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Just a Few Cabbage Leaves



"ALL-HEAD EARLY" Grown from Hastings' "PREMIER BRAND" Cabbage Seed.

From **H. G. Hastings & Co.**

SEEDSMEN

35 Marietta Street ❧ ❧ ❧ ATLANTA, GA.

Cabbage Growing in the South

THE NOTES on the culture of Cabbage to be given in this pamphlet are intended to cover also the culture of Cauliflower, Kohlrabi, Brussels Sprouts and other vegetables of this same general class. They may be handled in much the same way, and are subject to the same diseases and suffer from the same insect enemies.

CABBAGE is one of the standard crops of the civilized world, and, in our own Southland, there is no crop that is of greater importance. It should therefore be of interest to us all to find the best methods of growing and preparing the crop for market so as to get the best results from our work.

It is safe to say that there is no part of the South in which Cabbage cannot be grown, provided the proper conditions are furnished. It is a heavy feeder, and the land which is to grow the crop must be liberally supplied with the food necessary for its best growth. A moist, sandy, well-drained, loam soil is the most suitable for this crop. Loam with a clay sub-soil is good. A crop of excellent quality, though the heads will be small, can be grown on the common sandy soils of the South, if the crop is properly fed and cultivated.

The seed should be sown in a seed bed, and the plants transplanted when they have reached the proper size. The beds should be 4 feet wide, level on top, and elevated somewhat from the ground around it. This bed can be protected by glass or other covering during cold weather, when the plants are being started early in the spring, or, if planted in the summer or early fall, shade can be given. The soil of the seed bed should not be richer than the soil in which the crop is to grow. Make the soil in the seed bed fine and smooth, removing all lumps and sticks. Sow the seed in drills across the bed 4 to 5 inches apart, covering the seed from $\frac{1}{4}$ to $\frac{1}{2}$ inch, according to the quality of the soil. When the seed is sown, at the rate of 4 to 5 seeds to the inch, let the earth be dry rather than moist, but after planting firm the soil and give the bed a good watering. After the seed has been planted, and before the little plants appear, it is well to scatter Bug Death lightly on the bed for the benefit of the tiny flea beetle, which often destroys the young plants even before they show above ground. It is a good idea also to keep the inside bottom of the watering pot used freshly painted with tar, as this tends to keep ants and other insects away from the bed. The seed bed should at all times be kept rather cool, as the Cabbage is a cold weather plant and the young seedlings will be much more stocky and healthy if they are grown slowly in a cool spot rather than forced.

In planning for the quantity of seed to be used, take into consideration the time of year. In the spring $\frac{1}{4}$ pound of good seed will give enough plants for an acre. For summer and early fall sowings it is best to figure on $\frac{1}{2}$ pound per acre, as the heat at that season will be fatal to many of the young plants, and insects are also more prevalent then. Hundreds, yes, thousands of pounds of Cabbage seed are lost every fall in the South on account of the heat. The Cabbage likes cold weather, and the seed will very often not germinate when planted during the hot months. This fact must be kept in mind during summer and fall plantings. Seed may fail entirely in July that would have germinated perfectly the following December.

PREPARATION OF THE LAND.

Cabbage will thrive in good, rich, garden soil with the proper supply of moisture. In growing the crop in the South on a large scale, you cannot do better than to precede the Cabbage crop by plowing under Cow Peas, Beggarweed or Velvet Beans. Whenever obtainable, well-rotted manure can be used to advantage, and it is almost impossible to get too much of it in the ground. The best way of applying it is broadcast, and then harrow it in thoroughly. If compost can be obtained in sufficient quantity, use it on your crop.

If you cannot get manure you will have to use a commercial fertilizer. This will vary a good deal, according to the character of the soil in which your crop is to grow.

Customers often write us, asking, "What kind of fertilizer will I need for my Cabbage crop?" We can't answer that question off-hand, for we don't know just what your soil is, or just what it will need in the way of the different elements. You will have to experiment a little yourself to determine just what you will need, and use your own judgment to a large extent. On a clay soil you will not need

so much potash in the fertilizer as you will on sandy soil, and on rich bottom land you will not need so much nitrogen. We can't give exact directions on this point, because it is a thing that each grower must determine for himself.

A complete fertilizer for Cabbage should contain :

Available phosphoric acid.....	7 per cent.
Potash.....	8 per cent.
Nitrogen.....	5 per cent.

1,500 to 2,000 pounds of this formula per acre should give excellent results. Two or three weeks before the plants are to be set out, lay off the rows and apply the fertilizer in a broad band in the furrow. Stir it in well and put two furrows on it. The following table will give the amounts of the various fertilizing materials necessary to give the required per cents in a mixture. Bear in mind that no matter what fertilizer is used, the land should be as fine and well prepared as possible. Don't try to grow the crop on rough, lumpy soil, full of roots or trash. You can't get the land too smooth or too fine.

ELEMENT.	POUNDS OF DIFFERENT MATERIALS FOR ONE ACRE.		
Nitrogen...	{ 1,200 to 2,000 pounds cottonseed meal; or 750 to 1,200 pounds dried blood; or 500 to 800 pounds nitrate of soda; or 400 to 650 pounds sulphate of ammonia.		
		Potash..... { 1,200 to 1,600 pounds kainit; or 300 to 400 pounds muriate of potash; or 300 to 400 pounds sulphate of potash; or 550 to 750 pounds sulphate of potash and sulphate of magnesia.	
			Phosphoric acid { 1,000 to 1,750 pounds acid phosphate; or 800 to 1,500 pounds dissolved bone.

Supposing the little plants in the seed bed to have had good care and no accidents, they will be ready to transplant when they have made three pairs of leaves; they should be about 4 inches high and very stocky. The best time to transplant is just before a rain, and about the worst time is just after a rain. If the prospect is that there will be no rain shortly after planting out, do not take any chances, but "puddle" the plants liberally when they are being set out. If you will use water in which fresh manure has been soaked, making a weak solution, instead of using clear water for puddling the plants, you will find the results will justify the trouble. This puddling takes a little more time, but you will gain by doing it. Many of the large market gardeners of the North do not transplant directly from the seed bed to the field, but "prick out" the plants into shallow flats about 2½ inches in depth, the earth being a little richer than that used for the seed bed. The plant develops a vigorous root system while growing in a flat, and when transplanted into the field grows off very strongly. We think it would pay to make a trial of this plan, especially if the grower has a fancy trade to supply, where unusually nice stock will bring an advanced price.

It is claimed that this plan of two transplantings will bring in Cabbage two weeks earlier than when the plants are set out directly from the seed bed. The planting into flats could, of course, be done on rainy days when field work was impossible, and thus the time lost would not be as great as might be supposed. When the plants are to be set into flats, the transplanting should be done as soon as they have made their second pair of leaves.

