, como las sequías, las plagas, las inundaciones, etc., o bien a las intrigas capitalistas.

Lo curioso es que tales argumentos sólo son válidos para los países del bloque comunista. En iguales condiciones en otros países de los llamados "no comprometidos" o "neutralistas" que tienen fronteras con la Unión Soviética, el índice de la producción agrícola ha sido superior y en ellos los efectos "lógicos de la naturaleza" no se han observado.

—Antonio Silva, en GACETA AGRICOLA, Navojoa, Sonora, Mexico

Distaff Voice at Yuma Field Day



MISS JUNE GIBBS

A successful 1962 season of spring and fall field days ended with a most successful event Nov. 20 at the Yuma Valley Station. With Supt. Frank Pritchard the able host, information was given by College of Agriculture personnel on cotton, sorghum, alfalfa and other crops.

Innovation was a talk by Miss June Gibbs, Extension Nutritionist, who discussed safflower oil as a human food. Advertised well beforehand, the talk attracted a large group of women.

Warner Fisher discussed cotton breeding, Bob Briggs the cotton spacing, K. C. Hamilton weed control and Bob Voigt and Lee Stith discussed sorghum research. Bob Tilt reported on Sonora, the new alfalfa.

County Agent G. E. Blackwell made the commentary during a tour of research plots. Adding greatly to the day were 10 special exhibits arranged by various research and extension personnel.