

# PROGRESSIVE FARMER

THE INDUSTRIAL AND EDUCATIONAL INTERESTS OF OUR PEOPLE PARAMOUNT TO ALL OTHER CONSIDERATIONS OF STATE POLICY.

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## FARM AFFAIRS.

### BUSHEL CRATES.

Correspondence of the Progressive Farmer.

What is a bushel in North Carolina? Here, in Michigan, the standard Winchester bushel of 2150.4 cubic inches is the legal standard for all grain and commodities sold by "struck measure." The Winchester bushel is a cylinder 18 1/2 inches in diameter and 8 inches deep. For vegetables, fruit, coal, &c., sold by "bushel measure" the contents are heaped up in a cone from outside to center 6 inches high, or "as high as may be without special effort." This standard heaped bushel contains 2748 cubic inches nearly.

Did you ever measure your bushel and figure out its contents? Try it. Any common school arithmetic will give the rule. Your high school boy, or his teacher can figure it out if you can't. You pay taxes for schools. Get a little practical work out of the tax eaters. If you can't find out, say so in The Farmer and I'll have the rules published—editor willing.

Bit about the crates. They are very popular in Michigan. Near Oxford, Michigan, is a great potato growing section. Farmers plant 10 to 40 acres of potatoes. Two thousand to ten thousand bushels is not an unusual potato harvest for a farmer there. He will have from 200 to 1200 bushel crates. They are used in the harvest, in storage in cellars, in marketing. Apple growers make great use of them. Corn and vegetables are harvested, transported to market or stored at home in crates. Even the women use them for coops for the hen and chicks, or as a jail for the troublesome "settling hen."

About the size and material. Many use elm, some basswood and poplar some use pine. I prefer as follows: 4 posts, 1 inch square by 1 foot long for corners to nail the slats on. Elm suits me best for this. It doesn't split easily in nailing and holds the nails very firmly. For end slats 4 for each end. The two bottom slats are cut 1/2 inch thick by 2 1/2 inches wide by 14 inches long. The other 6 are 2 1/2 wide by 1/2 thick by 14 inches long. The sides consist of 4 slats on each side, cut 17 by 2 1/2 by 1/2 inches thick. The bottom consists of 5 slats cut 17 by 2 1/2 by 1/2 inches.

In making the bottom end slats are shaved off at the end 1/2 inch to fit the posts; this makes the outside even.

Have a form to put the two posts on square and true. Nail on the end slats, 3 nails, No. 3's are best, in each end of each slat. Make up a lot of crate ends first. Now have your form so you can set up your two ends square and true, the thick end slat up. Nail on your 5 bottom slats, turn quarter over nail on the 4 side slats, on the other side nail the other 4 side slats, 3 nails in each slat's end. Your crate is done, and, if properly made, should crate 3 in a nest, one slipped end first in the other and the third crate slipped on over. This makes it handy storing or carrying empty crates.

This crate measures 28 5/8 cubic inches, outside measure. Deducting the solid contents of slats and posts leaves it less than the regulation heaped measure, since it is 16 1/2 by 14 by 12 inches and the corner posts out of that.

But the crates sit in the ordinary wagon box end to end across the box very nicely, which is convenient in

handling and wastes no room. Some make them 18 by 13 by 12 inches, and others even make them 18 by 14 by 12. These last hold over a bushel heaped and do not bruise the top potatoes when placed two deep.

Some people make the ends of one board, cutting hand holes near the top. They are too heavy, I think. A nice light crate is built of elm corner posts and two bottom nailing slats, the others of pine, basswood or other light, strong timber. Building laths make a cheap service crate. You may not need them on cotton plantations, but vegetable and fruit farmers will find 50 to 1000 very handy and growing more convenient for many uses every year.

### A TRUCKER

#### FARM PAPER; CELERY.

Correspondence of The Progressive Farmer.