The work of setting plants in the field can best be done by three workers. The ground having been properly marked off, one should go ahead, make a hole with a dibber, and drop a plant into it. The second, following him, pours into the hole about a quarter of a pint of water, and the third packs the wet soil closely around the plant and covers the soil with dry earth to prevent evaporation. The planters should work closely behind each other, so that the plants may not become dry or the water sink into the earth before the plant has been well set. The plants should be carried about in a shallow box or basket, kept moist and covered with a damp cloth. Do not let them get dried out under any circumstances. The plants should be set in the earth down to the stalk of the uppermost leaves, or very nearly to the crown of the plant. If no rain comes soon after the plants have been set, better water them in some way rather than take the chances of having them suffer from drouth and thus receive a check. They must be kept growing vigorously for best results. The rows in which they are set should be 3 feet apart, and the plants set 2 to 3 feet in the row, according to size of variety used.

After setting out, cultivation should be frequent but shallow. It is very desirable to cultivate the plants while the dew is on them, but of course this cannot be done when large crops are being grown.

Frequent hoeing is good, and the aim should be to keep the whole crop in vigorous growth. Cultivation must be shallow, as the feeding roots are near the surface.

Cabbages for market are usually packed in ventilated barrels, the loose outer leaves being trimmed off, and leaving only enough to protect the head from injury. Pack the cabbage firmly in the barrels, using considerable force to be sure that the barrel is full enough to allow for the shrinkage that will occur. The top is usually covered with bagging, instead of the regular barrel head, as this allows the barrel to be packed fuller, and gives better ventilation. Crates are sometimes used, usually holding 100 pounds, but the barrel is generally preferred. As to yield, from 170 to 200 barrels per acre of marketable heads is a good crop, though these figures are often very largely exceeded. Prices obtained vary a great deal, and we can give no idea as to what a grower ought to expect, though we are often asked this question. The price depends on the quality of the Cabbage, the shape in which it gets to market, and on the state of the market when it is sold. The grower must simply grow the best cabbage he can, watch the market closely, and pack his crop in the best possible shape. After watching the produce markets here in Atlanta for the past three years, we are convinced that the low price often realized is due in many cases to the fault of the grower who ships poor stuff badly packed. It won't pay to do that. During cool and cloudy weather the packing can be done in the field, but when it is hot and sunny it had better be done under shelter.

Cabbage seed may be sown both in spring and fall. We cannot give exact dates for sowing that would apply to all of our customers. In this section, Atlanta, we begin sowing for spring cabbage in January, and sow during that and the following two months. The seed for fall crop is sown during July and August. Further south, seed should be sown during August, September and October. We do not think that there is any gain in sowing cabbage seed during July in Florida or lower Texas. It is too hot at that season for the seed to germinate well, and it is hard to get thrifty plants. We get a number of complaints every fall from those States, on cabbage seed, and the fault is simply because the seed was sown too early. Figuring on an average season and good cultivation, with other circumstances favorable, cabbage will mature in from 100 to 130 days after the seed germinate. This is for the early and intermediate sorts. In deciding the time to plant, watch your most successful neighbor, decide on the time you want to market your crop, and use your judgment and common sense as to what weather conditions you may reasonably look for between seed time and harvest.

VARIETIES.

Every seedsman has varieties for which he makes special claims, and as a rule, the biggest claims come from the smallest seedsmen. We don't intend to tell you that we have some special new variety that is ahead of any Cabbage that was ever grown. This matter of varieties gives you another good chance to use your common sense. Don't let these extravagant claims of wonderful new varieties fool you. If you try them as an experiment, go mighty slow. The chances are that the wonderful new sort is only some old standard variety which has just had its picture taken again, and the seedsman is trying to make a little extra money. There are really only a few standard types of Cabbage, and these marvelous new sorts are mostly old friends who have changed their names. We have trials made every year, on our growing farms, of many of these "new" introductions, and it is very seldom indeed that we find anything of startling novelty or value. In the latter part of this pamphlet you will find some boiled-down advice about reliable standard sorts, and we assure you that we have made a very careful study of the question of variety. We don't make any extravagant claims for any variety that we carry. We have standard, tested, reliable sorts, that we know are good, and we do not try to make you think that we have anything else.

It is best not to plant cabbage too often in succession on the same land. Rest the soil by changing the crop. After cabbage, plant some thing entirely different, like tomatoes, cucumbers, melons, or some farm crop. This is also a help in keeping down cabbage diseases, such as black rot and club root. If, during the growing season, the cabbage is subjected to severe freezes, there will always be complaints that, instead of heading at the proper time, the cabbage has run to seed. Injury by cold will very frequently produce this result. It is an effort by nature to save the cabbage from extermination, and is one of the most interesting features in the study of plant life. It is as though the cabbage knew that it had met with severe injury, and it hastens at once to save its species from final destruction by forming seed, and thus providing for succeeding generations. When cabbage was first known, centuries ago, it did not form heads at all but was simply a loose-leaved plant like our collard. But centuries of cultivating and breeding have developed in it the habit of forming the close, hard bunch

of leaves that we call the head. But when the plant feels itself injured it throws off its centuries of breeding, and reverts to the old type in its instinct to save itself. When it does not run to seed after an injury of this sort, it may so change in shape that the crop will seem to be made up of many different varieties, and the farmer, not knowing the cause, sometimes accuses the seedsman of selling him mixed seed. The injury which the plant has sustained is, however, the cause of the trouble.

DISEASES AND INSECT ENEMIES.

The principal diseases to which the crop is subject are the Black Rot and Club Root. In plants affected by Black Rot the outer leaves turn yellow and die in spots, usually near the margin. These black spots enlarge and the veins become infected, and thus it spreads rapidly through the entire plant. The disease seems to be spread by means of a germ, and prompt measure should be taken to stamp it out as soon as it makes its appearance in a crop. The following preventive steps should be taken: Do not plant cabbage, or any similar crop, a second year on land where the disease appears. It is always better to rotate the crops, even where there is no disease, as this lessens the danger. Do not feed the diseased plants, or leaves or trimmings from them, to the farm stock. The disease can be readily spread in this way. Keep the plants as free from insects as possible. Where the disease has once appeared, watch the field most carefully and destroy by fire all infected leaves and plants. Do not allow kale, wild mustard or similar plants subject to the disease to grow in or near the cabbage field.

CLUB ROOT.

