

Soy Beans Continue To Grow In Importance

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The soybean is rapidly growing in importance in the United States. Industrial chemists have found a variety of uses for products of the bean. The Middle West, particularly Illinois, has built a great oil industry based on the soybean, but oil is only one of the many products of this magic bean.

The following interesting article appearing in Industrial Bulletin of Arthur D. Little, Inc., Chemists-Engineers, Cambridge, Mass., September, 1936, issue tells of some of the chief uses of the soybean and its products.

A BEAN WORTH KNOWING

The soy (or soya) bean was discovered some 25,000 years ago, and although it was virtually unknown in this country twenty years ago, its cash transactions during many days last Fall exceeded those of corn, the so-called king of the grains. Production of soy beans in the United States during 1935 was approximately 40,000,000 bushels.

An editorial by E. F. Marsiglio, in The Chemist-Analyst of the J. T. Baker Chemist Company, summarizes the recent soybean symposium of the American Chemical Society, and we are privileged to pass his comments along to Industrial Bulletin readers as an excellent brief resume of an important agricultural and industrial development.

According to N. F. Tree, the presence of significant quantities of essential amino acids renders the soybean the equivalent of milk in nutritive protein value. The oil yields an alkaline ash, and due to the percentages of linolenic and linoleic acids, the unsaturated fatty acids of soy oil are of value. In addition to mineral salts, vitamins B and G exist in quantities.

Soya oil is stated by E. E. Ware to have poor drying qualities but to possess the excellent property of permanent elasticity and stability of color. The oil is at present blended with other oils of better drying qualities for paint purposes and as a constituent of a synthetic resin vehicle. Agricultural and industrial research may establish soya oil as the most valuable oil for paints.

Millions of pounds of soybean oil have been used in soap making in the United States, but very little has been published on this use. The lathering capacity of the soap varies with the degree of hydrogenation of the oil, and is not affected by the hardness of water. A. A. Horvath further points out the possibility of substitution of soya oil for at least a part of palm and coconut oils. Crude soya oil contains 2 percent phosphatides, mostly lecithin, which interfere with the hydrogenation process, so that these must be removed before the oil may be used for soap making.

Industrial laboratories are very active in the search for new uses of the products of the soybean, and, according to the progress announcements, there appear to be no other agricultural product of such wide adaptation. The industrial demand for soybean is increasing until today it ranks as the fourth largest cash crop to the American farmer. Present indications seem to point that chemical and agricultural research will eventually establish the soybean as parallel in importance to wheat, corn and oats. The soybean or its products have already found the following uses: paints, breakfast cereals, glues, infant diet materials, rubber substitutes, stock feed, plastics, cooking and salad oil, auto parts, beverages, candy making, varnishes, flour, soaps, meat packing, floor covering.

The soybean is a new crop to the farmer, and, because of its varied adaptability, creates markets not heretofore open to agricultural products. It is said to be chemically beneficial to the soil, ideal for crop rotation purposes, and good for silage. There are many types and varieties of the soybean; hence selection of bean to soil and climate places its cultivation on a national basis. Cultivation has thus far been confined largely to crop production and industrial uses. Selection or breeding of varieties to extended food uses of the soybean will undoubtedly follow, once the importance of this agricultural product is realized. Nearly one hundred varieties are known and are roughly classified as the "food" and "industrial" types.

Woodruff and Klaas have made proximate chemical analyses of about a dozen edible varieties, and made flour from eighteen or twenty other varieties. Although some volume of refined soybean oil is marketed as a cooking or salad oil, some oil is blended with cottonseed, and some is used in vegetable shortening, soybean as a food is not used extensively in this country.

An agricultural product in demand by industry, adaptable to national cultivation, yielding a large cash crop to farmers and possessing nutritive food values to both beast and man cannot long be ignored. With the crop growing larger each year, and industrial demand increasing by now,

ly discovered uses, it will require only a little push by a food demand to establish for soybeans a future market. What relative positions the big four—wheat, corn, oats, soybeans—will take, only time can tell.

Timely Questions On Farm Answered

Question: How can I keep skipper and other insects out of cured meat?