It is well for a man to be a man in and of himself—that is, have an opinion of his own. But he should look well as to the real ground of his opinion. We will suppose him to be a farmer satisfied with his occupation, with no cause for complaint about hard times. You may call to see him at his home and you are apt to find books and papers on the science of farming and him well posted on all the improvements of the times. Good farming is a science and an art. This man knows what to grow and how to grow it; where the demand is and how to reach it. The man at this age of the world who says that he wants no paper farming in his is behind the times. The information that a man gets by personal experiment comes slow and is very costly. A good well-edited agricultural paper, giving the results of the latest agricultural experiments and thought, is very suggestive to the mind that is open to instruction.

Another subject: the question of crops. Suppose you grow lettuce as your money crop. It is a good crop to grow, but it would not pay you for reasons well known to yourself. The tomato is a paying crop, but you must be near a large market. Now the vast supply of celery comes from a far off State. It grows freely in this State and there is a demand in our cities. Hundreds of our farmers can make money growing it. R. R. MOORE, Guilford Co., N. C.

#### GROWING SWEET POTATOS.

Correspondence of the Progressive Farmer.

Sweet potatoes are grown successfully in one half the area of the United States. The crop produces from 100 to 300 bushels to the acre in the States South of Nebraska and New York and fair yields are reported from Maine and the warm valleys of the irrigated West. The last official census gives the yield for the entire country at 44,000,000 bushels. Expert growers estimate the actual cost of production from 10 to 20 cents per bushel. There is certainly good profit in growing the crop. I have sold good sweet potatoes at ten cents per pound, but the general market price will not average more than one third, or even as low as one fourth that amount. Sometimes certain conditions cause very low prices, as in other farm products, but, as a general rule, the market remains very good.

A warm, sandy, well drained soil is the ideal spot for sweet potatoes. The crop will not be satisfactory on heavy clay land nor on old worn-out fields. New land is very good for the plant if it has not been highly fertilized with barnyard manure. The potatoes will not grow to very great success in the shade, nor on a cold hillside.

The sweet potato is a heavy feeder and removes much plant food from the soil. According to reports of the U. S. Department of Agriculture, 185 bushels require: 10 pounds phosphoric acid, 23 pounds nitrogen and 50 pounds potash.

The potato thrives best on sandy soils, and these as a rule, contain the least food. An average application for sweet potatoes should be about: 6.0 to 8.0 pounds per acre of a fertilizer running, say, 6 per cent. phosphoric acid, 8 per cent. potash and 4 per cent. nitrogen, to be used before planting and well mixed with the soil.

Sweet potatoes are best grown from plants. These are started in a hotbed or cold frame. My best plan for getting the plants is the cold frame. Dig the pit the size required, about two feet deep. Fill in six inches with coarse leaves or barnyard litter, to insure proper drainage. Then put about six

to eight inches horse stable manure, which must be well pressed down. On this add four inches of earth. Then lay the sweet potatoes as close together as possible without touching each other, and cover with fine sand or soil. Cover the bed with a cloth and on that, place some boards or slats to hold the cloth in place and protect against sudden freezes. Keep the bed well watered and the plants will be a success. The bed should be made about six weeks before the time the plants are wanted, which is usually about the first of May.

There are several good varieties, the Jersey or Nansmond being best for small, early market, and the Yama best for late planting for the general market and stock feed. The potatoes will mature in from 60 to 90 days after planting. Plants should be set about 18 inches apart in furrows running north and south if possible, with plants on west side of furrow. The furrows may be three feet apart. Some plant thirty inches either way, requiring about 7,000 hills to the acre. Plants are usually set when six inches in height. The dibble is the best single-hand tool for transplanting, but several machines are now in use, by which large areas are planted. Cultivation is very simple, shallow plowing and careful weeding being the chief requisites. Most farmers think that cultivation the best, and do not disturb the seed bed only in pulling out weeds.

The potatoes may be plowed out and after drying be marketed or put in the winter storage bins. They will keep if a uniform temperature of about 60 degrees is maintained. Some find the surplus potatoes left after the market prices drop, very valuable food for horses, cattle and hogs. Several canning factories are in operation putting the potatoes in three pound cans and placing the product on the market with very satisfactory results. Some Southern housewives have found it very good and profitable to dry the potatoes in the sun, by slicing them into two pieces. The crop is one which every farmer should try, if he has the soil and the climate favorable. Seed potatoes may be obtained of seedsmen or the plants may be purchased at reasonable rates from those engaged in growing them in almost every State. JOEL SHOMAKER

#### EARLY POTATOS.

Correspondence of the Progressive Farmer.