The name of this disease indicates its character. The roots of the infected plant become distorted, and large lumps are formed, the plant finally losing all vitality and dying. This disease is caused by a fungus growth which spreads by means of minute spores. When the soil has become infected, it is unsafe to plant any crop like cabbage or turnips, as this will simply continue the life of the disease. A number of common weeds are subject to it and are often a cause of infection to a crop. Preventive measures are the same as those recommended for Black Rot. An application of from 40 to 70 bushels of air-slacked lime broadcasted on the land and worked well into the soil is a practical remedy. Lime is of decided benefit in stamping out this disease and should be freely used.

INSECT ENEMIES.

We now come to a portion of Cabbage growing where every one can "talk out in meeting," for most of our customers know what it is to have bugs destroy a crop. We can't give in this pamphlet a list of all the different bugs, worms and insects that conspire to make life miserable for the Cabbage grower. There are plenty of them, of all colors, sizes and shapes, and every one has a full-grown appetite. We shall simply give a list of poisons, insecticides and sprays that are used, and these can be tried in rotation against your insect enemies. Some of them ought to be effective. When our customers find any of these particularly useful, we would be glad to have them write to us and give us their experience; we shall be glad to pass it on to some other grower who is having more than his share of trouble in this line.

Bug Death sprinkled in the seed bed, or dusted on the young plants, is good in keeping off many destructive insects. Try it on ants when they are troublesome. When the young plants are set out, sprinkle Bug Death around the stem. This will keep off the cut worms. Before transplanting the crop, dip Turnip, Mustard or Cabbage leaves into a solution of Paris green and scatter them about the field. The cut worms will feed on them instead of the young plants. Bug Death dusted on the plants at any time during growth is a splendid preventive for many kinds of insects and worms; it can be used safely at all times, as it is not a poison, and can be used on Cabbage, Cauliflower or Lettuce.

Very fine salt, sprinkled on Cabbage plants when they are wet with rain or dew, is a preventive against several kinds of worms. This work is best done at night and care must be taken not to put on too much salt. Tobacco dust can also be used to advantage against some forms of insects.

An ounce of saltpeter dissolved in 4 gallons of water makes a solution that is effectual in some cases. Paris green, as an insecticide, is well known, and can be applied dry or in solution. It is a deadly poison and should be used only when the plants are very young.

In applying Paris green careful experiments have shown that it can be best used in the following way; make a stock solution as follows:

Pulverized resin.....	5 pounds.
Concentrated lye.....	1 pound.
Fish oil, or any cheap animal oil, but not tallow.....	1 pint.
Water.....	5 gallons.

Place oil, resin and a gallon of water in an iron kettle and heat until the resin is softened; add lye solution made as for hard soap, stir thoroughly, add remainder of water and boil for two hours or until the mixture will unite with cold water making a clear, amber-colored mixture. If the mixture has boiled away too much, add sufficient boiling water to make 5 gallons.

For use dilute 1 gallon of this stock solution with 16 gallons of water, and then add 3 gallons of whitewash. Stir thoroughly and then add $\frac{1}{4}$ pound of Paris green or arsenate of lead. The solution is very adhesive, and a thin film of poison will cover every part of the plant touched by the spray. It should be applied by a hand-power machine and in a most careful manner. The workman must be close to his work and give every leaf a thorough coating on each side. Cauliflower should not be sprayed after the head has formed. Where the plan has been tried carefully by large Cabbage growers of Long Island, it was estimated that the yield was 100 per cent. better than crops near by not so treated, and 60 per cent. better than other crops where Paris green was applied in powder form.

We hope that some of the remedies we name may prove to be of benefit. Some may succeed with one, and some with another. We shall be glad at any time to write personally to any customer who is having special trouble in this line. If some insect which is troubling his crop does not seem to be affected by any of the methods given, we shall be glad to have a description of the pest, and, if possible, will suggest a remedy. Don't be afraid to write to us on any subject connected with your crops if you think we can help you. What we know is at your service at all times.

The Harlequin (Lincoln or Yankee) bug gives a great deal of trouble in some sections, and about the only remedy for this pest is to pick them off the plants by hand and drop them into kerosene. They are very fond of Mustard, and it is a good idea to plant Mustard seed at intervals through a Cabbage patch, as the bugs will collect on the Mustard and can be picked or knocked off and destroyed.

It will take lots of hard work and the use of every means that can be devised, to raise a crop free from insect ravages. The bugs are after your crop from the time the seed is in the ground until the cabbage is being hauled to market. The killing of birds about a farm is one of the worst things that can be done. Let the birds alone and they will help you down the bug. They will down some of your fruit, too, but you ought not to begrudge them a little pay for their work. Don't kill the birds. You may just as well start in to breed bugs as to kill birds. The cabbage louse is a troublesome fellow. Tobacco dust sprinkled on the plants will help put him out of business. He has not yet acquired the habit of chewing it or smoking cigarettes, and it acts on him about as it does on the average small boy making his first attempt out behind the barn.

We are sometimes asked what is the best market for shipping, who are reliable commission men, etc. If you want information on this line write to the Barrick Publishing Company, Kansas City, Mo., and send them a dollar for a year's subscription to *The Packer* or ask for a free sample copy. This paper is the best we know of for keeping shippers in touch with the markets. We believe it to be absolutely honest, and its publishers spend a lot of money in detecting and exposing dishonest commission houses. This is not a paid advertisement for *The Packer*—we write it simply to let our customers know that it is a good thing. Reliable commission men advertise in it, and it is a paper that every vegetable shipper ought to have.

NOW ABOUT SEED.

After spending money, time, and hard work in getting ready for a cabbage crop and growing it, the owner sometimes finds that it has all come to nothing because the seed, the very basis of the whole crop, was not what it ought to have been. And we want to give you a little heart-to-heart talk about cabbage seed for your own benefit, and we think its a subject that we have learned a little something about. We have been in the seed business more than a dozen years, and every year during that time we have tried to learn everything we could about Cabbage seed—where and how to get the best, and what it was that made the best better than any other.

The best cabbage seed grown comes from Long Island, and a good deal of the worst comes from the same place. The best comes from there because Long Island seems to have been designed by nature to grow the very best cabbage seed that could be produced. The soil in the cabbage growing district is just exactly right—a lively loam soil, with gravelly sub-soil. The climate is just right, full of moisture from the sea air, not too hot or too cold, the seasons favor perfect development, and the presence of great markets nearby have stimulated the growers to produce the very best that can be grown.

The worst seed comes from the same place because of the reputation that has been gained for Long Island by the good seed sent out from there. Just as any successful, first-class article is counterfeited by shoddy imitation: this is just exactly what has happened with Long Island cabbage seed—and so

when you are offered "genuine Long Island grown seed" you need not think that you are getting the best just because it comes from Long Island.