Answer: Be sure that the meat is protected from flies and there will be no trouble with meat insects. If the smokehouse is not screened and ventilated, the meat should be removed as soon as smoking is completed and wrapped in heavy wrapping paper. Each piece should be wrapped separately and put in a thin cloth bag. Tie the bag securely so as to prevent flies from coming in contact with the meat and hang in a cool, well-ventilated smokehouse or cellar until ready for use.

Question: How often should fresh mash be placed before my laying hens?

Answer: For best results, fresh mash should be placed in the hopper each day. This will result in more feed being consumed and will also give the poultryman an opportunity to check on the amount consumed and to regulate his feeding before any drop in egg production is noticeable. It is a good practice to add this fresh mash at some definite time each day as this has a tendency to increase consumption. Before adding however, the mash that remains in the hopper from previous feeding should be removed.

Question: What are the best varieties of apples to plant in North Carolina?

Answer: Recommended varieties are the Yellow Transparent, Horse, Golden Delicious, Delicious, Stayman, and Winesap. These may be planted at any time during the winter in Eastern Carolina, but in the western section where winter conditions are severe, the planting should be delayed until spring. Plant the young trees from one to two inches deeper than they stood in the nursery and be sure that the hole is wide enough to receive the roots without bending them from their natural positions. Apple trees should be set at least 35 feet apart.

Question: Is it safe to feed silage to dairy calves?

Answer: Silage should not be fed to young calves, but a small amount may be included in the ration when the calves are from three to four months of age. About two pounds a day is sufficient at first as silage is laxative and too much will cause scours. This amount may be gradually increased as the calves grow older. Only good, well-cured silage should be used as any sour or mouldy feed will cause indigestion and retard growth.

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Question: What can I substitute for green feed in the poultry ration?

Answer: A good grade of cod liver oil that has been biologically tested for potency and vitamin content may be substituted in part for green feed. One pound or one pint should be added to each 100 pounds of mash when the substitution is made or it may be fed on the grain instead of mixing with the mash when more convenient. Where possible, however, some cured alfalfa hay, lespedeza, or clover hay that retains the green color should be provided for the vitamin content and laxative effects.

Question: Is it too late to seed Austrian Winter Peas for soil improvement?

Answer: No. This legume may be sown at any time from September to December and good growth has been secured where seedings were made much later than this date. As the seed are large they should be covered two to three inches deep so as to protect them from the surface frosts. There is always enough moisture at this depth to bring them up at once. Be sure that the soil is inoculated and, for best results, use at least 30 pounds of seed to the acre.

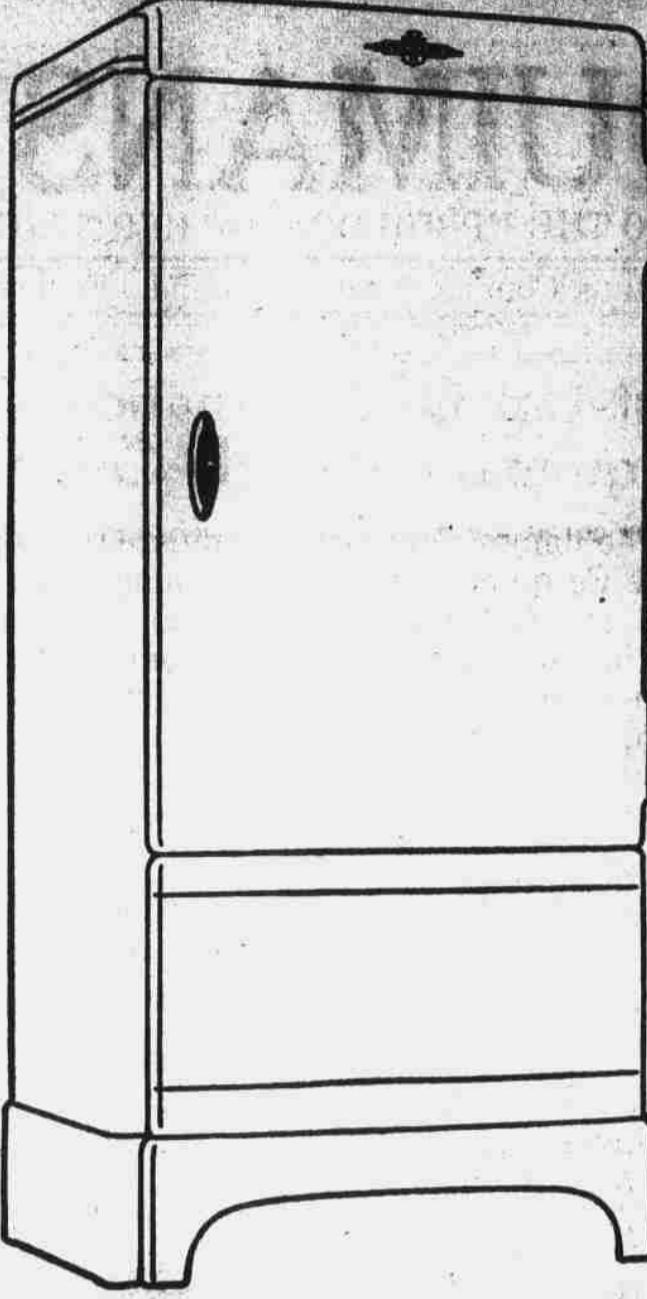
Cut Only Inferior Or Dead Timber For Fuel

