

Improve Soil to Increase Crops

Several Middle West States Show Gains in Acreage of Legumes.

The concerted drive in the Middle West for improved soil fertility and better crop rotations is accomplishing its purpose as shown by figures compiled by A. J. Surratt, crop statistician for the Illinois Department of Agriculture. According to the census reports for 1924, as compared to those of five years before, the states of Illinois, Missouri, Iowa, Indiana, Ohio, Michigan and Wisconsin, all show a gain in the acres of legumes per 100 acres of cultivated crops. This is accounted for largely by the educational campaign put on by agricultural colleges, county agents, the press and other agencies.

Michigan Heads List.

This report shows that, of the states named, Michigan heads the list with an increase in legume acreage of 7.37 per 100 acres of cultivated crops; Missouri is next with 5.79 acres; then follow Wisconsin, Ohio, Indiana, Illinois and Iowa in the order named. Each of these states now has more than ten acres of legumes per 100 acres of cultivated, thus devoted to legume growing.

Legumes, per 100 acres cultivated crops, showed a gain in the last five years:

In Illinois, from 7.33 to 10.34, or 3.01 acres; in Indiana, from 9.59 to 14.15, or 4.56 acres; in Iowa, from 10.50 to 12.25, or 1.75 acres; in Michigan, from 22.65 to 30.02, or 7.37 acres; in Missouri, from 7.97 to 13.76, or 5.79 acres; in Ohio, from 12.98 to 17.83, or 4.85 acres; in Wisconsin, from 24.91 to 30.10, or 5.19.

Factors Increasing Profits.

Farmers generally have seen the advantage of better crop rotations and higher crop yields as factors in reducing costs and increasing profits. Inability to grow legumes because of soil deficiencies, principally of lime and phosphorus, has in the past discouraged many farmers from growing these crops. Educational work has shown how to grow better crops of alfalfa, clovers, soy beans and other high-yielding legumes through use of lime and fertilizers, inoculation and improved cultural practices. With the desire to grow more legumes and the adoption of proper methods of soil treatment, it is expected that the acreage of the soil-building crops will increase rapidly. Live stock and dairy farmers want such crops for their high-protein feeding value and grain and truck farmers want them for cover crops and manure crops.

Soy Beans Superior as Emergency Crop for Hay

About this time of year a certain number of dairymen find that they are not going to have enough good cow hay, clover or alfalfa. For such men, says the crops specialist of the New Jersey State College of Agriculture, there is nothing that will beat soy beans as an emergency crop.

Soy beans may be planted alone or in mixture with sudan grass or sorghum, advises the specialist. They should be inoculated if they have never been planted on the field before. Although they respond to lime, they will make a satisfactory growth on land which has not been limed for years. They are an easy crop to grow. They are the equal of alfalfa hay in feeding value and they leave the ground in good condition to sow wheat or other crops that follow.

Some farmers object to soy beans because they find the crop difficult to cure into hay. The experienced growers do not often have this difficulty. The principal source of trouble is in putting them into the mow before they are cured. The best method is to have the crop cured thoroughly in the field, letting most of the curing be done in the cock. Even though this may take a week or two soy beans seldom spoil in the field.

Where alfalfa can be grown there is no dairy hay that can come up to it in quantity, quality and low cost per ton, but not all farmers are ready to lay out the money for lime, nor have they the ground ready for alfalfa. For these men the soy bean is a good crop.

Well Prepared Seed Bed Favored for Many Crops

The cheapest and easiest time to cultivate corn or any other crop, is before the seed is planted. If the seed bed is thoroughly well prepared and all of the surface well pulverized, the crop is in the best condition to start growing. It will even pay, if weather conditions permit, to delay planting a few days for the sake of letting the first weed seeds start to grow, and then going over the field an extra time with the harrow to uproot them. When the seed is put into a warm, mellow, well cleaned soil, it has a real chance to start growing and to get ahead of noxious weed growth.

Get Barley Seeded Early

For a good crop of barley it is quite important to get it seeded early; in fact, it is best to seed barley before oats are seeded for best results. It is beneficial for oats and barley seed to remain in cold ground a short time before the soil and ground is found to be warm enough for growth. When sown very early, both oats and barley seed should be well-matured, or there is much danger of its rotting before growth starts.

See Potato Buyers Victims of Tricks

Much Substitution of Varieties by Dealers.

(Prepared by the United States Department of Agriculture.)