Now, to show you just how it works, we shall have to let you inside of the business a little :

Now, suppose we have a grower on Long Island who has contracted to grow for us 2,000 pounds of Drumhead Cabbage seed. We agree to pay him \$1.25 per pound for the seed, and he agrees on his part to furnish us with absolutely first-class seed. He promises to select for seed only such heads as are true to type, perfect in form, of prompt maturity, and up to the standard in every respect. By this agreement we are to get perfect seed, as near perfection as can be obtained.

Now, when the crop is harvested, the grower has a large amount of seed which, if he is an honest man, he cannot send to us under his agreement. Some of the Cabbage have failed to head well, or have not been true to type, or are badly shaped, or very late in maturing, or from some other cause do not produce seed that could honestly be called first class. Now the grower does not wish to lose all this part of his crop, and as there is always a demand for second-class seed, he saves all that he has after selecting the cream of the crop to fill his contract with us.

He will probably sell this second-class seed for 40 or 50 cents per pound. A good deal of such seed* is sold for even less than that, and we have known of some Long Island growers who would supply "genuine Long Island grown Cabbage seed" at 25 cents per pound. You can imagine the quality.

Most of this inferior seed goes to the large wholesale dealers, and vast quantities of it are circulating around in the commission seed boxes, to be found at every country store. We will suppose that all of the seed of this particular crop has been bought up by one of these wholesale dealers at 45 cents per pound. He sells it to some local seedsman or storekeeper in Texas, Florida or Georgia for 80 cents per pound, and he in turn sells it to the grower for \$1.25, or more, if he can, so that the grower gets seed that have been honestly guaranteed, both by the wholesaler and the local dealer, to be "genuine Long Island grown," but which is merely the culls from a crop, and pays a price that lets two people between himself and the grower make a nice little profit. The wholesaler has made 35 cents and the retailer 45 cents on the pound of second-class Cabbage seed.

If the wholesale man runs a retail department, or sells direct to growers, he may sell the seed direct for \$1.10 or \$1.20 and make 65 or 75 cents himself.

Now, there are several points of difference between this way of selling Cabbage seed and Hastings' way. In the first place we pay our grower for a much higher grade of Cabbage seed than he has been in the habit of growing for the seed houses. He is a man who has been in the business of growing Cabbage seed for many years, and knows all about the methods of growing and the different grades of seed. When we were first taking up the matter with him, he wanted to know what grade of seed we wanted. He told us the difference in the grades, and we promptly told him that we wanted *absolutely the best, if it cost three times the price of a second or third grade.* We are getting and paying for the best seed that this man can grow, and he is an authority on the subject of growing Cabbage seed—a *specialist.*

So you see that in the first place we are getting better seed than the wholesale man or the storekeeper. The wholesale man has to get cheap seed, because he has to sell it cheap in competition with other dealers, and he could not afford to handle the high-grade seed because his price would have to be high and his drummers would not land the orders from the storekeepers. The storekeeper buys this low-grade seed because the drummer tells him it is all right and he does not know the difference. Cabbage seed is Cabbage seed with him, and he may honestly think that the wholesaler can buy first-class Cabbage seed and sell it to him for 80 cents a pound. It can't be done.

Now, as we have supposed, the Drumhead Cabbage seed we have from our grower costs us \$1.25 per pound. In quoting this seed to a large grower, or to a truckers' association, we may make a price of \$1.40 or \$1.50 per pound, or \$1.75 to the purchaser of one or two pounds. That leaves us 15 to 25 cents for a profit on the large sales, and 50 cents on the small one. On the cheap seed one man has made 35 cents and one man 45 cents. You can see that it would pay us, so far as immediate profits go, to handle second-class seed. The reason we don't do it is this: In the long run, this second-grade seed isn't satisfactory to the customer. He gets some kind of a crop, of course, but it isn't as good as his neighbor is getting who uses Hastings' "Premier Brand" seed to start with, and so he decides to pay 15 cents per pound more for the seed from us, and get with it 75 or 80 cents worth of quality. With the other seed this 75 or 80 cents goes into profit between the wholesale man and the storekeeper. With "Premier Brand" it pays for *quality*, and you get the benefit of it. See this point? And bye and bye this man's neighbors begin to buy "Premier Brand" from Hastings, and so, in course of time, we hope

to have all of his neighbors buying from us, and you among them. We don't talk about the "cheapness" of our Cabbage seed. What we want to show you is, that we have got the *quality*.

Our Cabbage seed comes direct to us from the growers; we do not pay any dealer's profit on the seed, but we do pay more than twice as much for the seed we use than we could get this second grade for. We believe it pays to do it, for our "Premier Brand" seed is coming to be known as the best to plant for a successful crop.

Not all the poor seed sold in the South comes from such sources as we have described. A great deal of it comes from Europe. The seed itself is good, but is a failure for Southern planting, as it is grown in a cool, moist climate, and almost invariably proves a failure when planted in our Southern soil. This European seed costs from 50 to 75 cents, laid down in New York, and can, of course, be sold at a nice profit, but it will prove unsatisfactory to the planters and should be let alone. It is a curious fact that this European grown seed is by far the best looking Cabbage seed that can be obtained. It is large, plump, and of fine appearance. It can be used to good advantage in the Northern States, where the climate is cool, but it is a failure in the South.

Each year some representative of our firm visits our Cabbage growers and goes over the fields with them noting the growth of the different varieties, watching the selection of seed, the care with which the crop has been handled, and comparing the different varieties. It costs us money to do this, but we are repaid for the expense in our knowledge that the seed we get is what we promise you it will be—THE BEST that can be grown. Does your storekeeper or local dealer ever see the crops from which his stock of seed comes? Does he know from personal inspection that everything possible has been done to produce high quality?

We are seedsmen of the South and for the South. We have no trade in any other section, and we therefore are *compelled* to study constantly the needs of the Southern grower. The Northern dealer does not do this, because it is not necessary for him to do so. His Southern trade is only a small part of his whole business. But with us our Southern trade is *everything*. Don't you think that your seed business is safe in the hands of a firm which depends entirely on the South for its field, and which devotes its entire attention and time to the needs of the Southern grower? We don't ask for your business simply because we are Southern seedsmen, but because we have made it our aim to supply the very best seeds for the South; because we firmly and honestly believe that our seed will give you better results in your crop, and because we believe that the use of such seed will bring you in more money.

A CABBAGE GROWER'S EXPERIENCE.

Several years ago one of the largest Cabbage growers of Florida had an experience with "cut-price" Cabbage seed. He was using at that time 100 pounds of Cabbage seed, and first-class Cabbage seed at that time was worth \$2 per pound. He bought 100 pounds of cut-price Cabbage seed from a prominent Northern house at \$1.65 per pound. His crop was a failure. Under ordinary conditions of growth his crop would have been worth that year something like \$13,000.