Reaching the market early with new potatoes is the plain secret of profitability with such crops. Fall plowing is practically a necessity, except on thin sandy soils, and cross plowing as soon as the weather breaks is the second step. There is more or less risk in seeding before the soil warms thoroughly, but this risk must be taken if an early market is to be reached; also the tubers must be well grown, as "green" tubers cook solid and are a little worse than tasteless. With new potatoes the common practice is to apply the fertilizer with the seed, and trust to Providence. As the whole crop is put through with a rush, there is no time to prepare the seeding bed, and rest for ten days or two weeks before planting. As a result, the fertilizers sometimes damage the crop.

All fertilizers, practically, when mixed in the soil a few weeks, lose in various properties. When, however, the tender roots push out, only to encounter raw acid phosphate, the result is inevitably death and decay. There is no risk in applying potash and phosphates some weeks before seeding, in fact, this is the best way to use such fertilizers, but the nitrogen should be applied at seeding time, or even later, if nitrate of soda is used. The crop is planted usually in drills just far enough apart to admit of horse-hoeing, therefore, broadcasting the potash and acid phosphate is perfectly safe, and it should be done on top of the cross plowed soil, before the smoothing harrows are put at work. Used in this way the chlorides of potash, which are commonly thought to be injurious to potatoes (kainit and muriatic) are entirely harmless and as useful as the high grade sulphate.

Used in this way, it is supposed of course that an ample quantity has been used, there are few farm crops which resent more quickly, negatively feeding. Early potatoes make, or should make, a quick growth, and if starved are promptly apt subjects for all kinds of root diseases. Not only this, but the soil may become so charged

with disease germs, that succeeding crops which are adequately fed, may suffer severely. In fact, for early potatoes, an excess of plant food should be used invariably. Any great excess will be saved from loss by the following cover crops, which all prudent farmers now use to follow early harvests, to protect the soil from autumn washing and leaching.

Just what may be considered an excess of plant food is a simple problem. A crop of 200 bushels contains in tubers, tops, &c., 45 pounds of nitrogen, 75 pounds of potash and 20 pounds of phosphoric acid. These are contained in 1000 pounds of a fertilizer containing 4 1/2 per cent. nitrogen, 7 1/2 per cent. potash and 6 per cent. available phosphoric acid (the latter should always be used in great excess, as it quickly takes insoluble forms in the soil). Now, while 1000 pounds of this fertilizer contains enough, that is not sufficient for success with new potatoes. At least 1,500 pounds per acre should be used. If the potash and phosphoric acid are used together, but cannot be purchased in proper form, make a mixture for each acre of 225 pounds of muriate of potash and 500 pounds of ordinary acid phosphate. Then 275 pounds of nitrate of soda can be used later, top dressed along the rows, after the plants have broken through the soil. R. GARWOOD.

The following note quoted from the American Horse Breeder, breathes the reviving spirit in horse breeding circles:

"The horse must go," shrieks the automobile promoter. To be sure it must. He's built that way. You saw him go last week at Madison Square Garden, and the week before. Last week he went to the tune of the biggest prices ever paid for trotters since the business got down to the basis of actual values. The week before he went to the tune of the largest crowd that ever thronged the ring-side of a horse show in Madison Square Garden. On both occasions the horse evoked more enthusiasm than was ever shown him under like conditions. And, then, too, there is speedway, where the horse is, of course, but a memory, which affords another proof of the statement that 'the horse must go.' Therefore we are compelled to applaud the unprejudiced views of the automobile stockholder and his industrious advance agent. The 'horseless age' is an expression which the auto-stallions love to mouth. It sounds well and is cheering to their hopes and dreams of avarice. It is, too, a high compliment to the human race, for it presupposes that the flower of sentiment which has prompted men to heroic deeds in every sphere of human endeavor has been plucked from the breast of man. Still, in spite of all the glowing word pictures drawn by the auto-pushers, we are constrained to take the view that the horse as a companion of man, as an industrial factor, and a contributor to his pleasure on the track and on the road, will survive the passing fads of cogs and wheels."

