

MIDSUMMER CATALOGUE OF SEASONABLE SEEDS



IOWA SEED COMPANY
DES MOINES - IOWA

Two Crops Each Year

The high values of land throughout the corn belt make it imperative that we secure greater returns from the acres than have been taken in the past. Farming conditions are changing. The corn belt is now almost the only source of supply of marketable live stock. It seems to us that while we may not be able to produce beef, pork, or other meats at any lower cost than at present, we can and should market double the present number of animals from the corn belt area. This simply becomes a question of food supply. The silo offers the method by which the returns from our corn fields are practically doubled. These are being erected by thousands throughout the middle west, but we are not making the same progress in increasing the returns from our lands planted to crops other than corn. Every field in Iowa, Illinois, Missouri, Nebraska, Kansas and Oklahoma, which is now in small grain is capable of producing yet another crop this year. Even the corn fields can be made to furnish greater crops by intelligent planting of rape, cow peas, or other seeds at last cultivation.

In this midsummer catalogue we have endeavored to furnish information about a number of items that may be utilized as second crops, and have also listed such items as winter wheat, rye, etc., which are planted in the fall for crops next year. Diversified farming has been advocated in the Agricultural press for many years, but to our mind the result has been very disappointing, because so few items are really raised on the average farm when a dozen different crops now but little grown, would be found desirable and profitable, and might be produced with only the labor cost on lands cultivated in the regular rotation system.

We have not space in this booklet to do more than give general directions for the growth of the various crops listed, but we believe our farmer friends may readily grasp the advantages offered by the use of Rape, Cane, Cow Peas, Sweet Clover, Crimson Clover, Millet, Buckwheat, or Turnips all of which will produce a crop if planted after July First.

We want also to increase the yield of your regular crops and offer you the choicest seed of Winter Wheat, Rye, Alfalfa, Timothy, Etc, that you may increase your production by sowing only strong, pure and vital seeds. It does not pay to sow ordinary seed any more than it does to raise scrub animals.

We wish to thank all our customers for their patronage this season. Our friends have shown their confidence in our house by greatly increased orders, and have taxed our capacity to its utmost. Our real effort this season has been to secure the stocks suitable to our trade in sufficient quantity, as the orders seemed to come without effort on our part. We have labored diligently to secure good seeds of summer crops, and now have on hand a generous supply of the items listed here, and all are of splendidly high quality or they would not be offered by the

IOWA SEED CO.,

613-615 Locust St.

Des Moines, Iowa

SEASONABLE FARM SEEDS

FOR SUMMER AND FALL SOWING

For Prices See Red Ink Price List

Copy enclosed herewith. Mailed at any time on request.

Prices on farm seeds change constantly, and we do not make quotations good for a longer period than ten days. We want your order now, but if not ready just now, don't fail to write for prices before you buy. If you are in a hurry you can order and we will send seed to full value of money received on day that your order comes in. Please remember that our quotations are for our best grades of recleaned seed, and we know that the price is low for such grades.



WAREHOUSE, 208-210-212 SOUTH EIGHTH ST., WHERE ORDERS FOR FARM SEEDS ARE FILLED.

ABOUT WARRANTING. We thoroughly test all our seeds and nothing is sent out which we do not believe to be good in every respect. However, we give no warranty, express or implied, as to description, quality, productiveness, or any other matter of any seeds, bulbs or plants we send out, and we will not be in any way responsible for the crop. If the purchaser does not accept the goods on these terms, they are at once to be returned, and the money paid for same will be refunded.

SHIPPING: There are five express companies and fifteen railroad lines at Des Moines, so that quick shipments can be made to any town in the United States. All prices quoted, unless stated otherwise, are f. o. b. Des Moines, the customer to pay freight or express charges. At the pound rate we prepay the postage.

DELIVERY: When we quote a delivery price it means simply that we prepay the freight, express charges or postage.

Many of our farmer customers live at railroad stations where there are no agents. In such cases we must request them to send sufficient money to prepay freight charges on heavy shipments; also in cases where perishable or other goods are ordered to be sent by freight or express to such great distances that cost of transportation will nearly or quite equal the value of the goods.

NOTICE: We have in our employ an **EXPERT SEED ANALYST** who has been trained in the U. S. Department of Agriculture at Washington, D. C., and who inspects and analyzes our Clover and Grass Seeds under the Microscope, and tests their vitality. The thorough training received in the government service amply qualifies for accurate and reliable work; therefore **WE KNOW**, as near as any dealer can know, that

OUR SEEDS ARE RIGHT.

YOU ARE SAFE in ordering Seed Grain, Clover Seed, or any other seed from us, as you are protected by our

\$10,000 GUARANTEE BOND

as you will note by the following:

OFFICE OF CENTURY SAVINGS BANK

DES MOINES, IOWA, Nov. 1, 1911.

TO WHOM IT MAY CONCERN:

This certifies that the Iowa Seed Co. of this city has deposited with us a bond for TEN THOUSAND DOLLARS (\$10,000) as a guarantee to any one ordering seeds from them, where cash accompanies order, that if said seeds are found to be unsatisfactory upon examination or test they may be returned within ten days from date received and the money which has been paid for same will be promptly refunded.

L. E. STEVENS, President.

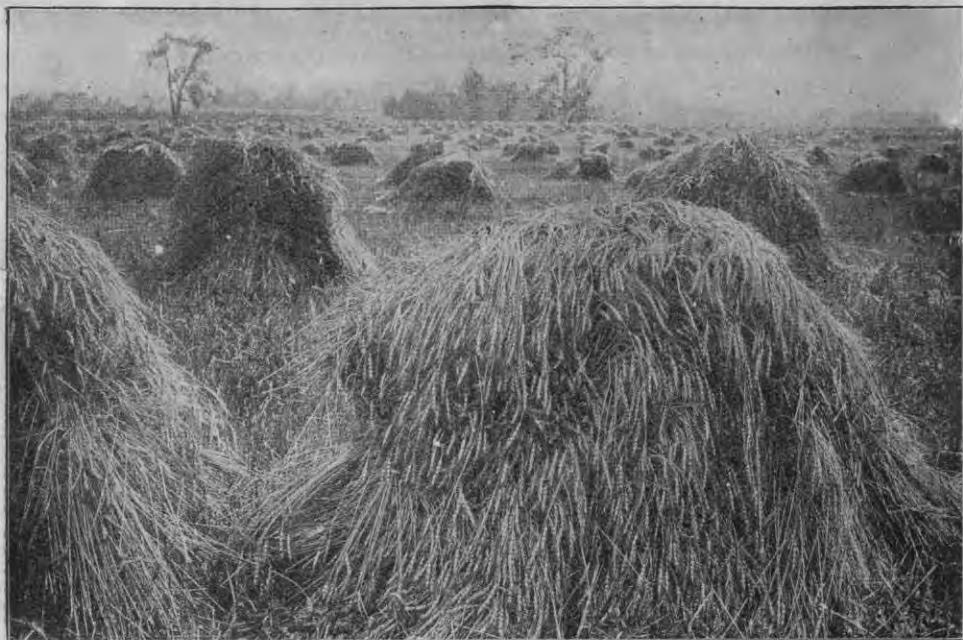
After the seed arrives, examine it, test it or have it inspected and tested by the United States Inspector, the State Botanist, or the U. S. Department of Agriculture. Then you be the judge. If their report or test is not satisfactory, or if for any reason, or without any reason you want to return the seed to us within ten days from date received, we will return your money promptly without quibbling. Can any offer be fairer?



OUR NEW GRAIN ELEVATOR AT ALTOONA.

GROW MORE WINTER WHEAT

A MOST PROFITABLE CROP IN ALL
PARTS OF THE CORN BELT



The Agricultural College at Ames summarizes the results of winter wheat growing at the station farm as follows: "Winter wheat costs under average conditions \$10.72 per acre. The average good yield of winter wheat is 25 bushels per acre. Twenty-five bushels at 95 cents per bushel equals \$23.75. Net profit per acre \$13.03."

There are farmers in every county in Iowa and also in the surrounding states who think they cannot grow wheat profitably simply because they have tried some of the old, worn-out varieties with little success. During the past few years thousands of farmers throughout the entire corn belt district have proven that there is

MORE MONEY IN GROWING WINTER WHEAT

than in any other small grain crop, and it all comes from sowing the improved varieties we are offering. We wish we might persuade every farmer to grow Winter Wheat, as it will produce more dollars per acre than any grain crop he can grow, not even excepting corn. At least this has been the results as shown by repeated crops during the past few years. Just the ordinary average return of Winter Wheat for the past two years was \$30 to \$35 per acre and it is a mighty good corn crop that will bring that sum, while no other small grain will even approach it in value. Some farmers hesitate to sow Winter Wheat as they think it does not harmonize with a short crop rotation, but Mr. Geo. W. Franklin, who originally introduced Turkish Red Winter Wheat in Iowa, is authority for the statement that clover and grass seeds can be sown on Winter Wheat in spring and simply harrowed in, with just as good results as if sown with spring wheat or oats. It was Mr. Franklin's experience that the harrowing of the Winter Wheat is really a benefit to the crop. Winter Wheat is an especially good crop to precede Alfalfa, as it is early and can be out of the way before time for Alfalfa seeding.

Another advantage of growing Winter Wheat lies in the fact that the ground can be prepared and the seed sown at a time when most farmers have time to spare and the crop thereafter takes care of itself until harvest. It is a great advantage to have the crop in so that it will not take time during the busy spring season. Another thing, and an important one, is that our varieties of Winter Wheat usually far outyield any Spring Wheat. They mature early and thus escape disastrous summer storms. They are hard and make the finest quality of flour.