He saved \$35 in the cost of the seed in comparison with what he would have paid us. He planted the seed, the germination, in both germination tests and in his seed beds, showed the seed to be of low vitality, over 25 per cent. less than it should have been. In the seed beds were rutabagas, turnips, kale, mustard and collards. After selecting the Cabbage and setting it in the field he was some 100,000 plants short of having enough to fill out his 100 acres of Cabbage. These he purchased from a neighbor, who had bought seed of us at 35 cents per pound higher, and from that 100,000 plants came the only satisfactory heads of Cabbage that he raised. Outside of these, he got only 150 crates of Cabbage that were marketable from 100 acres. This gentleman stated to us that his loss on the crop was \$13,000. The transaction figures out like this:

Loss through inferior seed.....	\$13,000
Saved in purchase price.....	35
Net loss through inferior seed.....	\$12,965

It struck us as being expensive economy. This grower was probably the largest vegetable grower in the State, and his loss was a heavy one, still, \$13,000 to him was felt less than \$200 would be felt by the average gardener. It is all a matter of loss proportionate to the size of the crop. It is a matter of fact that this grower cannot be caught by low priced seeds any longer. He has had enough experience in that line to last him the rest of his life. It is also a fact that the house from which those seeds came is largely engaged in supplying merchants throughout the South with seeds to be sold again to the planters.

The difference in cost per acre between good seed and poor seed is practically nothing. In winter

and spring planting $\frac{1}{4}$ pound of first-class seed will make enough plants for an acre. Low-grade seed will cost you about \$1.25 per pound; the highest grade about \$1.75 for standard varieties, leaving a difference of 50 cents to be spread over 4 acres of Cabbage. Is it wise; is it common sense to risk an acre of Cabbage—10,000 to 12,000 heads—for 12 $\frac{1}{2}$ cents? You may not have thought of it in that light before, but it's the straight truth. This is on the supposition that the low-grade seed will germinate as well as the high grade, which is rarely the case. It will usually turn out that a pound of the high-grade seed will actually prove the cheapest, on account of the greater number of plants it will produce. A first-class article at a little higher price is always the cheapest in the end, no matter whether it be Cabbage seed, shoes, or clothes.

“BEST THAT CAN BE PROCURED.”

ORMOND, FLA., June 7, 1902.

H. G. HASTINGS & Co., Atlanta, Ga.

GENTLEMEN: I take great pleasure in stating that the Cabbage seed I received from you last fall was the best I ever planted. No failure in germination, plants were strong and healthy and every plant that I set made a good head, some of them very large.

I have bought your seeds for twelve years and have found them very reliable. I always feel that your seeds are the best that can be procured.

Yours truly,

JAS. STANTON.

Hastings' Premier Brand Cabbage Seed.

We sell the highest grade of Cabbage seed of any seed house in the country. For 12 years we had the best obtainable up to that time. Our customers were generally satisfied, but we were not. It took us years to get to the point that we could get this “**Premier Brand**” grown, but we now have it, something of so high a grade that you can't get it of anyone else. It is grown for us exclusively by the best Cabbage seed growers in America.

Every head of Cabbage from which our “**Premier Brand**” of seed is grown is carefully selected. **Every head that is not absolutely true in shape, size and solidity is thrown out and destroyed.** Every head that does not come up to the standard of the most exacting Cabbage seed grower in the country is rejected. In this way every ounce of seed produced is what is known as “stock seed” among the seed growers. Every variety of Cabbage seed in our catalogue is grown under those conditions. No matter what variety you buy from us you get the very best seed. No seedsman North, South, East or West has it. It's grown for H. G. Hastings & Co., of Atlanta, exclusively. It costs us from 100 to 200 per cent. more to grow it than the grades sold by other seedsmen, but we believe in getting for our customers the best that can be grown. Nothing is too good for them. We began selling our “**Premier Brand**” Cabbage seed a little over one year ago. Since that time our sales of Cabbage seed alone have more than doubled. It's because we furnish the best. Our “**Premier Brand**” Cabbage seed would be cheap at \$10 per pound compared with the grade sold by many other seedsmen at from \$1.25 to \$2 per pound and which costs less than one-half as much to grow.

Look at the picture on page 1, taken from a photograph. It's as pretty a head of Cabbage as can be grown. It did not have special treatment. It is simply a head of Cabbage taken from a market gardener's crop grown from Hastings' “**Premier Brand**” seed. If you are a good gardener and will give your crop good, careful cultivation you can have just as good Cabbage as this.

Summer and fall plantings of Cabbage in the South are the heaviest of the year. It is also the most trying period of the year on Cabbage seed germination. You need the strongest, healthiest, most vital seed you can get for sowing then. Our “**Premier Brand**” seed is what you need. If you have never planted it before use it this summer and fall as well as in the spring. If you have planted it before we are sure of your orders again.

Early Varieties of Cabbage.

ACCORDING to the seedsmen's catalogues there are several hundred varieties of Cabbage. Careful tests show, however, that there are less than fifty distinct varieties of Cabbage grown in the United States, the balance of the so-called varieties coming from the common practice of so many seedsmen of re-naming old varieties and making wonderful claims therefor. So far as the South is concerned, about half of these varieties are adapted to our soil and climate, and hardly more than half of these are worthy of any attention from market gardeners. It is not our intention here to describe at length all these varieties, nor fill these pages with high sounding adjectives or pictures of impossible heads of Cabbage. We aim to give here reasonable and honest descriptions of the varieties and illustrations showing what a Cabbage of that variety actually looks like. We wish to avoid exaggeration in both words and illustrations. We shall divide our list into three classes :

First, the Early, which includes the Extra Early, Early and Second Early ; second, the Intermediate or Main Crop varieties ; third, the Late varieties.

The Early varieties are :



Hastings' Long Island Wakefield Cabbage.

The Long Island Wakefield is the largest of the Wakefield type of pointed Cabbage, and is more closely bred than what is known as the Charleston Wakefield. Heads are conical, as shown in the illustration, and not as sharply pointed as the Jersey Wakefield and weighs from $1\frac{1}{2}$ to 2 pounds more than that old favorite. Where properly grown it is of very uniform size and shape, and one of the most solid of all varieties. In good soil and with favorable weather it has been known to make marketable heads in 50 days from transplanting. Largely grown for near-by markets and for shipment.

IN FLORIDA. The only Cabbage seed that I ordered and used this year was your Long Island Wakefield. They proved to be the best I have ever used as to uniformity, solidity and beauty of shape. Don't see what improvement you could make except to furnish your customers with irrigated farms in dry seasons. R. J. PENDARVIS.
Blountstown, Fla.