#### BE A BUSINESS MAN.

Every farmer should be capable of transacting business as well as any merchant. Keep posted on the prices of your machinery, hardware, groceries and everything needed on the farm. Get catalogues from all the big mail order houses; they will cost a few cents, but they are worth it. Ascertain the responsibility of the concern. Find out the freight rates on the various articles you need from the place at which you can buy cheapest; the freight agent can supply this information and then when you need anything just order it. Don't give your local dealer from 25 to 40 per cent. profit which you can save by dealing with mail order houses. Let me give you an example: Had corn shellers are from \$4.50 to \$5.50 in Chicago, freight, \$1.20. The dealer charges from \$8 to \$8.50 so if you buy from him you pay \$2 to \$2.50 for a little trouble which you might just as well have experienced and thus saved that amount. Pass as many middlemen as you can; buy and sell direct. With the low prices of our farm products standing still and the prices of what we have to buy going up we cannot afford to give away money. Of course, you have the advantage of using your credit if you purchase of your dealer, but remember credit is best to leave alone if you possibly can do so. Another thing: you can examine the

goods offered by the dealer, but the proposition which the mail order houses make, giving the purchaser the privilege of returning the article if after examination it is not satisfactory, you don't take any more risk than the dealer and if he can stand it you can.—A. W. Hedine, McPherson, Kansas, in Farmers' Voice.

#### RURAL DELIVERY.

"Our readers must have patience with us if we continue to harp at frequent intervals on the value of rural delivery. Many of them no doubt think the daily delivery of mail at their door is a very long way off. We assure them it is not nearly so far off as they expect, provided only they will bestir themselves and secure good roads. The Department is expending \$300,000 this year in order to test the value of rural delivery, and our readers will no doubt be very much surprised to learn that the annual cost to the government is but 84 cents per capita, while the cost of delivery by carriers in cities not exceeding 5,000 population is \$2.80 per capita. They may also be surprised to know that the increase in the postal receipts following the establishment of rural delivery is from 50 to 75 per cent., to say nothing of the doing away of the expense of fourth class post-offices and star routes which are superceded by this new service.

"We do not believe it is possible in the very near future to have every farm in the West reached by free delivery routes, but we believe it is entirely possible in the next two years to have free delivery established where ever 700 people can be reached in a 25 or 27 mile drive. One of the essential points, however, is good roads, and we do not know of any movement which will tend so much to improve the roads as rural free delivery." The above two items are clipped from Wallace's Farmer.

The Report of the Postmaster-General contains a vast deal of valuable information on this subject. Among other things it says:

"City delivery was initiated primarily to relieve the postoffices, it being manifestly impossible for the postmaster to deliver the mails of ten thousand or more people through the postoffice window. Rural free delivery has for its main purpose the advancement and education of the people and to bring the postal service within their reach. Even in the most favored rural districts there is no service that approaches in completeness the house-to-house delivery of the cities. The recipients of the rural mail have to provide boxes and place them at convenient places along the line of road traversed by the rural carrier, so that he can deposit and collect the mails, if need be, without alighting from his buggy. Frequently seven or eight neighborhood boxes are grouped together like a lot of beehives at a cross road corner, and the people living in houses perhaps half a mile or more back from the road watch for the daily passing of the carrier and come to the cross road to collect or deposit their mails. But even this is so much better than the long ride to the postoffice in all kinds of weather, on the mere chance that there may be some mail awaiting them, and the time consumed in watching for the carrier and sending one of the children, it may be, down to the letter box to get the mail, is so much less than that which would be occupied in hitching up a horse and driving to town, and the saving of labor in the busy season is so important an item to the frugal, industrious agriculturist that free delivery is generally spoken of in the communities where it has been tried as the greatest boon the government has ever conferred upon them. One Missouri farmer calculated that in the last fifteen years he had driven 12,000 miles going to and from his postoffice to get his mails, all of which travel is now saved him by rural free delivery."