We carefully screen and grade the seed wheat we offer, so that none but the largest, plumpest grain is offered for seed purposes. Our seed wheat costs a trifle more than market wheat, because we pay our growers a premium and add labor, bags and shrinkage to the first cost. Our price, however, is extremely low and our margin of profit is very small. If you ever buy seed wheat from us you will be entirely satisfied with cost because the extra yield per acre will more than pay the cost of the seed. Sow 1½ bushels of good seed per acre with a grain drill. Sow from the 5th to 25th of September. The early date in the northern and later in the southern district of the corn belt.



DEFIANCE WINTER WHEAT

In Hardiness, Stooling Qualities,
Productiveness, Strength of Straw

UNEQUALED

In Quality of Grain, Quality of Flour
and in Rust-proof Qualities.

Best in all Respects of Any Wheat Now Offered for Seed.

We know this is considerable to say, but we feel sure that any farmer who tries this grand sort will have it proved to his satisfaction. Our DEFIAENCE WINTER WHEAT has been selected from the choicest stock of Turkish Red Wheat, which has yielded immense crops under ordinary conditions. By careful selection we have secured this excellent variety which we believe to be far superior to any other on the market.

Don't fail to sow "Defiance" no matter whether you live in Minnesota or Texas, California or New England.

It is not only unsurpassed, but unequaled in hardness, producing an excellent crop in Minnesota. The straw is stiff enough to hold up the heavy heads well. It has a record of

OVER FIFTY-NINE BUSHELS PER ACRE

under favorable circumstances; other crops range from thirty to forty bushels under very ordinary conditions. It stools out the best of any variety we know; heads are of good size and a great many of them to each root. The grains are plump, handsome and quite hard; the hull is reasonably thin and it makes a most excellent grade of flour. Many millers claim that it is fully equal to the world famed Hungarian flours made from the choicest wheat grown in Hungary and Bohemia.

Turkish Red Winter Wheat originated from a few seeds of wheat which were brought to this country from Turkey in a shipment of rye. It looks very much like rye when growing, and is just as hardy as any variety of rye. It has been selected and improved from year to year until it is beyond comparison in value, for farmers in this section of the country, and has established the fact that **it most decidedly does pay to grow winter wheat in Iowa.**

During the past few years many new varieties of winter wheat from the east, north, south and west have been tested in Iowa, but in spite of eloquent descriptions, high testimonials and great records in other sections, they either winter kill, blight or rust so as to be worthless. Notwithstanding all the failures of other sorts, Defiance has proved to be invincible, and every year with only one exception (season of 1898-99, when all kinds of fruit and even oak trees were killed) it has produced a good paying crop. It is strictly iron clad and almost entirely free from rust, blight and scab and lives through the winter in the most exposed places.

PRICES, See Red Ink Price List Enclosed.





TURKISH RED Winter Wheat

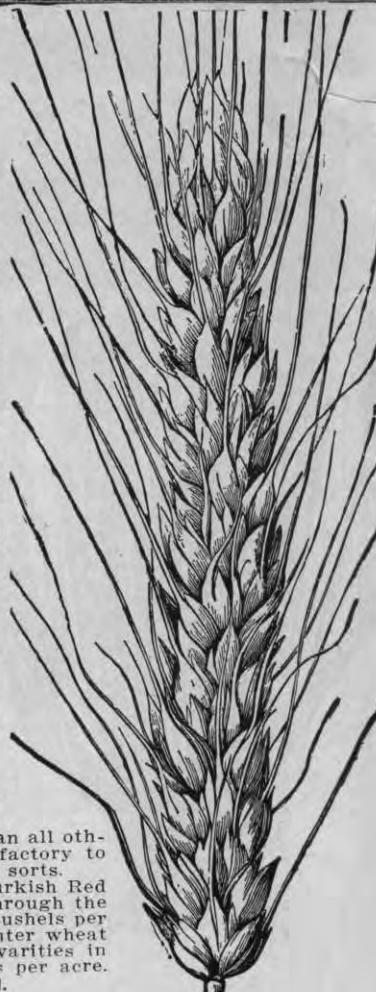
SECOND ONLY TO DEFIANCE

The best variety on the market except Defiance. Remember this is not a new or untried variety, as it has been grown in Iowa for twenty years and endured a temperature of 30 degrees below zero. It also stood more than 40 degrees below zero in Minnesota. It has never winter-killed except the season of 1898-99, when clover, grass, fruit and even oak trees winter-killed owing to the dry fall and the extreme cold weather without snow. Other years when the Fultz, Mediterranean, Michigan Amber, Harvest King, Poole, Russian Red and other varieties killed out very badly or rusted so as to be worthless, the Turkish Red came through in fine condition and yielded a bountiful crop. It is a big yielder, a sure cropper and there is no danger of its freezing out. It has given such excellent satisfaction in Minnesota that there they have renamed it the "Reliable Minnesota," or "Bearded Flife." Kernels are red and have a thin husk, very hard and rich in gluten. We believe that there is no other variety in existence except the Defiance that will give as good satisfaction in every respect, that will produce as large a crop under ordinary conditions, that will make as much good flour per bushel or weigh as heavy per struck measure as the Turkish Red. IT YIELDED FORTY-EIGHT BUSHELS IN INDIANA, and we believe under favorable conditions would do still better in other parts of the East. It is of strong growth with heavy, vigorous roots stooling out immensely and succeeds well on a variety of soils. While we believe it will pay farmers to plant the best, still this will be found far superior to most of the seed wheat now on the market, and will doubtless please all customers. It is not as highly bred or as closely selected as Defiance, but the price is lower.

At the Nebraska State Experiment Station in fall of 1906 they sowed thirty-seven varieties of winter wheat; it all winter-killed except three; in 1898 they sowed over one hundred varieties and only five survived the winter in good condition. In 1899 they sowed forty-two varieties. In all of these tests the Turkey Red succeeded finely and is given a first place on their list. It withstands the scab disease better than all others, is of best quality, yields best and is most satisfactory to grow. It pays to have the best. Don't risk doubtful sorts.

The Iowa State Experiment Station says that the Turkish Red Winter Wheat turned out exceptionally well, going through the winter without the slightest injury and yielding 55.3 bushels per acre. It outyielded all other eighteen varieties of winter wheat tested with it, the average yield of the eight best varieties in same test being only seventeen and one-third bushels per acre.

PRICES—Quoted on Red Ink Price List enclosed.





Red Cross Winter Wheat

BEARLESS, HARDY, HEAVY-YIELDING

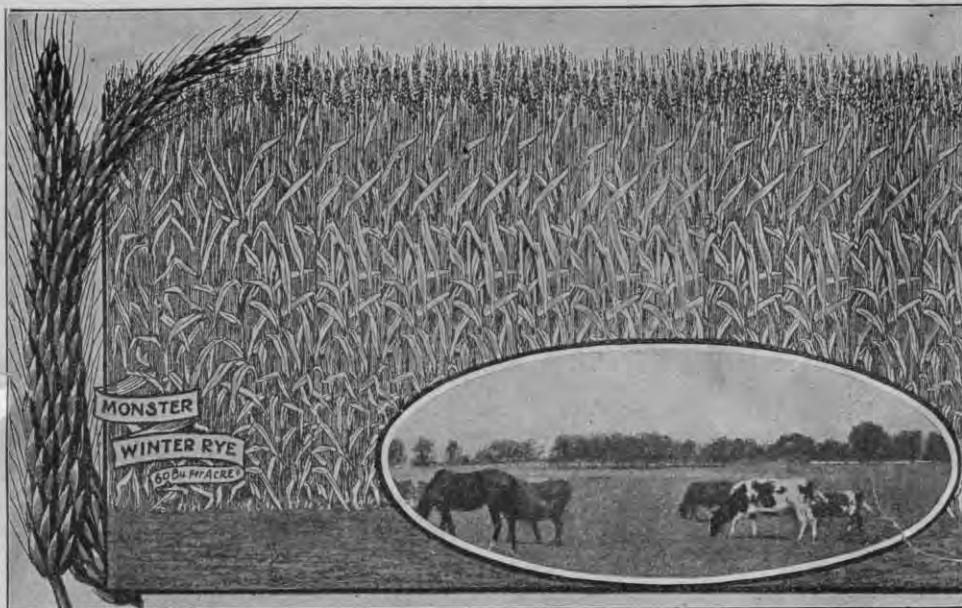
We offer this variety as the best beardless winter wheat for Iowa and the corn belt generally, and it has proven adaptable for a wide range of latitude. In fact it is the only beardless winter variety that we feel like recommending, as most other varieties are either too soft or too tender to withstand our northern winters without more or less injury. We have noted the conditions and yields of this variety in this section for several years past and it is only after the closest scrutiny and most careful investigation that we felt justified in advising our friends and customers to sow it. Mr. John P. Wallace, of Wallace's Farmer, grew a large field of it last season and states that it produced more grain and plumper berry than Turkish Red. Our stock is from a field producing more than 30 bushels per acre while Turkish Red in the same neighborhood threshed from 20 to 26 bushels per acre. If you prefer a beardless wheat we offer this as the very best sort for you to grow. Most farmers would prefer a beardless variety if it will yield as much as the bearded sorts, and we assure you that Red Cross will give satisfactory returns. There is absolutely no question about winter wheat being a profitable crop, as ten years' experience has convinced every observant farmer that in value per acre winter wheat is the best small grain he can raise. There is also no doubt that greatly increased acreage of winter wheat will be sown this fall, as farmers have learned how to make it fit into crop rotation. If you want winter wheat that will stand the winter, yield heavily, and which is free from the harsh, stiff beards that are so unpleasant to handle, sow Red Cross.

