

# \$27 MILLION Arizona Lettuce

By LELAND BURKHART



C. W. Van Horn (above), inspecting lettuce variety plots, is in charge of the University Experimental Farms, Yuma, with particular reference to lettuce-growing experiments including lettuce seed production.

Dr. R. E. Foster (below), bagging an individual plant selection for seed, is in charge of lettuce breeding and variety improvement in Arizona with headquarters at the University Vegetable Research Farm, Tempe.



A \$27,000,000 lettuce crop during 1949 was produced by Arizona growers and shippers. Improvements in this important crop benefit Arizona growers and shippers, consumers, railroads, truckers, ice manufacturers, suppliers of seed, containers, fertilizers, insecticides and machinery.

Arizona's annual 40,000 acres of lettuce are grown in two localized districts — (1) Salt River Valley and (2) Yuma area. The Phoenix district shipped 63 percent of the 1949 Arizona lettuce crop.

One-half of the annual Arizona lettuce acreage is harvested as fall or early winter lettuce, and the rest as spring lettuce.

## Seed Improved

The active lettuce seed-improvement work by the Arizona Experiment Station was begun in 1935. The original objective of the program was to develop Imperial strains showing specific adaptability to Salt River Valley and Yuma conditions through close cooperation with USDA workers. This was accomplished by the development of the relatively successful Arizona strains of Imperial 44, 152 and 615. These improved strains were developed by individual plant selection methods. Seed of these improved strains was grown and made available under the supervision of the University of Arizona to Arizona lettuce growers during the last seven years.

Through the cooperation of the Arizona Crop Improvement Association and the Horticulture Department of the University of Arizona, there is now being developed a certified lettuce seed program which will enable Arizona lettuce growers to obtain seed of locally adapted strains grown in Arizona. Climatic and soil conditions existing in the Yuma area have proved suitable for lettuce seed production.

Cooperative tests with growers in the Salt River Valley and Yuma areas have shown the advantages of band placement of phosphate and nitrogen fertilizers.

The fertilizer requirements of lettuce vary with season, rotation practice, soil type and residual fertilizer constituents in the soil as determined by soil analyses. Phosphate fertilizers



Dr. W. D. Pew, applying lettuce fertilizer by experimental side placement equipment, is in charge of the University Vegetable Research Farm, Tempe, with particular reference to improving lettuce fertilizer applications, irrigation, and tillage operations.

at rates up to 70 pounds available per acre were efficiently applied at planting time. Side dressings of nitrogen fertilizers applied after thinning and before heading at rates of 20 to 30 pounds of available nitrogen per acre banded three inches deep between the plant and waterline increased head size. The favorable effect of soil organic matter on lettuce production and quality has been repeatedly demonstrated.

The arrival of high quality Arizona lettuce in the nation's markets is also dependent upon grower-shipper support of USDA inspection-grading, and the Arizona Standardization Service.

The Western Growers Association is cooperatively engaged with the USDA in improving shipping containers for lettuce. Private initiative is being expressed in developing more efficient harvesting and packing in such developments as mechanized field packaging of lettuce and vacuum flash-cooling equipment.

## Demand Is Increasing

The consumer demand for lettuce is continually increasing. The national annual per-capita consumption of lettuce has more than tripled during the last 30 years, which establishes a rapidly developing American produce industry.

The improvement of Arizona's leading position in the nation's fall-spring lettuce industry is one of the chief objectives of the University of Arizona agricultural research program.

—Leland Burkhart is Head of the Horticulture Department.