The report says further: "That whenever the system has been judiciously inaugurated, with a sincere purpose to make it a success, it has been followed by these beneficial results: 1. Increased postal receipts. More letters are written and received. More newspapers and magazines are subscribed for. So marked is this advancement that quite a number of rural routes already pay for themselves by the additional business they bring.

"II. Enhancement of the value of

farm lands reached by rural free delivery. This increase of value has been estimated at as high as \$5 per acre in some States. A moderate estimate is from \$2 to \$3 per acre.

"III. A general improvement of the condition of the roads traversed by the rural carrier. In the Western States, especially the construction of good roads has been a prerequisite to the establishment of rural free delivery service. In one county in Indiana a special agent reports that the farmers incurred an expense of over \$2,600 to grade and gravel a road in order to obtain rural free delivery.

"IV. Better prices obtained for farm products, the producers being brought into daily touch with the state of the markets, and thus being enabled to take advantage of information heretofore unattainable.

"V. To these material advantages may be added the educational benefits conferred by relieving the monotony of farm life through ready access to wholesome literature, and the keeping of all rural residents, the young people as well as their elders, fully informed as to the stirring events of the day. The moral value of these civilizing influences cannot be too highly rated."

#### FERTILIZERS FOR WHEAT.

Results of the tests of fertilizers on wheat carried on at the Virginia Experiment Station, considered from all standpoints, strongly emphasize the danger attending the unintelligent or lavish use of nitrogen. This constituent is far the most costly of any and the greatest care is necessary in its use. Whenever possible, the nitrogen required by wheat—and these tests clearly show that on our soils, at least, it is needed—should be given by plowing in green crops, especially clover and other leguminous plants. Green or even dried vegetable matters supply it more cheaply than it can be bought in nitrogenous manures. The best results of recent agricultural science teach us that the farmer should get his nitrogen through the aid of such crops, and supply his mineral elements, phosphoric acid and potash, by applications of standard phosphate and potassic manures. Among the best of these are muriate of potash, kainit and acid phosphates of high grade.

The soil on which these tests were carried on is fairly representative of large areas in the southwestern and valley sections of Virginia, and the calcareous districts of other States, and their results, therefore, admit of wide application.

They teach that the farmer should, in these regions, depend as far as his wheat is concerned, chiefly upon acid phosphate—dissolved bone black, ground bone, phosphate slag, etc., may be substituted for it—to which he may add, with reasonable hope of some slightly increased profit, potash.

For his nitrogen he should depend upon turning under vegetable matter, or if convinced by intelligent observation or careful tests that his soil immediately needs nitrogen, he should apply dried blood, tankage or nitrate of soda, economically and cautiously.

#### IN BUYING FERTILIZERS, REMEMBER!

From the Farm Journal and its summary of a recent New Jersey bulletin, we glean many facts of value and interest to fertilizer buyers.

From Bulletin 139 of the New Jersey Experiment Station, we find that the manufacturers' average retail price per pound, during 1899, was 12 cents for nitrate of soda, 12 1/2 cents for sulphate of ammonia, 14 1/2 cents for dried blood, 12 1/2 cents; dried ground fish, 13 1/2 cents; fine ground bone and tankage, 15 1/2 cents; coarse bone and tankage, 11 1/2 cents. The price per pound of available phosphoric acid (in phosphate rock, bone and bone black) was 3 1/2 cents; for insoluble phosphoric acid in fine ground bone and tankage, was 4 1/2 cents, and in coarse bone and tankage, 2 1/2 cents. The price per pound of actual potash from muriate of potash was 4 cents; from kainit, 4 1/2 cents, and from high-grade sulphate, 5 1/2 cents. It should be carefully noted that these are the average retail prices of the plant food in the ingredients, and not of the ingredients themselves. If, for example, say given lot of nitrate of soda should contain fifteen and a half pounds of nitrogen per hundred weight, a ton of

[CONTINUED ON PAGE 8.]