This variety is an extra strong, robust grower. It stands up extremely well and stoops far more the past dry season than any of the other sorts which we inspected. It ripens fully as early as Turkish Red, and we are of the opinion that early ripening is the secret of successful winter wheat growing in Iowa. Years of observation tend to show that the earliest wheat to ripen is nearly always the best, and it would seem necessary for us to grow varieties that will mature before the hot, drouthy weather comes on. The Red Cross is the earliest beardless variety we know, and on that account alone we believe it will fully sustain our recommendation. We selected our stock seed for sowing in 1911 by hand selection, discarding every bearded head, and our crop for the season 1912 contained less than one-tenth of one per cent bearded heads. It stood five feet high and was in full head June 1st and was by all odds the earliest and finest field of wheat in our neighborhood. Could our friends have seen this field our supply of this wheat would have been sold before this catalogue was issued.

This variety originated by a hand-made cross of Turkish Red wheat on Scotch Fife plants; from which parentage was secured the hardiness and prolific quality of the Turkish Red, with the larger berry and beardless head of the Scotch Fife. Careful selection for a number of years has fixed the type, but owing to its hybrid nature it still contains occasional bearded plants, though the proportion is so small that they will not be troublesome. Our stock is exceptionally free from any bearded strain. There were so few bearded stalks in the field that close examination was necessary to detect them. Our friends and patrons know the conservative policy of our house, and will fully appreciate the fact that we would not recommend any farm crop that would not give satisfactory results, and we do recommend this wheat without the least hesitation.

Price per pound 25c, 3 pounds 60c, by mail postpaid. By freight or express not prepaid, $\frac{1}{4}$ bushel 60c, 1 bushel \$1.75, 10 bushels or more @ \$1.60 per bushel.





FAR AHEAD OF ORDINARY RYE

Read what Practical Farmers Say

I have grown this season a splendid crop of the Monster Winter Rye from seed purchased from you, and can fully recommend it as being adapted to this section of the state. It produced a better crop than any other grown here.—Fred Bogert, Lee county, Iowa.

I have finished harvesting the crop of Monster Winter Rye grown from seed purchased from you and it is the finest I ever saw, and I have raised Rye all my life. The heads are very large and heavy and the bundles "weigh like lead" in shocking them. The grain is large and the handsomest ever grown here.—William Hester, Dallas county, Ia.

The Monster Winter Rye which we purchased from you last fall has proved quite satisfactory.—Wood Bros., Warren county, Iowa.

MONSTER WINTER RYE

The Greatest Offering in the Entire List for a Double Crop of Pasturage and Grain

We consider Winter Rye one of the most important of all farm crops. In the first place it is a sure crop—failures being almost unknown. Every farmer should have at least a few acres of it. It can be sown in the fall and when the press of work is not so great. It grows very vigorously and will furnish pasture till late in the fall and also early in the spring before grasses have begun to make a growth, and for this reason is of **GREAT VALUE TO DAIRY FARMERS**. It can then be plowed up and another crop put in or allow it to mature a grain crop also, and some claim it produces a larger grain crop after being pastured. A crop of Rye can be produced on soil which is too poor for wheat. Owing to its extreme hardiness, freedom from blight, mildew, rust and insects, a good paying crop can also be depended on. Because it ripens so early it is especially good to precede Alfalfa, and two crops per year can be grown on the same field if Rye is harvested early and the land sown to buckwheat or turnips. It is highly valuable for sowing on rough, stony, stumpy or barren land, and will make a profitable crop and help reclaim the land. It grows so luxuriously as to smother all weeds, and therefore is valuable to clear the soil of weedy spots before a cultivated crop is put in. It may be sown very late in the season, even up to winter, but early sowing is preferable. Dairy farmers should appreciate the advantage an early pasture has for their herds in increasing the flow of milk and quality of butter, and sow a few acres this season. Our Monster Winter Rye is of extra quality and we are sure it will please you, no matter whether you want it for pasture or a grain crop.

COMMON WINTER RYE

A choice quality of ordinary Winter Rye. All our seed Rye is new crop. We do not consider old Rye fit for seeding, as it frequently will not germinate. There is an increasing use of forage and pasture crops among the farmers of the corn belt. Hay is becoming so expensive that pasture and roughage are being sought for more each year. From this need has grown up an immense trade in cane, rape, millet, cowpeas and kindred crops, and the demand for rye is constantly increasing because it is one of the best and most profitable, and is entitled to more attention than has been given it heretofore.



A FEW FACTS

Demonstrating the value of this new grain to the farmers of the west.

Grows in the arid regions.

Yields more than wheat or oats.

Cheapest feed for live stock next to corn.

Stock eat both grain and straw.

Does not rust.

Does not smut.

Sow in spring where spring wheat is grown.

Sow in fall where winter wheat is grown.

Use 50 to 75 pounds of seed per acre.

Makes a better return on poor soil than any other grain.

Grows anywhere any other grain will.

One grower claims that counting the value of the hay an acre of Speltz is equal to 3 acres of wheat growing in an adjoining field with the same soil conditions.

**FOR PRICES
See Red Ink Price List**

SPELT OR EMMER

Speltz was first introduced to the American trade by our house about ten years ago, and rapidly grew in public favor as a profitable grain crop. It is now listed by almost all of the leading seedsman and has become a staple crop in nearly all sections of the northwest and its position in the list of grains is thoroughly established. It is one of the many advances in agriculture which have come from introduction of improved varieties, and special crops by the Iowa Seed Co., and the increasing confidence of our growing list of customers comes largely through our efforts to advance at all times the interests of the farmer and feeder. Although this grain at the first trial gave promise of becoming a valuable crop, yet we did not realize how important it was destined to become. Since the experiment stations of the different states have tried it and without exception given a favorable report, the farmers, especially in the northern and western states, have been growing large crops of it and the reports received show that in nearly every particular it has the advantage over other cereals. Coming from the colder climate of Russia, Speltz is never affected by the weather in the northern states and is also very early, ripening before any danger of frost. Since being introduced into this country it has been successfully grown in the semi-arid states of the west, showing that its hardiness was fully equaled by its drought-resisting qualities. In yield it surpasses any of the other grains, not even excepting corn. On good ground it will produce immense crops of grain and the straw is claimed by some growers to be equal to wild hay for feeding and is relished by the stock.

Speltz is especially a crop for cold short seasons, dry semi-arid land, or poor thin soil, yet it will pay you to plant it on the most valuable ground of the corn belt. Speltz is very similar to barley in appearance and style of growth and is grown and harvested in like manner. It has some advantages over barley, as it will produce greater yields per acre and is therefore the cheapest grain feed that can be produced outside the corn belt, and is really no more expensive to produce than corn. We make the statement basing our calculations on the feeding value pound for pound of the two products. It can be sown either spring or fall in the manner of rye, and this makes it very desirable for the semi-arid districts where the ordinary cereals are not generally successful. We believe the greatest value lies in its power to produce great crops of valuable feeding grain under adverse conditions of thin soil, dry climate and short seasons. Like rye it can be utilized for pastureage and hay, and can be matured for dry grain feed of fair more value than that cereal. While it will make flour of fair grade, somewhat similar to rye flour in its commercial value. It yields 70 to 100 bushels of grain to the acre, besides several tons of straw for feeding. The grain is not so heating or fattening as corn, but is much richer in flesh-forming elements, and of superior quality for fattening hogs, cattle, sheep, poultry, etc.



WINTER TURF OATS

Winter Turf Oats are used in the South in the same manner and for the same purposes that winter rye is used at the North. Sown in the fall it produces winter and spring grazing and a crop of grain all from one seeding. Of course the pasturing cannot be carried on very late in spring, but the oats will carry a moderate amount of stock through winter and until grass pastures are ready. These oats may be sown any time from August 1st to October 1st, but early September is probably the best time in ordinary seasons. They are not always dependable in Iowa, but are probably equal in hardiness to the common varieties of winter wheat which were grown here before the Turkish Red was introduced. It is, however, a most valuable crop in latitudes south of the Missouri line, as it nearly always makes a good crop of grain and never fails in its grazing value. Mr. Chas. Schedlebower, of Willow Hill, Ill., reports 31½ bushels of Winter Turf Oats from one bushel of seed purchased of us and states that they stood up well and did not rust. They are quite heavy, stooling extra well, often growing 25 to 40 stalks from a single grain and therefore need not be sown quite so thickly as ordinary oats if a grain crop alone is desired. If they are to be grazed, however, we recommend seeding 3½ bushels per acre as it is likely to be thinned out somewhat by the stock. Any farmer who keeps live stock in the localities suitable for winter oats should not fail to grow them. They will produce so much green pasture at the season when grass pastures are dead that they will maintain the stock all winter with only a trifling addition of grain. It seems to us that these winter grains (rye and oats) afford great opportunities for cheap green feed for stock during the time that grass pastures are not available, and we are convinced that a trial of rye in the North and oats in the South will demonstrate their value to the stock grower. The oats will nearly always live through the winter in the south half of Iowa, but as they offer no crop other than grazing which is superior to spring grown oats, and as we consider rye superior to them for grazing, we only offer the Winter Turf Oats to our Iowa customers as valuable when pasturage or hay crops are short. To our friends in Missouri, Kansas, Oklahoma and other southern states, we do most heartily recommend them as superior to rye for winter grazing and for general crop.

