



With spraying time close at hand, all equipment should be in readiness.



For three years Beatrice worked with purebred sheep.

## Nitrogen Carriers Tested For Orchard Fertilization

WITH the widely prevalent practice of applying quickly available nitrogenous fertilizers to apple trees, have come questions as to the comparative value of the several forms on the market. In making a choice, several factors must be considered besides that of actual effects on growth and yield of fruit, points out H. E. Knowlton, horticulturist at the West Virginia Agricultural Experiment Station, Morgantown. Among the most important factors to consider are comparative costs per unit of nitrogen, mechanical conditions as affecting ease of application, and effects upon the soil reaction.

Four fertilizer experiments comparing nitrate of soda and sulphate of ammonia in their effects on apple trees were undertaken by the department of horticulture. Experiment I was started in 1922 with 32-year-old Rome trees in Pleasants County. Early application of both fertilizers were superior to those made at bloom. Nitrate of soda was found superior to sulphate of ammonia when both were applied at bloom. When applied 10 to 15 days before, there were no significant differences in results obtained from the two fertilizers.

### No Differences Noted

Experiment II was begun in 1926 with 36-year-old Rome trees in the same orchard. Fertilizers were also applied 10 to 15 days before bloom. No differences in growth or in yield were obtained.

Experiment III was begun in 1925 on 9-year-old Jonhathian trees in Berkeley County. Fertilizers were applied at time of bloom. Nitrate of soda was found significantly superior to sulphate of ammonia in both growth and fruit-

fulness.

Experiment IV was begun in 1927 on 25-year-old Black Twig trees in Jefferson County. Fertilizers were applied two to three weeks before bloom. No differences in growth were observed between trees fertilized with nitrate of soda and those fertilized with sulphate of ammonia. Significant differences in yield, however, were obtained, the trees fertilized with sulphate of ammonia yielding more.

### Acid Tendency Observed

Soil acidity determinations were made in Experiments I and IV. Sulphate of ammonia tended to make the soil acid. In Experiment IV, after fertilizer applications had been made for five years, the difference in lime requirement between nitrate and ammonia plots averaged 1800 pounds per acre.

The choice between the use of nitrate of soda and sulphate of ammonia in the apple orchard should be determined by their relative cost in terms of nitrogen units, advises Knowlton. To insure full value from sulphate of ammonia it should be applied at least two weeks before bloom, he says, and should be worked into the soil where early cultivation is being practiced.

In figuring comparative costs of the two nitrogen carriers, it should be borne in mind that eventually lime must be applied to correct the acidity of the sulphate of ammonia particularly if legume cover crops are grown. In such cases, the lime requirement should be determined and the amount needed to correct acidity should be applied. Addition of lime will not only help the cover crop, but also tend to make the ammonia more quickly available.

## Livestock Award Won by 4-H Girl

Seven Years Work Included Projects with Sheep, Dairy, Baby Beef and Canning

CLIMAXING seven years of outstanding livestock activities, a \$100 scholarship was awarded to Beatrice M. Nixon, 4-H club girl of Harrison County, West Virginia, by the West Virginia Livestock Association at its annual meeting in Morgantown, as one of the features of the Farm and Home Week activities at the College of Agriculture, West Virginia University.

During the seven years Miss Nixon has been a member of the Always Working 4-H Club she has completed 13 projects including three years of purebred sheep work, six years of dairy project work, three years of baby beef projects, and one year of canning. These projects had a gross value of \$1,263.12.

### Many Prizes Captured

Her work exhibited at county, regional, and state fairs won awards totaling \$55 in addition to many ribbons, medals, and other honors, including a reserve championship award in the junior division at the Tri-State Livestock Exposition at Pittsburgh this past fall where

her 1,055-pound Hereford baby beef steer sold for 20 cents per pound.

Miss Nixon was the state champion for 1935 in the Thomas E. Wilson National 4-H Club meet Animal Livestock Project Contest for which she received a 17-jewel \$50 gold watch.

### Prizes Personal Development

But of even greater value than what she has learned through her project work and the financial return it brought her, this wholesome young lady places the personal development she attained through her club activities. She says: "Through 4-H club work I have learned co-operation, truthfulness, fair play, honesty, and thoughtfulness of others. I feel club work has developed my inner-self, thereby making me a better citizen."

Miss Nixon graduated from the Shinnston high school in the spring of 1934 and is ready for college. During the past year, however, she has remained at home taking care of the housework and caring for younger brothers and sisters alone, in addition to her

4-H activities in connection with three projects, while her older sister and brother, accompanied by their mother as a housekeeper for them, have been attending West Virginia University.



Beatrice Nixon with her Hereford baby beef steer that took honors at Pittsburgh last fall.

## Virginia Tobacco Notes

### TURKISH TOBACCO HERE

Experiments in growing Turkish tobacco in Virginia have demonstrated that a grade of the tobacco can be grown here with flavor equal to the imported article, asserts George W. Koiner, commissioner of agriculture, commenting upon experiments of E. M. Mathews, superintendent of the Virginia Agricultural Experiment Station at Chatham, Pittsylvania county.

In order to obtain the characteristic Turkish flavor, plants must be grown very close together, within 12 inches of each other. The density of this growth seems to promote some sort of fermentation which gives the leaf its peculiar flavor. Methods of curing are also different from ours. One of Mathews' principal problems has been perfecting a method of curing which would be suited to our climate.

It is thought that the sale price of the Turkish brands would be a great deal higher than for Virginia flue-cured tobaccos.

Turkish tobaccos are imported by American cigarette manufacturers to provide blended flavors.

### SEED CLEANER INSTALLED

A tobacco seed cleaner has been installed in the office of C. L. Hall, county agent for Halifax County, Virginia, and farmers may have their tobacco seed cleaned without cost. As a result, better grades of the weed may be produced. Halifax is one of the outstanding tobacco producing counties in the dark belt of Virginia.

### TOBACCO LABOR DROPS

Tobacco, in regard to labor employment, dropped from first place in 1899, to fourth place in 1933 in Virginia, according to the State Planning Board.

The board's study started with 1899. Rayon and allied products that prior to 1929 did not figure among the first ten industries in the employment of labor, in 1933 became first. Railroad repair shops, third in 1899, became first in 1929, and dropped to second in 1933. Manufacture of cotton goods, fifth in 1899, became third in 1914, and jumped to third place in 1933.

## Farmers Develop County Programs

*Agricultural Policy Based on Proper Land Use Discussed*

Farmers in all of the counties in Virginia where agricultural pursuits have any degree of importance, are holding meetings for the purpose of discussing plans for a county-wide agricultural pro-

gram. S. K. Cassell, agricultural economist of the Virginia Polytechnic Institute division, Blacksburg, is working with the county agents in holding district meetings within the counties, and at these meetings, programs for an extended agricultural policy based upon a proper land use scale, are discussed. Mr. Cassell points out that as a result of the AAA program the following facts are now realized by the farmers:

1. An effective balance between production and consumption will result in a fair exchange price.
2. General prosperity is largely dependent upon a fair exchange value for farm products.
3. The centralizing power of the federal government can be used effectively to bring out a fair balance between agriculture, industry and labor.
4. To a certain extent farm products are not purchased under free competition, and monopolistic production is necessary to combat monopolistic purchasing methods.

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