Potato growers who purchase seed potatoes do not always get the particular varieties they order. There is so much substitution of varieties by seed potato dealers that the growers are seeking the passage of control measures which will correct the evil. Substitutions, either careless or willful, are more apt to be made, says William Stuart, potato specialist of the United States Department of Agriculture, for the newer or less known varieties. Purchasers who order "fancy names" or "new and highly advertised" varieties are more likely to be victimized, he says, than those who stick to the widely known varieties.

Mr. Stuart ordered 139 different varieties last year from 61 different seedsmen. Many firms replied that they were "just out" of that particular variety. Of the 98 named varieties that were received, 25 per cent proved to be varieties other than those specified in the order. In one instance, three varieties were ordered from a dealer advertising himself as "reliable." Three different packages were received, all of which proved to be the same variety, but not of any one of the three varieties ordered.

Tomatoes Easy to Raise

If Carefully Cared For

Tomatoes are easy to raise if they are carefully cared for. They can be planted in seed plots, kept in the basement near the furnace, and be replanted in the garden as soon as the danger of frost has passed. And early ripe tomatoes bring fancy prices on the market. They are one of the best-paying vegetables that can be raised the country over, says a writer in the *Successful Farming*.

When the transplanted plants have again taken root and begin to branch out, most varieties require frames about them to prevent the branches from being broken by the weight of the green tomatoes.

All that is necessary is a lot of light lumber of narrow widths, cut to the same lengths and nailed to stakes driven into the ground, there being four around each plant.

As the dry weather sets in, if it does, build small mounds of earth about the base of each stalk. This not only braces the whole plant, but places the roots deeper in the ground and there is less likelihood of any damage from drought.

Formalin Is Effective Against Scab of Potato

Formalin is effective against common potato scab and is used at the rate of 1 pint formalin to 30 gallons of water. Seed should be soaked from 1/2 to 1 1/2 hours, then spread out to dry before replacing in containers. Either use new containers or be sure that the old ones are sterilized. Formalin treatment will not control black scurf.

Corrosive sublimate treatment will control both scab and black scurf. Use 4 ounces corrosive sublimate to 30 gallons water. Seed should be soaked 1/2 to 1 1/2 or 2 hours, depending on the severity of black scurf infection. Tubers should be whole and dormant when treated by either method.

Trees Are Valuable for Any Unproductive Land

The United States forest service during the years of 1910-11 planted 23 acres of western yellow pine and Douglas fir in the vicinity of Colorado Springs.

In 1926, just 16 years later, the forest service has realized \$2,500 from this acreage in thinnings alone, and at the same time has left 500 trees to the acre for a future crop. These 500 trees which have been left will prove the most valuable financially for lumber purposes.

Farmers should plant those unproductive acres to trees and later realize a cash return from them.—Chester A. Lee, Extension Forester, Colorado Agricultural College.

Farm Hints

Alfalfa hay, home-grown grain, and pure-bred sires spell dairy success.

Screens around the dairy early in spring mean less flies later in the year.

The first grass is watery and poor feed for stock; and the stock are also hard on the first grass.

Legumes such as sweet clover and alfalfa cannot grow in acid soil. That is why farmers are putting lime on their soils.

Millet smut may be entirely prevented by giving the copper carbonate dust treatment, the same as for sorghum smut.

The junior club boy of today will be the farmer of tomorrow so why not watch with interest the way he cares for his calf, pig, or colt?

Farmers who notice the cream test decreasing needn't worry as that is logical with the heavily increased milk flow. They are just getting more milk and less butterfat.

U. S. DOCUMENTS EAGERLY SOUGHT

Public Purchases 7,770,782 Government Publications in a Year.

Washington.—The document division of the government printing office, which, under the superintendent of documents, has charge of the distribution and sale of nearly all government publications, except those allotted to members of congress, last year made sales amounting to \$487,922.63, an increase of \$47,017.70 over the preceding year, and \$194,551 more than for the fiscal year 1921, according to George H. Carter, United States public printer.

In the fiscal year 1925 the document division sold 7,770,782 copies of various government publications, an increase of 526,041 over the sales for 1924. Most of these publications were ordered by letters, of which 375,571 were received during the year. A large number also were sold over the counter of the government bookstore on the ground floor of the Document building.

The increasing sale of government publications is especially noteworthy, says Mr. Carter, in view of the fact that the office has no funds for advertising its products and has to compete with free distribution by members of congress and other officers of the government.

The sale of government publications could be greatly increased, declares Mr. Carter, by ending the present wasteful method of free distribution which cannot supply all the demands and is therefore of benefit only to comparatively few persons. The charge for government publications, it is pointed out, is nominal, based upon reprint cost, plus 10 per cent. With this low cost no real reason is seen by the public printer why the distribution of practically all government publications should not be put on a sales basis and every one thus given equal consideration in the supply of public documents.