In our article on Sand Vetch in this circular we recommend the seeding of Vetch and rye together for fall, winter and spring pasturage or hay, and we can recommend the use of Winter Turf Oats in place of rye for this purpose in localities where the oats are dependable. The oats are superior to rye, as they do not have the harsh beards of the rye and are preferred by the stock as a grain ration. About one bushel of oats and a half bushel of Vetch will seed an acre. Our trade in Winter Oats has grown considerably the past few years, and we feel sure that as they become better known and their value appreciated the demand will grow to heavy proportions.

Per lb. 25c, 3 lbs. 60c, postpaid. For price in quantity see red ink price list enclosed.

You Will Be Pleased

Our grass seeds and seed grain never fail to give satisfaction to our customers. You can increase your yields 25% by purchasing your farm seeds of us.

MICROSCOPE



EXAMINE YOUR OWN SEEDS

This is a double lens high-power microscope, with solid brass mountings, and the farmer will find it a very valuable aid in the examination of grass, clover and other seeds. Guaranteed. Each by mail, postpaid, 50cts. If sent with other goods by freight or express we will furnish it for 40c.



BUCKWHEAT

**The item which always offers an opportunity
for a second crop from the grain fields**

Not nearly enough attention is paid to Buckwheat by the farmers of the corn belt. It is too often looked upon only as a crop of last resort, something to fill in when floods, unseasonable weather or some other calamity has made a shortage in corn land or rendered some plot useless for other purposes for that season. The real value of Buckwheat is not nearly confined to the purpose outlined. Some western farmers raise two crops of grain each summer from certain fields in the rotation by taking off a crop of rye or winter wheat, plowing the land and sowing Buckwheat in late July or early August and harvesting a second crop of grain in October, equal in value to the first, and handled with only a moderate amount of labor. Many farmers have the idea that Buckwheat rapidly exhausts the fertility of the soil, but this is not true to any greater extent than any other small grain. If you use a header in harvesting and permit the Buckwheat straw to remain on the land all winter, turning the refuse under with the spring plowing, you will really benefit the soil, rather than rob it of fertility.

Another influence that has retarded the growing of Buckwheat is the reluctance of western elevator men to purchase the crop as offered. This difficulty is now readily overcome by the Farmers' Mutual elevators, and no farmer need fear lack of a market for Buckwheat, because the demand is strong among millers during the winter months.

Many orchardists and nurserymen use late-sown buckwheat as a winter cover crop among the trees, turning it under in spring. By this method splendid protection is afforded the trees, fertility is added to the soil and needed cultivation is given and the result is rapid growth and increased fruitfulness.

As it is generally sown in late June or early July it will fill up the vacant plots on the farm at a time when all other planting is past and produce a profitable crop on what would otherwise be waste places. Use about one-half bushel seed per acre.

JAPANESE.—A week earlier than Silver Hull and yields more. Flour is equal to any other buckwheat, while it is more productive than any other, and succeeds well far north. The kernels are quite large, but the straw is heavier and it branches more; need not be sown as thickly as other kinds. Per lb. 25c, 3 lbs. 60c, postpaid.

SILVER HULL.—Very good, popular variety. Grain is of light gray color, rounder than the common variety, has a thinner husk, earlier and yields more. It is preferred by the mills grinding buckwheat flour, as it makes a smaller proportion of hull to flour than any other variety. Per lb. 25c, 3 lbs. 60c, postpaid.

For prices of seed offered in this catalogue see the Red Ink Price List enclosed herewith, effective for immediate orders. Copy of our price list mailed to any of our friends at any time on request.



ALFALFA

The Wonderful Clover that is called "Queen of Grasses"

HOW TO GROW AND USE IT IN THE CORN AND CLOVER BELT.

In many sections of the country Alfalfa is the most important of all forage plants, and takes first place in value to the farmer and feeder. While we can do without it in the clover growing sections of the middle west, there is a place for it on every farm, and it will be found extremely useful and profitable if handled in the proper manner. It cannot take the place of other clovers as a part of a short crop rotation or as a quick restorer of fertility to the soil, but as a permanent meadow it will be found much superior to timothy and clover as generally used. This superiority is because it is much richer in flesh-forming elements than the grasses named, and with its use a balanced ration for all kinds of stock is secured. It is because of the cheapness of production, and because of its adaptability as a good item in any needed ration for all kinds of live stock, that it is conceded to be the most valuable grass which we can produce.

SOW THE SEED IN SUMMER.

In Iowa by far the greater part of the seeding is made in August, as by seeding at this time land can be utilized that has already produced a crop of grain. The young plants also begin to make their growth after the hot days of summer are past and are not so likely to be burned up from excessive sun heat. In ordinary years the young plants will reach nearly a foot high; sufficient size and maturity to stand the winter without loss, though if sown too late it is likely to get winter killed because of immaturity at time of frost.

PLANT ON GOOD GROUND.

Don't try to grow alfalfa on wet, sour soil, or on soil with compact clay sub-soil. Select the well-drained, porous soil, so that the roots may have no trouble to develop. They must make growth to a depth of ten or more feet, or the crops are curtailed and the plants are not permanent. Upland is better than bottom land, as it is not usually so heavy. Land that has grown some variety of clover recently (within two or three years) is preferable. Sweet Clover is usually considered the best preceding crop, but Common red, Mammoth or Alsike clovers all furnish the bacteria which helps the establishment of Alfalfa plants, and make almost certain the securing of a good stand.

HOW TO PREPARE THE SEED BED.

The field selected for Alfalfa should be cultivated a year before you make the seeding. If you seed in spring (April) take a part of the corn or oats field, disc and cross disc thoroughly pulverizing the soil about 3 inches deep (not more). It is not necessary to plow unless the ground has become closely packed, and if you have to plow, plow shallow. The best authorities agree that it is not wise to break the soil too deeply, as the young plants





are more easily killed by the summer heat if the roots are in too loose soil. If fall seeding is done (last half of August) raise a crop of early oats, rye or winter wheat on the field, and when ripe cut it and plow the ground shallow. Let it lie until about the middle of August; disc and cross disc, thoroughly pulverizing the soil and killing all weed growth, and sow the seed at once. There is no great secret in securing a stand of Alfalfa, the one necessary fact is to have the surface soil to a depth of two or three inches thoroughly pulverized and the sub-soil porous enough to let the young roots down into the depths. Best results come if seed is not planted more than one inch deep. Use a drag harrow with slanting teeth to cover the seed. Much stress is laid by some writers on inoculation of the soil, but this will not be necessary in the corn belt generally as where clover has been grown the soil is nearly always receptive and no difficulty is experienced from lack of inoculation. If you use ground that has grown corn the previous year it will be necessary to remove all stalks and root clumps if the seed is to get the right start.

CARING FOR THE PERMANENT MEADOW.

No care of the Alfalfa is necessary the first season except to see that it is not smothered by weed growth. This is easily regulated with a mowing machine. Set the sickle bar high enough so as not to cut the Alfalfa, and go over the field as necessary. If your land is clean as it should be this will probably not be necessary. The second year you can begin cutting the hay. The third year and thereafter it is recommended that the field be disced and cross-disced in the early spring season, as this tends to make the crowns of the plants more prolific of growth.

The discing also helps to keep down weed growth and prevent the spread of blue grass and other grasses which eventually crowd out the Alfalfa plants. Alfalfa in the corn belt is usually crowded out by the encroachment of other grasses and by discing and adding a little seed each spring, the planting may be made practically permanent. Generally it will pay to do this rather than to start a new alfalfa meadow every two or three years. A light dressing of well-rotted manure each winter will add greatly to the amount of crop produced. In fact we believe it will pay our farmers to fertilize their meadows, whether Alfalfa, Timothy or Clover, and if sufficient manure is not available light dressings of commercial fertilizers will show a profit by added weight of hay produced.

PROPER TIME TO CUT THE CROPS.

The time to cut Alfalfa is when ten per cent of the plants are in bloom, and just as often as it reaches this stage of growth. Some farmers find it easier to determine time of cutting by growth of plants rather than the per cent of bloom. It will not be difficult to determine the proper time, but it is necessary to watch it closely and cut it before it gets too far toward maturity, as the leaves are apt to shatter badly if allowed to grow too long. You can count on three cuttings a year in most of the central states, and if you are fore-handed, you can get four. Alfalfa must have attention. You can't neglect it. It must be cut when it is ready. If you don't you not only lose the best part of that particular cutting, but are liable to lose the next crop entirely. Don't let anything keep you out of the Alfalfa field when it is ready to cut.

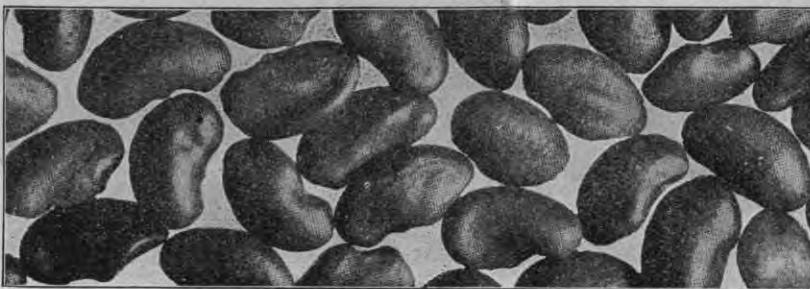
HARVESTING, CURING AND STORING THE HAY.