At this season farmers interested in improving their woodlands should go through their timber stands and secure their fuel wood by removing the dead, crippled and diseased trees.

The healthy trees that remain should be thinned lightly so that they can make straight, vigorous growth, advise the State College Extension Service and Charles H. Flory, forester of the Soil Conservation Service.

But do not thin too heavily, he warned, as the light coming through the tops of the trees should reach the ground floor of the forest only in small spots. As the sun passes overhead the lighted spots will gradually move, thus any one place on the ground will not be dried out too much.

SECOND PRIZE IN CONTEST



of soil fertility, and to help supply necessary food and feed for man and animals, he pointed out.

To help 4-H club members in their livestock work, F. M. Haig and R. E. Nance, professors of animal husbandry at State College, have prepared a bulletin, club series No. 10, "Livestock Judging for 4-H Club Members," which will be supplied club members through their county agent.

WILL SEE ARMY-NAVY GAME

A party of Hertford girls, including Misses Helene Nixon, Mary Helene Newby and Mary Towe, left early Thursday morning for Philadelphia, where they will spend the week-end with Mrs. Arthur Woods Jr. They will attend the Army-Navy football game on Saturday, accompanied by Midshipman T. J. Nixon, III, and Ensign W. R. Crawford and a party of other friends from Annapolis and West Point.

LOCAL NEWS

BIRTH ANNOUNCEMENT
Born to Mr. and Mrs. R. M. Baker, at their home at Whiteston, on Wednesday, November 18, 1936, a son.

BIRTH ANNOUNCEMENT

Born to Mr. and Mrs. James Carter, at their home near Whiteston, on Tuesday, November 17, 1936, a son.

MRS. WINSLOW IMPROVES

Mrs. Jesse T. Winslow, of Whiteston, who suffered a severe heart attack last week, is reported as convalescing.

MRS. RIDDUCK IMPROVES

Mrs. Ellie Riddick, who has been confined to her home by a severe cold, is convalescing.

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STATIONS	STATIONS
WAPI Tues. and Thurs.	12:45 P.M.
WSFA Tues. and Thurs.	12:15 P.M.
WFIA Mon. and Wed.	5:30 P.M.
WSB Tues. and Thurs. (C.T.) 4:45 P.M.	12:45 P.M.
WWL Tues. and Thurs.	12:45 P.M.
WBZ Tues. and Thurs.	12:45 P.M.
WAPI Tues. and Thurs.	5:15 P.M.
WIS Tues. and Thurs.	5:45 P.M.
WRVA Mon. and Wed.	12:10 P.M.
WJDX Tues. and Thurs.	12:45 P.M.
WMC Tues. and Thurs.	12:00 P.M.
WKH Mon. and Wed.	12:45 P.M.

Good Second-Hand Peanut Bags For Sale

These bags are of the same quality that proved so satisfactory to the many farmers who used them last year. They are not perfect, but we consider them better and more uniform in size than most of the so-called "re-built" bags. Stop by and look them over . . . and get our prices. It may result in a considerable saving to you.

The Edenton Peanut Co.

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