Would Help Pay for Printing. Increased sales would, of course,

help compensate the government for the cost of printing," the report continues, "but a material growth in sales, unless accompanied by a reduction of the free copies, would necessitate an additional force and a larger building for the document division, which is already seriously overcrowded. Therefore, any plan for the increased sale and distribution of government publications should, of necessity, take into consideration additional facilities and larger quarters for the document division.

"During the fiscal year 1925 the document division distributed 54,084,458 copies of publications. About 7,000,000 of these copies were purchased by the public. The distribution was made in 21,372,292 packages, filling 139,155 mail sacks. Periodical distribution for the various department and subscription lists requires the handling of 1,235 mailing lists containing approximately 835,000 names. From these mailing lists 22,712,964 machine-stencil impressions were made during the year.

"In order to meet the demand for government publications the document division has to carry a regular stock of fully 30,000,000 copies, including almost every publication issued by the government in the last half century. During the year the superintendent of documents received and stored 55,138,327 copies of the products of the government printing office.

"Not all of the copies printed annually ever reach the public. During the year 2,645,531 obsolete and useless copies, which had been ordered by the departments in former years, had to be disposed of as waste paper. Millions more of government publications will have to be consigned to the scrap heap year after year, if the present excess printing for free distribution continues and no additional space is provided for their storage.

"The superintendent of documents also conducts an extensive information service concerning government publications. Last year his office received and answered 161,852 letters of inquiry and aided several thousand other inquiring persons who visited the office. The fact that the document division possesses a remarkable library of government publications, consisting of 375,000 books, pamphlets and maps, for which there is a complete reference catalogue,

makes it possible to furnish information which could not be obtained as readily and accurately from any other source.

Better Library Service. "Better service is being rendered the depository libraries than ever before, as indicated by the increasing number of libraries that have found it advantageous to secure congressional designation as depositories of government publications. By the new law allowing depositories to select the class of publications to be furnished by the government, the depository libraries have been relieved of the unbearable burden heretofore imposed in having to receive and store copies of every publication printed by the government.

"Under the selection plan only 50 of the designated depository libraries elected to take copies of all government publications; 230 libraries receive more than 50 per cent of the list, and 173 of the smaller libraries less than 50 per cent, or only the publications of special interest to their patrons. This plan has effected a saving in the printing of thousands of publications, which heretofore the libraries had to discard after a time owing to lack of space or usefulness.

"Another agreeable service to the depository libraries is the immediate delivery of all congressional documents and reports that are of sufficient size to be bound separately. Formerly it was necessary to hold all these publications until after the close of a session of congress so that they could be bound in sets. Many publications of congress were obsolete or useless before they were sent to the libraries. The more prompt delivery was made possible through the co-operation of the joint committee on printing in adopting the new method of distribution as proposed by this office.

"Many obstacles are encountered by the document division which are unknown to most mail-order houses. It is pointed out by the superintendent of documents. The question of stock is always an uncertain quantity, he states, since, as a general rule very little information is had on which to base requirements. Publicity from unanticipated sources often exhausts the supply and aside from creating delays while reprints are made, if the publication was run from type and

not plated, refunds have to be made. During the last fiscal year, he reports, \$10,631.11 was returned, representing either overpayments or supply exhausted.

Would Facilitate Payments. "The adoption by the government of a legal tender of small amounts along the line of the Canadian postal note would be a great convenience, not only for the public in ordering government publications, but for any one patronizing a mail-order house where small remittances are involved," declares the superintendent in his report to the public printer.