Run the mower in the morning after the dew is off. Cut until noon. Allow hay to wilt, and rake it up into windrows, allowing it to remain until cured (generally about 36 hours). Handle carefully so as not to shatter off the leaves, as these are by far the most valuable part of the hay. It will pay to have a shed for storing the hay, and the floor of the shed should be two or three feet above the ground. Where this is available throw the Alfalfa loosely on the floor, and build up the stack from succeeding cuttings as harvested. If you have such a shed you can haul the Alfalfa in the same day it is cut if it is free from dew or rain and you do not build more than three feet deep. In the dry regions Alfalfa hay is generally stacked without protection, and where rain is not excessive this practice is

commended, and it may be stacked in Iowa, but we recommend using stack covers, or a good top of slough grass to protect the Alfalfa from rain. If stacked before thoroughly cured it heats and "burns," turning black. Care must be used if large stacks are made. A frequent practice is to stack the first cutting to make half the permanent stack, building it up to full size with the succeeding cuttings. If this is done the stack covers are a necessity in regions where rain falls.

SELECTING THE SEED TO SOW.

Buy the cleanest seed you can find. Prices should be secondary to purity and vitality. Our house buys and sells under the microscope, and it will be glad to have you apply the same test. If you don't feel competent to judge for yourself let us advise you, or mail you samples for analysis by the agricultural colleges who will gladly aid you in the selection of the seed. Sow thickly as you would clover seed, using 15 to 20 lbs. per acre. The greatest number of plants in an Alfalfa field is when they first come up. The process of natural selection starts when the plants come up, and each year the number gets fewer and the plants larger and stronger. The heavy seeding smothers out the weeds to a large extent, and furnishes plenty of plants for nature's selection of the fittest.

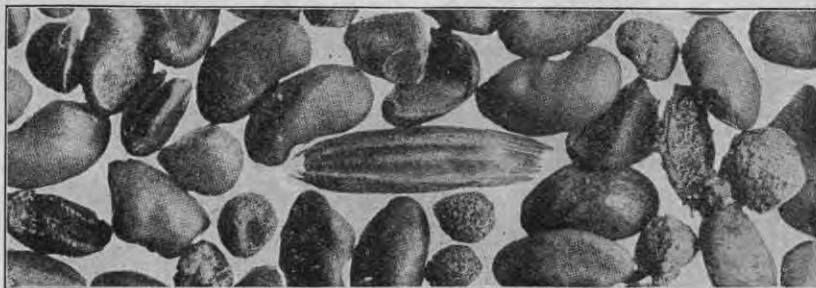


WHAT THE MICROSCOPE REVEALS

It is hard to tell about the seed with the naked eye, but the two pictures herewith present a forceful object lesson.

Upper Picture (Iowa Shield Brand Alfalfa)—More than 99½ per cent pure, new crop, plump, sound seed, bright in color and of strong vitality. Only a few fields produce such seeds, and those are new plantings in dry sections, free from weed growth. The best seed we can find and then we reclean it and take out sand, chaff and small grains and make it "Iowa Shield," the best grade offered.

Lower Picture (seed as frequently sold)—Full of weeds, broken grains and dirt. Unfit for seed. You breed loss and trouble for yourself if you buy such stuff. Use the microscope. Reject any seed that won't bear the closest inspection and analysis.

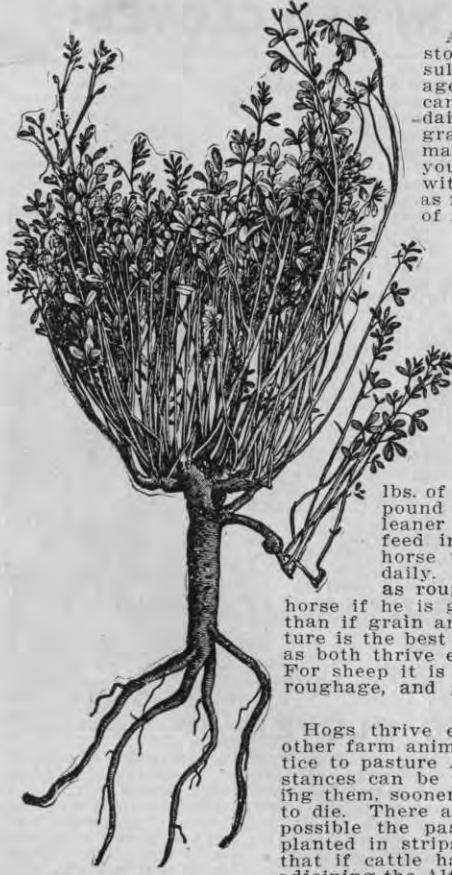


Don't try to start Alfalfa with a nurse crop. The soil, preparation and seed are the three necessary steps in starting a field of Alfalfa and the most important item of all is the seed. For the central and southern part of the corn belt the native or American seed is the best, while for the northern part we recommend the Turkestan Alfalfa for its hardiness and ability to withstand severe weather conditions. In the extreme north some authorities are recommending a yellow-flowered Siberian Alfalfa, but we believe the Turkestan will stand any climatic conditions in these states, and it is conceded that it is more productive than the yellow-flowered variety. The native sort is more prolific than any other and is no doubt the best for central Iowa and corresponding latitudes. It is claimed by most writers that seed grown by irrigation or on irrigated land is not suitable for Iowa and the middle states. We have never seen any proof substantiating this claim, nor have we personal knowledge that agrees with this idea; but a prejudice exists in the minds of many planters against seed grown under irrigation and for this reason we handle seed procured in the semi-arid regions of Kansas and Nebraska. We are extremely careful in the handling of Alfalfa, and our Iowa Shield Brand western grown seed is the select of the select. You can have a small sample for inspection any time on request.



HOGS IN ALFALFA PASTURE—COURTESY OF "OHIO FARMER"

HOW TO FEED IT.



Alfalfa is too valuable a crop to feed alone to stock and besides it isn't necessary. The best results are from feeding it with other grain and forage. For wintering cattle a half and half ration of cane (sorghum) hay and Alfalfa feed of 24 lbs. daily will keep them growing and thrifty without grain feed; and this we consider the very cheapest maintenance feed yet produced. For calves and young stock two lbs. of ground grain is advisable, with balance of ration as given above in quantity as needed. For fattening cattle six or seven pounds of Alfalfa should be given each animal at night in place of any other feed, while the corn and roughage are fed in the day time ration. For dairy feeding Alfalfa is used in place of bran, figuring three lbs. of Alfalfa as equal to two of bran. Alfalfa is not intended to take the place of green feed or silage for dairy cows, but will furnish the elements necessary at a much less cost than bran, shorts or concentrated foods. For hogs Alfalfa is of special value. It makes excellent pasture for young pigs and shoats and can be fed as hay with equal results if it is preferred not to pasture it. It is rich in lean meat and bone forming elements and is so invigorating that hogs fed upon it are not nearly so liable to disease as if this item is missing from the ration. Two lbs. of green Alfalfa will produce as much pork as one pound of corn, and the Alfalfa pork will be healthier, leaner and more desirable in every way. For horses feed in proportion of one to one hundred. If the horse weighs 1,000 lbs., give him 10 lbs. of Alfalfa daily. Figure it in as a part of the grain ration, not as roughage, but you will find more strength in the horse if he is given Alfalfa to keep up the bone and sinew, than if grain and tame hay alone are given. An Alfalfa pasture is the best possible kind for the brood mare and the foal, as both thrive exceedingly on the elements which it contains. For sheep it is to be used in preference to any other hay or roughage, and gives best results when fed with grain.

PASTURING ALFALFA.

Hogs thrive exceedingly on Alfalfa pasture, but for most other farm animals it is usually considered a dangerous practice to pasture Alfalfa. While live stock under some circumstances can be pastured on Alfalfa for weeks without injuring them, sooner or later some of the animals are almost sure to die. There are a great many plans recommended to make possible the pasturing of Alfalfa. Some have the Alfalfa planted in strips, with strips of grass between; others claim that if cattle have access to other kinds of food or pasture adjoining the Alfalfa field there will be no danger from pasturing the crop.

Alfalfa Plant.



MEDIUM OR COMMON RED CLOVER

"Iowa Shield" and "Iowa Standard," our Famous Specialties.

Clover is frequently sown in corn at last cultivation, and this is a commendable method in good seasons, as the clover will become sufficiently established to withstand the winters. Many farmers also sow the vacant places which show in the spring seeding after the grain is cut. It is sometimes sown in timothy meadow after the first hay crop is cut, in order to increase the percentage of clover in the hay. This practice is desirable because clover "runs out" in permanent meadows unless kept up by new seeding. Clover is a great specialty in our trade, and there is a continuous demand for the seed all the year round. We sell it every month in the year and the summer demand grows in volume every year as the farmers come to know the possibilities of midsummer seeding.

We sell more clover seed direct to farmers than any seed firm in the West, and it is all sold because those farmers get better quality of seed—brighter, cleaner, more plump and vital—than they can secure elsewhere. Another thing our customers never have to guard against is foul weed seeds—we do that for them—and no seed that is not strictly first class in every respect is shipped by us to our friends.

Our clover seed has become widely known for its purity, strong vitality, hardiness, vigorous and healthy growth, and stooling qualities, so that now we receive many orders from the most distant parts of the United States. Well-posted farmers appreciate the difference between it and ordinary stock. This is the most important of all clovers and the standard everywhere for hay and pasture and our "Iowa Shield" grade is the plumpest, cleanest, purest, fanciest grade; tested and of high vitality. Farmers usually sow 15 to 20 pounds of clover seed to the acre when sown alone, but this seed is so choice that 6 or 7 pounds is really sufficient if conditions are favorable, but we recommend sowing 10 pounds so as to be sure of a perfect stand. About 5 pounds, if sown with timothy. Per pound, 40c; 3 pounds, \$1.10 postpaid. Ask for price by bushel.