Hastings' All-Head Early Cabbage.

WE have what we believe to be the finest strain of **All-Head Early** in existence. The illustration on page 1 of this pamphlet is from a photograph of a head of this variety grown near Atlanta by one of our customers. The illustration shows its fine shape, solidity and scarcity of loose outside leaves.

The **All-Head** is an extra early strain of the Flat Dutch and of Long Island origin and thoroughly adapted to all parts of the South both for fall and spring planting. Heads of medium size, weighing usually from 5 to 7 pounds, perfectly round and well flattened on top. Stems rather short; growth very compact with solid heads. It stands shipment well where not on the road over one week. Color a rich shade of glossy green, which holds well during shipment. This variety is several days earlier than the Early Summer and is a very desirable variety both for market and home use.



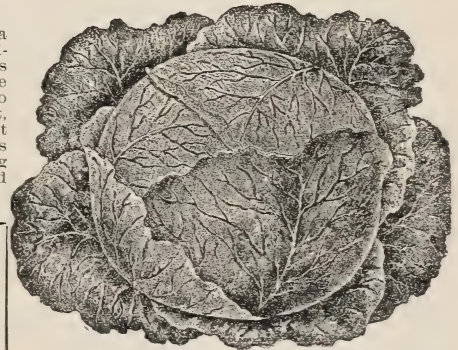
Early Summer.

EMERALD KING.

This early flat variety was introduced by us to the Florida trade in 1893 and in many parts of that State is now grown almost exclusively and has been planted with satisfactory results all through the South. It is very early, coming in about the same time as Early Summer. It is of fair size, averaging 5 to 6 pounds in weight, grows very uniformly; heads are flat, round and very solid. It is a very sure header and does not burn or blister easily in hot sunshine; withstands droughts well. It is of dark glossy green color, holding its color long after other sorts wilt and fade. It is a fairly good shipper and an especial favorite for near-by markets and home use.

WANT NONE BETTER.

The "**Premier Brand**" cabbage seed received from you were true to type and turned out just as you said they would and I want none better. One of our largest commission dealers here said my cabbage was the finest he handled; never had to "cull" them.
S. E. MITCHELL,
Corpus Christi, Tex.



Hastings' Emerald King.

THE EARLY SPRING.

We have never listed this variety, but it will appear in our 1903 annual. It is a French variety known as the "Early Parisian." It was imported by a prominent New York seedsman, renamed "**Early Spring**" and introduced under that name in this country. Its value to the shipping market gardener of the South is as yet unknown. Its value seems to be entirely in its earliness, coming in as it does almost with the Jersey Wakefield. It is small, flat and has but little stem, the head almost resting on the ground. Being small, it can be set 20 to 21 inches apart, 13,000 plants per acre. Like other extra earlies, it is a rather poor keeper and must be marketed quickly after maturity. Heads are firm and solid and where earliness is especially desired in the spring crop it will be advisable to plant some of this variety.

EARLY WINNINGSTADT.

This is an old favorite pointed sort used almost entirely for home gardens and near-by markets. Well known everywhere. A very sure header, hard and firm, coming in just after the Jersey Wakefield. Leaves dark green and glossy. Good for either summer or spring planting and is less subject to attacks of worms than any other early sort.



The Early Spring.

STEIN'S EARLY FLAT DUTCH.

This is a very careful selection from the Early Dwarf Flat Dutch, being somewhat larger, shorter stemmed, and a little later than the Early Dwarf. It is known under dozens of names, but is commonly known in the lower South as "Stein's" and "Augusta Truckee." For the market gardener who ships his crop this is valuable. It seems to do especially well in certain parts of Texas, but is not a favorite in Florida. Our illustration gives a good idea of its general appearance. It is firm and solid, shrinks but little in shipping and holds its color well. While a comparatively hardy variety it is not as resistant to cold as Centennial Flat Dutch, Surehead and Danish Ball Head.

IN GEORGIA.

I ordered seed from you last year. Mine were the finest cabbage grown in this country. I will always plant Hastings' cabbage seed as long as I can get them. Planted 2 acres in cabbage last year and sold \$300 worth in Columbus market.

J. W. ROZIER, Gentian, Ga.



Stein's Early Flat Dutch.

EARLY JERSEY WAKEFIELD.

Almost every one knows this popular pointed variety and extended description is unnecessary. The principal point in its culture is to get the right strain of seed. It is a rather shy seeder and the higher bred and more closely selected this variety is, the smaller the quantity of seed and the higher the price. We have a very closely selected strain and crops grown from it show the greatest regularity of size and solidity. It is a splendid variety for an extra early for near-by markets or home use.

EARLY DEEP HEAD.

This is an early strain of the Flat Dutch type, about the same in size as the Early Dwarf Flat Dutch but somewhat more solid and thicker through, in this respect resembling the Danish Ball Head. It is of the finest flavor, crisp and tender and desirable for home use and near-by markets.

EXTRA EARLY EXPRESS.

A very dwarf, extra early, pointed cabbage, suitable for home gardens only where extra earliness is desired. It is too small to grow profitably.



Hastings' Alpha.

CHARLESTON WAKEFIELD.

The Charleston or Large Wakefield belongs to the same general class as our Long Island Wakefield described on page 10, but it is not as closely bred as the Long Island. The Charleston is at least two weeks later than the Jersey Wakefield, has conical heads, weighs about a pound more but always shows great irregularity in form. The Charleston was an improvement when first introduced, but is being superseded by better strains.

LARGE EARLY YORK.

This is an old and well-known variety in the South. It is pointed, very early and of the finest flavor of any, but the head is not much more than a mass of loosely formed leaves. It is worthless for market gardeners and should only be grown in home gardens for its tenderness and fine flavor.

EARLY ETAMPES.

A French variety very similar to the Express and, like that variety, it is only valuable on account of its extreme earliness.

Our New Cabbage

HASTINGS' ALPHA.

In our next annual catalogue we shall place on sale an entirely new and distinct variety of extra early cabbage, something entirely distinct from all existing types of cabbage. We have secured this new cabbage after much trouble and expense. It is the most valuable introduction in early cabbages since the Wakefield was introduced some 40 years ago. It is a rather small head, almost as round as a ball, firm and solid and a few days

EARLIER THAN WAKEFIELD.

It's the earliest cabbage in existence, and for those who object to pointed cabbage it will be a favorite. Plants are dwarf in growth, rarely growing over 8 inches in height and will stand close planting. We recommend it fully to all of our friends who want the very earliest good solid heads in cabbage. Watch for it in our next annual catalogue issued January 1st, 1903.