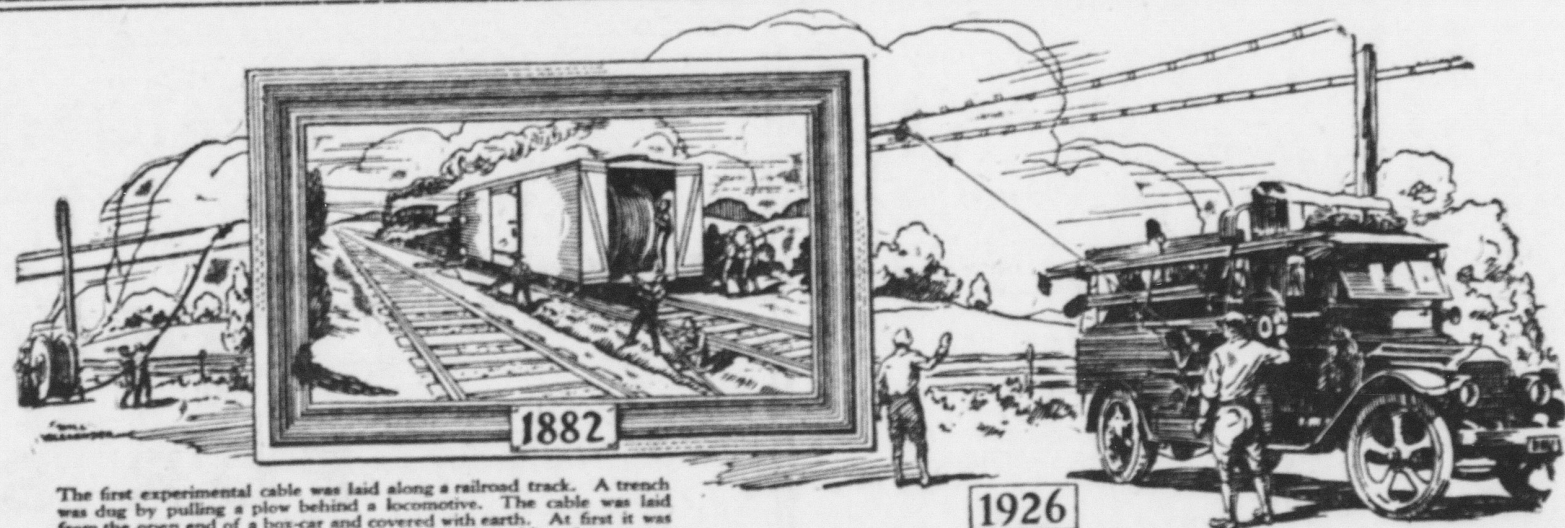
"Although we advertise that postage stamps will not be accepted, last year more than \$12,000 worth were received as remittances. If we could not find an outlet for these stamps it would be necessary to return them as nonacceptable for the reason that they cannot be converted into cash. Fortunately our foreign business has grown to such an extent that we were able to use all of them. I am convinced that advertising of stamps as nonacceptable keeps a great many people from ordering publications, when the remittance is a small amount, because they consider it is too much trouble to obtain a money order.

"The generous policy of the United States government in its free distribution of publications has no doubt served to depreciate their value. Those opposed to a restricted free distribution might be interested in knowing that Great Britain since the war has discontinued even its pre-war limited free distribution, and now all libraries have to purchase their copies.

"The British government, recognizing the value of its publications, in 1887 passed a resolution permitting the reprinting of information contained in a majority of them. The policy is similar to ours, in that we do not allow copyrighting. The two countries also entertain similar views in their practice of charging the prime cost to the government, so that the public may purchase at a nominal cost for paper, presswork and binding."

It Depends

It's all right to say "It depends on father" if the son in college doesn't mind being called an "it."



The first experimental cable was laid along a railroad track. A trench was dug by pulling a plow behind a locomotive. The cable was laid from the open end of a box-car and covered with earth. At first it was impossible to talk any great distance through cables. Nowadays, storm-proof, trouble-free, toll cables are rapidly displacing "open wire" lines.

Storm-proofing the Service

Experiments with underground telephone lines were made as early as 1882.

In the beginning the wires were wrapped in cotton and twisted into cables, usually of a hundred wires each. To prevent moisture getting in and breaking down the electrical circuits, the cables were soaked in oil.

At Philadelphia in 1890 was laid the first lead-sheathed "dry core" cable, in which the wires were wrapped with paper. This marked the beginning of what has now become the universal type of construction. And the hundred wires of the early cables have now increased to 2400, inclosed in a lead sheath less than three inches in diameter.

The use of these cables in urban development is well known.

Not so generally appreciated, however, is the extent to which they are reaching out through the state, tying the cities together.

Across the central part of Pennsylvania, from east to west, is the longest; and continuations of it already reach to New York and Boston, Baltimore and Washington, and Chicago and intermediate cities.

Similar cables radiate from Philadelphia and Pittsburgh, and are steadily extending onward. North from Reading to Bethlehem, Eacton, Hazleton, Wilkes-Barre, and Scranton is another very important link of an inter-city cable system that is now growing at the rate of three hundred miles a year in Pennsylvania.

Twenty years ago such cables would not have "talked." Today, furnishing a service which is as flexible and natural as a cross-town connection, they comprise an outstanding example of the continuous progress of telephony.

F. L. RICHARDS, Manager

THE BELL TELEPHONE CO. OF PENNSYLVANIA

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