MAMMOTH RED CLOVER

Shield Brand Clover.

Notice the plump, perfect shaped grain and freedom from weeds. You cannot secure better seed, no matter what you pay for it, and it costs but little more. It always pays to sow the best.

This is also called Sapling or Pea Vine Clover. It greatly resembles the Medium Red, but grows coarser and more vigorous. It is the best clover for pasturage as it will produce an enormous yield and is of the highest feeding quality, but not as desirable for hay. Specially desirable for hog pasture. You can enrich your soil more cheaply by sowing Mammoth Clover and plowing it under than in any other way. Per lb. 40c, 3 lbs. \$1.10, postpaid. Ask for price in quantity.



Ordinary Clover.

As it comes from the huller, full of weed seeds, trash and sand. If you buy low-grade seed, you not only risk filling your land with weeds, but you are also paying for each pound of weed seed and trash.



SWEET CLOVER

(MELILOTUS OR BOKARA CLOVER)



During the past three or four years, there has been considerable discussion in the farm papers as to the value of Sweet Clover, and the plant which has for many years been thought of as a weed is now beginning to take a prominent place in agriculture and those who have tried it longest are most earnest in its praise. It has been demonstrated repeatedly by actual farm experience in Iowa, as well as in the surrounding states, that all kinds of live stock will eat it readily and when they once acquire the taste for Sweet Clover they will eat it in preference to any other clover or grass, and not only like it as a pasture, but also when cured as hay. It can be grown on land which is not fit for other clovers and is said to produce a larger quantity than any other clover on the list, as it can be cut from two to four times during the season and if cut while growing vigorously before the stems become hard, it is very nutritious.

Sweet Clover belongs to the family of leguminous plants, and adds greatly to the fertility of the soil on which it has been grown. The same bacteria which live on its roots also thrive on the roots of alfalfa and there it is claimed that alfalfa will do much better on land where Sweet Clover has previously been grown. It roots very deeply, therefore, opens up the soil so as to adapt it for all other kinds of crops, making it not only more rich in nitrogen, but allowing the roots of other plants to penetrate more deeply. Farmers who have grown it in Iowa, Kentucky, Ohio, South Dakota and the western states claim that it will yield as much forage, if not more, than alfalfa and will thrive on poor sandy soil or on dry, badly-washed hillsides where other clovers fail. It is not a perennial plant like the alfalfa, but is a biennial, similar to Red Clover, although in Iowa it is considered more as an annual, reproducing itself each year from seed.

Most farmers are accustomed to seeing the white-flowered variety growing along the wayside, where it is not cut, but is allowed to produce a seed crop, and therefore, continues year after year. It is not, however, a dangerous weed in cultivated fields, as it will not stand cultivation. It can be sown with grain crop in the spring, and after the grain is harvested, will make pasture or hay and can be turned under in the fall, and thus enrich the land greatly, without losing the season's crop. It makes a good pasture when combined with blue grass, timothy or any of the tame grasses. Hogs are quite fond of it and especially like to root it out and get at the roots, as well as the tops. It is claimed by some farmers that there is absolutely no danger of cattle bloating when fed on Sweet Clover.

It may be put on as a top seeding by discing the ground light in old pastures, but it will be much more profitable to thoroughly prepare the ground by plowing and thorough harrowing just as you would do in preparing the land for alfalfa or other clover.

Those who have heretofore been familiar only with the white-flowered Sweet Clover which grows so freely by the roadsides will be more pleased, we believe, with the yellow-flowered sort, which is much earlier and does not grow either as tall, rank and woody, but is of a more succulent nature. The accompanying illustration represents its habit of growth. We can supply seed of either the white or yellow-flowered varieties.

CRIMSON CLOVER

This is an annual variety—that is, it will not withstand our winters in this northern latitude. The seed starts very quickly, grows rapidly, and the blossoms are large, cone-shaped, and of the richest dark crimson or scarlet color, so that a field of the Clover when in bloom is a beautiful sight. It is particularly recommended for sowing in corn at time of last cultivation. It makes a rapid growth, does not seem to interfere with the corn, but helps to keep the weeds down and makes an excellent fall pasture. Some of the best posted farmers in the state have already purchased it for sowing in their corn, especially where they expect to "hog it down," as soon as the corn crop is in fit condition. Others gather their corn as early as possible and then turn in the stock for fall pasturing. It is also an excellent cover crop for sowing in orchards. After harvesting your small grain, sow Crimson Clover, and get two crops the same year. Prices of these Clovers on Red Ink Price List.

Ask
for
Prices





OUR PERMANENT MEADOW AND PASTURE MIXTURES

Prepared Under Our Own Formulas From Choice Fresh Seed: Ready for use Six Weeks After Seeding

In the course of natural reproduction grass seeds mature and are sown by the winds in summer. Seeding at this time, assisted by preparation of the soil, will result in a good stand of grass when fall rains come and in ordinary years sufficient growth is made to withstand the winter without loss. The meadows may be improved by the sowing of mixed grasses after the first cutting of hay, and a sowing of these mixtures is recommended on grain stubble where the spring seeding of clover or other grasses is thin.

PERMANENT MEADOW MIXTURES

Will make the best quality hay as the mixture contains such grasses as produce a heavy growth and mature together. We send out the No. 1 mixture when not otherwise ordered, as it is adapted to the medium or average soils. Sow about 22 lbs. (1½ bu.) per acre; or for top seeding 10 to 15 lbs.

NO. 1—FOR MEDIUM SOILS.—Contains Meadow Fescue, Perennial Rye Grass, Italian Rye, Orchard Grass, Tall Meadow Oat, Timothy, Red Clover, Alsike, Sweet Vernal, etc.

NO. 2—FOR HIGH, DRY LAND, LIGHT OR GRAVELLY SOILS.—Contains Sheep's Fescue, Alfalfa, Hard Fescue, Perennial Ryegrass, Meadow Fescue, Timothy, Kentucky Blue Grass, Sweet Vernal, etc.

NO. 3—FOR HIGH, DRY LAND, HEAVY OR CLAY SOILS.—Contains much the same as above with the addition of Orchard Grass, Crested Dogstail and Bromus.

NO. 4—FOR MOIST AND RICH SOIL, OR LAND SUBJECT TO OVERFLOW.—Contains Water Meadow Grass, Meadow Foxtail, Perennial Rye Grass, Meadow Fescue, Red Top, Meadow Soft Grass, Alsike, Clover, etc.

NO. 5—FOR TOP SEEDING SWAMPS, MARSHES, ETC.—(Sow 10 lbs. per acre.) Contains much the same as above in different proportions.

PRICES: Any of the above Permanent Meadow Mixtures, per lb., 40c; 1 lbs., \$1.00, postpaid. By freight, not prepaid, per bu. (15 lbs.), \$3.25; 2 bu. or more at \$3.00 per bu.

PERMANENT PASTURE MIXTURES

Selected with a view to having a succession of grasses coming on constantly from the earliest spring through the dry summer weather and through the fall. It is permanent and keep improving year after year. Sow about 22 lbs. (1½ bu.) per acre, or for top seeding, half the amount.

NO. 6—FOR MEDIUM SOILS.—Contains Kentucky Blue Grass, Meadow Fescue, Perennial Rye Grass, Orchard Grass, Tall Meadow Oat Grass, Hard Fescue, Alsike Clover, White Clover, Timothy, Red Clover.

NO. 7—FOR HIGH, DRY, GRAVELLY SOILS.—Contains Sheep Fescue, Hard Fescue, Creeping Bent, Crested Dogtail, Meadow Fescue, Timothy, Kentucky Blue Grass, White Clover, etc.

NO. 8—FOR HIGH, DRY, HEAVY OR CLAY SOILS.—Contains much the same as above, mixed in different proportions, with the addition of Alfalfa and Orchard Grass.

NO. 9—FOR MOIST AND VERY RICH SOILS.—Contains Perennial Rye Grass, Water Meadow Grass, Water Fescue, Meadow Foxtail, Orchard Grass, Meadow Soft Grass, Tall Meadow Oat Grass, Alsike, etc.

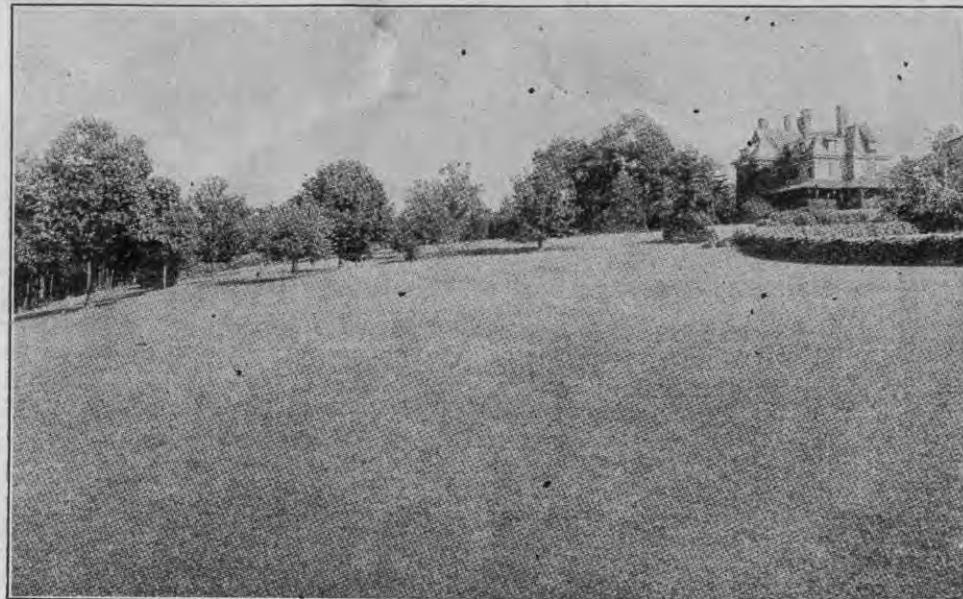
NO. 10—FOR ORCHARDS, WOOD PASTURES AND SHADY PLACES.—Contains Wood Meadow Grass, Kentucky Blue Grass, English Blue Grass, Meadow Foxtail, Sweet Vernal, Red Clover, Alsike, etc.