Intermediate Varieties.

IT is somewhat difficult to draw the line between some of the second earlies and the intermediate or main crop sorts. These main crop varieties are all good sized, flat, round and solid, all of them in the following list being adapted to shipping as well as near-by markets and home use. The six varieties in this list are all standard sorts which have given satisfaction in all parts of the South.



Hastings' Sure Crop Cabbage.

HASTINGS' SURE CROP CABBAGE.

This is the earliest of all the large round flat varieties. We have sold it for more than a dozen years in every State in the South and it is planted every year by more people than any other variety with the possible exception of Surehead. It is adapted for both fall and spring plantings; for shipment, near-by markets and home use. On good soil and with proper cultivation it makes heads weighing from 8 to 12 pounds, very firm and solid, uniform in shape and size, well flattened on top. Quality is excellent, being crisp and tender and where rightly cared for scarcely a plant will fail to form a good marketable head. Color a dark green, holding up well after being cut. It is a first-class variety for July and August planting in the lower half of Georgia, Alabama, Mississippi and Louisiana for maturing in late fall and early winter, as well as for August, September and October planting in Florida and Texas. It is well adapted for spring planting in all the South except Florida, where fall planting only is advisable.

THE BEST IN SIXTEEN YEARS.

I have been a gardener for 16 years, but never had such success as I have had this year using your seeds. Notwithstanding the cold spring and an April frost, your seed all germinated and produced strong, healthy plants which withstood the cold. I never raised such cabbage in my life—my garden was the talk of the town.

September 15, 1901.

J. M. CAROTHERS, Taylor, Texas.

FLORIDA DRUMHEAD CABBAGE.

This is the only thoroughly satisfactory Drumhead variety for the lower South, combining as it does all the desirable qualities of the Drumhead with heat, drought and cold resisting qualities. It is a rather short-stemmed medium early variety, growing very compactly, the leaves turning in closely to make the head. Large, very solid, perfectly round and flattened on top. It is a strong, vigorous grower, and a sure header, weighing from 10 to 25 pounds according to soil and cultivation. Suitable for August, September and October planting in Florida and both spring and summer planting in the other Southern States.

SOLID SOUTH.

This is a cabbage resembling the Early Summer in appearance but is somewhat larger and a little later than this variety. It is of good size, round, flattened and solid, does not split as easily as the Early Summer. Well adapted both for shipping and home use and should be more generally planted than it is.



Hastings' Florida Drumhead.

BEST IN THIRTY-FIVE YEARS.

I have been growing cabbage for nearly thirty-five years, and I have never made finer cabbage than crops grown from your "**Premier Brand**" seed. I do not know of any way of improving your cabbage seed. They are not only cheaper, but I find them better.

Haines City, Fla.

W. R. JOHNSON.

G. Onderdonk

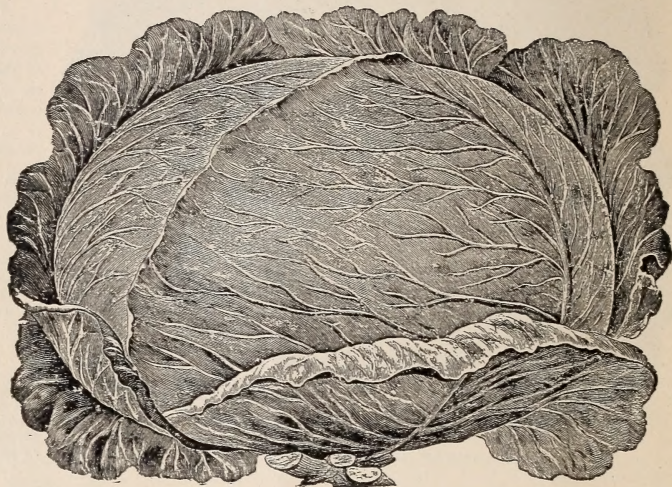
OF NURSERY, TEXAS

The Veteran Nurseryman

Writes that after using our seeds for a number of years, he has found them to be all that he could expect. He says: "My last purchase of 'Premier Brand' cabbage seed grew well, but the crop was almost destroyed by cold; what was left headed beautifully, and we were satisfied that but for the cold, our crop would have been all that could have been desired. I seldom order seed from any other house than Hastings & Co., for I feel sure that they always intend to supply the good article, and they come as near as anybody to having the best."

HASTINGS' GENUINE SURE HEAD.

Sure Head and Sure Crop are the most popular varieties in the South. The Sure Head is the result of a cross between the Early Dwarf Flat Dutch and a Late Drumhead, giving increased size for a main crop variety. Its strong points are its vigorous growth, fine shape, solidity, and its sureness in heading. On good soil and with proper cultivation it is the rarest thing for plants to fail in making good marketable heads from every plant in the field. It matures rather late for main crop and is remarkably uniform in size, shape and color. The only objection that can be raised to it is that in very wet seasons it has a tendency to grow too large to pack well in crates for shipping. It is the best all-around cabbage for main crop in the South for market and home gardeners and we can thoroughly recommend it to all. In this variety you should be sure to get the pure strain, otherwise you will be disappointed.



Hastings' Sure Head Cabbage.

"HASTINGS' SEEDS PERFECT."

Cabbage seed purchased of you was a perfect success. I don't see how you could improve on it. It made 95% of good marketable heads. Your lettuce was perfect both in germination and heading. I bought 10 pounds of beet seed from you. They were perfect also and the quality can't be beat. Before this I have split my orders and must say that I have had best results with your seed.

J. W. BALL, Daytona, Fla.



Succession Cabbage.

SUCCESSION.

The Succession is a large, flat, round variety for main crop, introduced in 1888 and has come into general use as a shipping variety in many parts of Florida, Georgia and Texas. It is a good strain and a reliable header both for late summer and fall planting as well as in the spring in all parts of the South. It matures some two weeks later than Early Summer but is nearly double the size. It holds up well in shipment, and is fairly hardy in ordinary winters in the South.

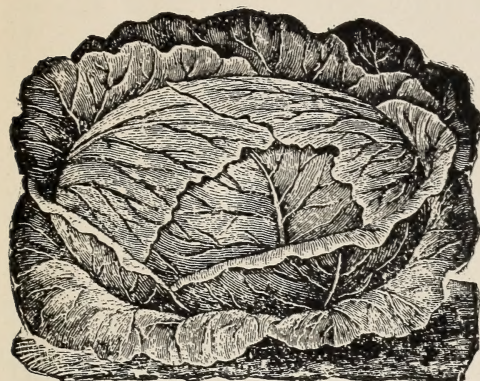
ALL SEASONS.