PRICES: Any of the above Permanent Pasture Mixtures per lb., 40c; 1 lbs., \$1.00, postpaid. By freight, not prepaid, per bu. (15 lbs.), \$3.25; 2 bu. or more at \$3.00 per bu.

LAWN GRASS SEED

*"Thank God for Grass! No other Glory vies
With the refreshing glory of the grass;
Not even the blue of the o'er bending skies,
Nor fading splendors when daylight dies,
Can this sweet smile of living green surpass."*

beds seem insignificant. How important it is then to plan for the best lawn obtainable! Considerable time may be saved by making your lawn in the fall, the ground at this season usually working up loose and mellow, and by sowing the seed in September or October, it will be well established before winter begins and make a beautiful green carpet over your ground very early in spring. Ask for circular, "How to Make a Lawn."



EVERGREEN MIXED LAWN GRASS SEED.—This is a mixture of the best varieties of grass seed suited for growing together and will make a beautiful, soft, velvety lawn of as handsome green as an emerald, and is formed of grasses which keep green from early spring all through the hot, dry summer weather until late in the fall. It comes up quickly (about two weeks) after seed is sown, and after once up it spreads to cover the ground and is ready for the lawn mower in six to eight weeks. It roots deeply on any soil and forms a dense, thick turf. This mixture is made only by us from new crop, recleaned, pure seeds of the best varieties, well suited for even and permanent growth, as good as money can buy. Price per pound (will sow 400 square feet) 40c; 3 lbs., \$1.10, postpaid. By freight, per bushel of 15 lbs., \$3.75; 5 bushels or more at \$3.50 per bushel.

CENTRAL PARK LAWN GRASS SEED.—Nice for lawns, but is of special value for parks and around country homes where it is not convenient to mow the lawns frequently. Sow about 50 lbs. per acre. Per lb., 35c; 3 lbs., \$1.00, postpaid. By freight, bushel of 15 lbs., \$3.50; 2 bushels or more at \$3.25 per bushel.

SHADY LAWN MIXTURE.—For sowing under shade trees; a combination of grasses which grow naturally in the woods and are of dwarf evergreen growth. Rake in a little air-slaked lime in such places before sowing as ground is sometimes "sour" in such spots. Per lb., 50c; 3 lbs., \$1.35 postpaid. By freight, per bu. (15 lbs.), \$4.00.

TERRACE LAWN MIXTURE.—This is a mixture of such grasses as have strong, spreading roots, making a close turf which the heavy rains cannot easily wash out. Per lb., 50c; 3 lbs., \$1.35 postpaid. By freight, bu. (15 lbs.), \$4.50.

KENTUCKY BLUE GRASS.—Our stock is of the best grade of fancy cleaned, new crop, tested seed. Per lb., 35c; 3 lbs., \$1.00, postpaid. By freight, per bu. of 14 lbs., \$3.00.

WHITE CLOVER.—Makes a close turf and looks nice mixed with lawn grass. Per lb., 60c; 3 lbs., \$1.50, postpaid. Ask for prices.

PEERLESS LAWN FERTILIZER.—You cannot expect your lawn to look fresh always when you are cutting a crop of grass from it every week. Lawn grass is a voracious feeder and requires fertilizer. Our Peerless lawn Fertilizer is of the best quality, dry, finely pulverized and easy to apply. Use 10 lbs. for 1,000 square feet of lawn or 400 lbs. per acre, early in spring. Price per 10-lb. pkg., 60c; 25 lbs., \$1.00; 50 lbs., \$1.75; 100 lbs., \$3.00.

BONE MEAL.—Ground fine and suitable for fertilizing lawns, flowers, etc. Useful to all planters. Price per 10-lb. pkg., 50c; 50-lb. pkg., \$1.25; 100-lb. bag only \$2.35.

LAWN MOWERS and other lawn supplies. Ask for circulars and prices.



TIMOTHY

Iowa Grown Seed of Choicest Quality.

The Timothy meadow has come into its own and will without doubt yield as much profit per acre as any equal area on the farm. For many years the value of hay and seed did not yield sufficient money returns, but the past two years hay (especially choice timothy) has reached extreme prices, being sold at retail on the Des Moines market at \$25 per ton. In addition to this the price of seed has reached a value unknown in the past. Because of these factors the farmers who had timothy meadows the past two years have made a fine profit. While no doubt the values will rule somewhat lower this year, there is no question that remunerative prices will prevail, and present conditions must appeal to the progressive farmer and urge the allotment of a goodly portion of the farm to timothy. On account of the extremely high price of timothy seed (the best grade selling at \$8 per bushel) many farmers during the spring sowed clover seed alone, rather than the usual mixture of timothy and medium clover. Most of these farmers expect to add the timothy seed this fall, and thus have the meadow in proper proportion for the production of choice hay next year. There is no reason why this cannot be done successfully, and you can also thicken the stand on the old meadows as well by seeding this fall. In our opinion it will pay to seed the meadows after the first crop of hay is cut. By this method you can increase the stand of grass greatly and keep the tonnage at a profitable figure. It will pay to keep up the timothy meadows because of value of the hay.

THE WHY OF FALL SEEDING

Nearly as much timothy seed is sown in the fall as in the spring, and this is following nature's method. Timothy ripens in August and the winds and rains sow the seed as it matures. It would seem, therefore that we might with safety sow at this time, as the work of the farmer is only to assist nature. Timothy is entirely hardy, and if sown in August or September it gets sufficient growth to withstand the rigors of winter without damage. Another inducement is that the price of seed is generally lower at this season of year than at any other. See Red Ink List enclosed.

Why You Should Buy Of Us.

We use the microscope in our buying. We protect you from foul weeds. We have the best cleaning machinery made and experienced men to operate it. We buy the best seed, we take out dirt, trash and impurities, and when we sell you timothy you can submit it to most careful test and it will not disappoint. **Our Iowa Shield Brand Timothy** is bright in color, but little hulled, almost entirely free from impurities and only requires about 8 pounds per acre for adequate seeding. Not one field in a hundred produces this quality, and the best seed from the best fields is not good enough for this grade until we have run it through our cleaning mills. Our Iowa standard grade is recleaned seed as it comes from the ordinary fields and meadows of Iowa.





GERMAN MILLET

HUNGARIAN

SIBERIAN

JAPANESE

MANITOBA

MILLETS

**IS QUICK GROWING AND
VERY HEAVY YIELDING FOR HAY AND CAN BE MATURED
AFTER WINTER WHEAT**

The Millets are useful to the farmers of the corn belt to provide hay and roughage quickly. Most varieties mature a crop in sixty days, and hence are available for sowing as late as July 15th. No great amount of work is required. Prepare a good seed bed, sow about a bushel of seed per acre and in good seasons three to four tons of hay per acre can be cured. The proper time to cut Millet is just when the seed is in the dough and before it hardens. If allowed to ripen thoroughly, the leaves shatter off in curing and this, together with the seed falling from the heads makes the hay dusty. Millet hay is good for cattle, while Hungarian is generally preferred for horses.



GERMAN MILLET.—It matures about two weeks later than common millet. It grows 4 to 5 feet high, yielding an abundance of leaves; heads closely condensed; spikes very numerous; seeds are round, golden yellow, in rough sheaths. Sow one bushel to the acre. We offer northern grown German Millet in two grades, "Iowa Shield" and "Iowa Standard." The Iowa Shield grade is fancy, recleaned seed, of extra quality, while the Iowa Standard grade is a choice quality of commercial German Millet, superior to most millet as generally sold.

TENNESSEE GERMAN MILLET.—This is an extra fancy grade of the true southern grown German Millet of the Tennessee or cultivated strain which is grown in rows, and cultivated like corn. This manner of growing makes for purity and strong vitality. The seeds are round and "shotty." The heads are very large, borne on a strong vigorous, very leafy plant and produces a much heavier crop than the ordinary stock.

SIBERIAN MILLET.—Frequently called Red German Millet. It is earlier than German which it resembles in manner of growth and productiveness. Very hardy and

withstands drouth and heat better than other varieties. Makes a rank growth with abundant leaves which start from the ground.

JAPANESE MILLET.—(*Panicum crus-galli*)—Barnyard Millet. A distinct variety called by one seedsman the "Billion Dollar Grass." Especially valuable for the North. Yields an enormous crop of forage, which is greatly relished by stock. When cured makes an excellent hay. Growth is heavier than the German Millet and the hay is nearly as coarse as cane or sorghum. Sow seed broadcast 15 lbs. per acre, or drills 12 to 18 inches apart, using 10 to 12 lbs. per acre.