As its name indicates it is suitable for either summer, fall or spring planting. Large, flat, solid, round variety largely grown for home use and near-by markets. Not suitable for long distance shipping.

"Never Fail" -- Have used your seed for three years and never fail to get a stand. I was the only one that raised a cabbage in my community last year.

W. B. BRYAN.

Late and Savoy Varieties.



Hastings' Centennial Late Flat Dutch.

DANISH BALL HEAD.

Also known as "Hollander," "Danish Emperor" and "German Export." It is an extremely hardy and handsome late variety valuable only for fall planting in the lower South. Next to Centennial Flat Dutch it is the hardiest and is a special favorite with Texas gardeners who grow for shipment. It thrives well on thin soils and exposed situations.

Heads are of good marketable size, very hard, almost round, extra solid and fine grained and will weigh one-fourth more than flat varieties of the same size. Wherever tried in the South it has proved a marked success for summer and fall planting.

A peculiarity of this variety is that it has no fixed type of growth. A field of it looks decidedly mixed, some tall, some medium, some dwarf, large and small. However badly it may appear to be mixed, no matter how large or how small, each plant produces a round, very solid head, that for shipping and keeping is not equalled by any other variety.

PERFECTION DRUMHEAD SAVOY.

The Savoy cabbages are the finest flavored of all, but are little grown in the South. They are not really at their best until touched by frost, after which they are almost as delicate in flavor as Cauliflower. In the middle South sow in July and August, in Florida in September and October. The Savoys are as hardy as collards. Perfection Drumhead Savoy is the best variety.

BUNCOMBE CABBAGE.

Buncombe or North Carolina Winter Cabbage is a distinctly Southern variety of unknown origin. It is valuable only for summer and early fall planting. It is as hardy as a collard and stands the average Southern winters without the least injury. Planted in July and August it grows all through the winter and can be used any time during the winter and spring months.

With proper treatment it makes a firm solid head and will be found a desirable variety for home use.

IMPROVED LATE DRUMHEAD.

An old standard variety of extra large late maturing drumhead cabbage only used in home gardens in the South. It is extra large, very solid and of good quality. A reliable header for spring planting.

GREEN GLAZED.

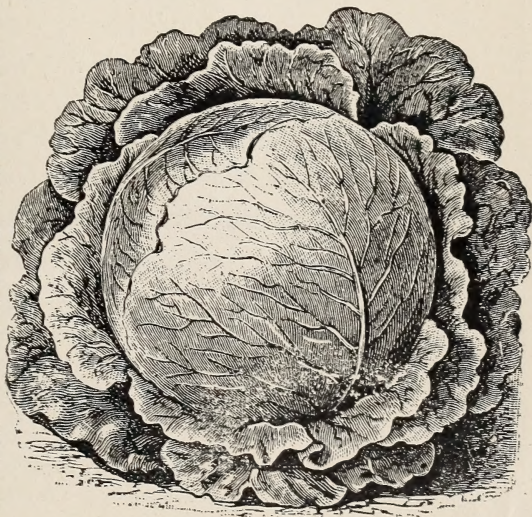
More nearly a collard than a cabbage. A loose leaved sort, valuable for summer, and insects seldom touch it.

CENTENNIAL LATE FLAT DUTCH.

This is the best strain of Late Flat Dutch. It's a good reliable header and admirably adapted to all parts of the South. It is large and solid, round and flattened, weighing 6 to 10 pounds from summer and fall plantings, according to soil and cultivation. Its great value for fall planting, however, is its resistance to cold, being harder than any other variety used by market gardeners, making it especially valuable to plant on lands subject to repeated and heavy frosts and freezes such as are common in the market gardening districts of the South. It withstands these frosts and freezes with less injury than any other. It is a good shipper, holding up without wilting or fading much longer than any of the early varieties. When planted in the spring the heads grow from 3 to 5 pounds heavier than from fall planted seed. This variety should not be planted later than October 15th for April shipments.

PREMIUM LATE FLAT DUTCH.

Very similar in appearance and size to the Centennial, but not as resistant to cold nor as regular in growth as that variety. Most valuable for spring planting.



Danish Ball Head.

A FEW FROM FLORIDA.

Your "Premier Brand" cabbage seed is all right, although we had the most unfavorable season we have had for years, but made a good crop. I shall order more of this same seed from you this fall.

FRED NORDMANN, New Smyrna, Fla.

The "Premier Brand" cabbage seed planted last fall were very fine. I know your seeds to be the best on the market; I have tried various seedsmen, but in my experience, your seeds have always proved superior.

HUBERT VINSON, Lecanto, Fla.

Your "Premier Brand" seed gives every satisfaction. I do not think that the quality of this seed can be improved.

H. PEARSON, Ft. Meade, Fla.

I have had wonderful success with your "Premier Brand" cabbage. I raised many heads weighing from 12 to 14 pounds of the very best quality. Since using Bug Death I have been entirely rid of cabbage worms.

J. R. TRUMBOWER, Seabreeze, Fla.

...*BUG-DEATH*...

IS THE BEST ALL-AROUND INSECTICIDE ON
THE MARKET.

IT KILLS or drives away almost every Bug or Worm destructive or injurious to plant life. It is easily applied and can be used with perfect safety, it being poisonous only to insect life. After three years' trials of it we recommend it fully to all of our customers without reserve. It never burns the plants like Paris or Laurel Green or London Purple, but actually furnishes additional plant food. : : :

WE ARE SOUTHERN WHOLESALE AGENTS

For **BUG-DEATH**. Your merchant should keep it on sale regularly, and we will supply him if he desires at wholesale prices. Bug-Death in three- and five-pound packages cannot be sent by mail. When ordering seed by freight or express include a package of Bug-Death, as it can be packed and shipped with the seed.

Single pounds, postpaid, 25 cents. When shipped with seed by freight or express, 15 cents per pound; 3-pound package, not prepaid, 35 cents; 5-pound package, not prepaid, 50 cents; 12½-pound box, not prepaid, \$1; 100-pound keg, \$7.

To any express office reached by the **Southern Express Co.**, we will ship a 3-pound box, charges prepaid, for 60 cents; a 5-pound box, charges prepaid, 85 cents; a 12½-pound box, charges prepaid, \$1.45.

To any express office on the line of the Wells-Fargo, American, or Pacific Express Companies, we will send Bug-Death, all charges prepaid, as follows: 3-pound box, charges prepaid, 60 cents; 5-pound box, charges prepaid, 90 cents; 12½ pound box, charges prepaid, \$2; 100-pound keg, not prepaid, \$7.

In our opinion it is the cheapest and most effectual insecticide on the market today.

H. G. HASTINGS & CO.