MANITOBA MILLET.—(Hog or Broom Corn Millet)—Growth is strong and coarse. Makes splendid green feed for hogs and can also be cured and used like fodder. Matures quickly and withstands drouth extra well. Produces an immense amount of seed which is excellent food for poultry.

HUNGARIAN.—Often called Hungarian Grass. In general favor for summer forage purposes, as it can be sown as a second crop, and it will be ready to cut in sixty days. Sometimes preferred to millets, as it is thought to be less dusty.

For Prices of Millet Seeds of the Varieties here Listed, See Red Ink Price List Enclosed.



AMBER CANE

Prices fluctuate. (SORGHUM) See red ink list.

A Wonderful Forage Plant for Live Stock Feeders.

It is easy to raise, the only real labor in its management coming at the harvest. It is valuable as pasture, green forage, as hay or fodder, and as silage, so that a live stock feeder can, from one field of cane, produce feed for several months as needed. It is wonderfully productive, the Ames Agricultural College harvesting twenty-nine tons of fodder per acre on August 27th from a plot seeded on May 21st. It is claimed that forty tons of green or ten tons of dry forage have been produced on an acre. It makes good feed, readily eaten in any form by all kinds of live stock, but it is specially valuable as a feed for dairy cows, as the cows will give more and richer milk if fed on Amber Cane as a part of the ration.

HOW TO PLANT IT.

Prepare the ground as for corn. Plow early in the spring as you can, and if possible harrow twice before planting, so as to destroy weed growth. Sow any time from May 10th to July 15th, broadcast or in drills, using about 100 pounds of seed per acre broadcast, or 75 pounds in drills. The grain drill is probably the better method, and if the ground is extra strong and rich, it is profitable to use 15 or 20 pounds more seed per acre.

FOR PASTURAGE.

If cane is to be pastured it must be watched carefully, as sometimes too much is eaten by the stock and injury results. The best way to feed it is to cut it with the mower and allow it to wilt twenty-four hours before giving it to the animals. By this method more labor is required, but the waste caused by trampling of stock and danger of bloat or poison is lessened. You can begin to pasture or feed sorghum when eight or ten inches high, and if grazed or cut at this period it will make a second growth suitable for winter fodder or silage.

FOR HAY.

Plant with grain drill when corn planting is over, using 75 pounds per acre. Do not harrow the ground until the cane is five or six inches high, as it is so tender and brittle when first up that harrowing does more harm than good unless the cane is large

enough to survive the rough usage. It is usually cut in September, but the best plan is to let it stand until the seed has begun to form and before the seed has fully matured. The stalk is then filled with sweet sap. If allowed to stand in the field until the stalks become dry, the sweetness returns to the root and much of the nutrient is lost and the stalks become hard and woody. Cut with binder and put up in shocks the second day after cutting. Or it may be cut with a mower and raked into windrows and put into large cocks of 500 to 700 pounds. It will cure in this way very nicely and can then be stacked for feeding through the winter. It does not keep well in very large stacks, however, and most farmers prefer to feed direct from shocks. At the Iowa Agricultural College they used one field for hog pasture with good results. They say also that both the hay and green fodder were greatly relished by all kinds of stock, and the work horses especially thrived well on it and preferred it to any other hay.

FOR SILAGE.

The best authorities agree that Amber Cane is not desirable for silage alone, as the juice is liable to turn to vinegar in the silo and become too astringent for best results in feeding. It is conceded, however, that sorghum is a valuable addition to corn in the silo if the proportion is not less than four parts corn to one of cane. In this ratio it greatly increases the sugar content of the silage, and does not affect the animals injuriously. Some farmers are planting cane and cowpeas in drills, and cultivating the crop. It is then cut for fodder or silage as desired, and this combination fed with corn will provide a very cheap and desirable ration for wintering stock.

AS A GRAIN CROP.

Amber Cane yields a heavy crop of seed, and it will often pay to grow it for seed alone. The seed makes good feed, and if grown with other grain for live stock will produce growth at low cost. There is a heavy demand each year for the seed, and there is nearly always a remunerative market for it in all grain and seed centers.



COW PEAS

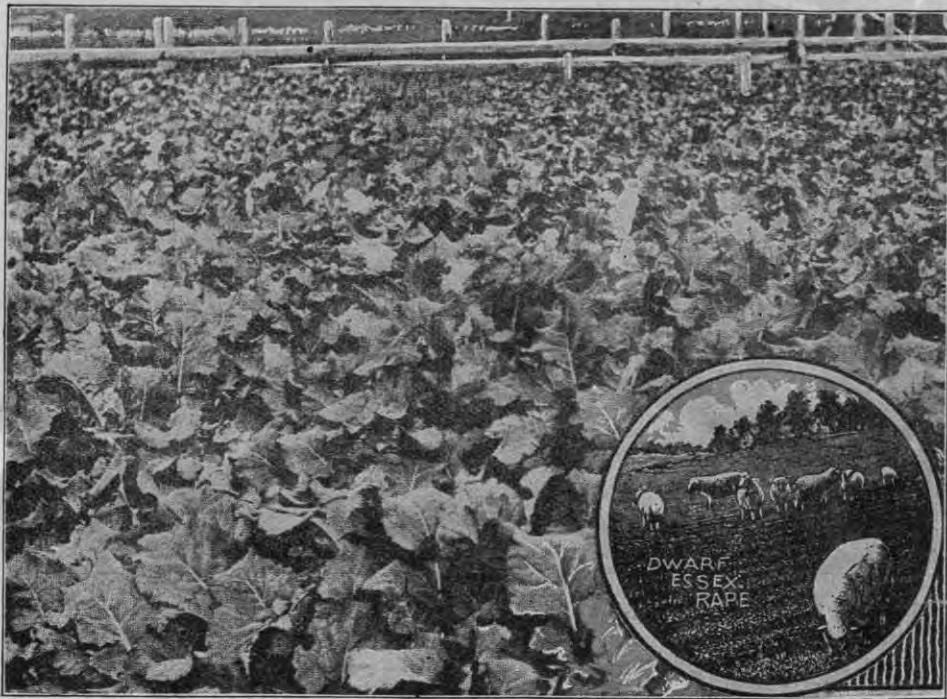
By the introduction and cultivation of the upright-growing, early varieties of cow peas the area in which they can profitably be grown has been greatly extended, and the New Era and Whippoorwill varieties are used with success as far north as the Wisconsin and Minnesota state lines. The value of cowpeas in the crop rotation is because they serve the double purpose of producing a crop of feed and fertilizing the soil at the same time. They improve the soil in the same manner as the clovers, and are harvested and fed in much the same manner. They possess one advantage over clover, in that the full benefits from a crop of cowpeas can be secured in one growing season, whereas it requires two years for clover to yield its full returns. In the state of Missouri, south of the Missouri river, the two varieties of cowpeas named above are sown after wheat harvest upon the stubble. They are plowed under in the fall, and by this means no rotation of crops is required, and the land produces good crops of wheat continuously for a number of years. The rye and winter wheat in Iowa ripens early enough so that if removed at once from the fields, cow peas can be sown and a splendid soiling crop be grown before frost. The great problem of the corn belt farmer is to keep up the fertility of the soil, and cow peas will help greatly to solve this question in a profitable manner.

If a crop of cow pea hay is wanted, the seed should be sown with the grain drill, using about one-third or one-half of the tubes, and about three pecks to five pecks of seed per acre, depending upon the strength of the soil. If the soil is loose and rich, the heavier seeding is recommended. They are to be planted just after corn planting in May, and in ordinary seasons they will mature for hay in early September. As much as five to nine tons of cow pea hay has been produced per acre, and its feeding value is far greater in actual cash than any of the grasses fed as hay, if the cow pea hay is used as a part of the grain ration, along with corn or mixed feeds. In order to cure cow pea hay you must give it more care and labor than is bestowed on ordinary meadow grasses. Commence cutting after the dew is off, and only cut such amount as can be turned and handled frequently, to dry it thoroughly in the shortest possible time. Cow peas are very rank in growth, and also they continue to grow until frost, so that when cut for hay they are green and heavy, and consequently slow to cure. They should be cut when the first pods turn yellow, and before the leaves begin to fall. In curing, it is not expected that they become dry and brittle, but they cure slowly, so that they may be handled without shattering. By growing cow peas for hay, you not only get a very heavy crop of forage, but you actually leave the soil in better fertility than before the peas were planted.

As stated in the beginning of this article, the best use of cow peas for fertilizing comes from removing the small grain as soon as ripe, and sowing cow peas on the field. Some farmers may believe this to be very laborious, but when it is realized that they are worth more than barnyard manure, they really provide a very cheap fertilizer easily applied.

In growing for fertilizing purposes, use three to four pecks per acre, turn the stubble three inches deep, and plant with a grain drill, using one tube out of four, and harrowed in thoroughly. Usually the rank growth of the peas will keep down all weeds. They grow very rapidly during the hot weather of July and August, so that at time of frost they may have grown so large as to be difficult to turn under with the plow. If this happens, turn the pigs and cattle on them, or use the mower, if the field is not so you can loose the stock, and haul a part of the forage off the field to the feeding pens before plowing. If you are to get best results, plow the peas under the latter part of September or first of October.

Grow cow peas for the silo, just as you would a crop of field or garden beans, and cultivate with horse cultivators. Sow in drills about twenty-four inches apart, in May, and give about two cultivations. Cut with a mower when the pods are filled, and run through the ensilage cutter, packing in the silo alternately with corn or by themselves.



ENDORSED BY PRACTICAL FARMERS.

You will particularly notice that it is recommended as the best and cheapest food for hogs.

"The Dwarf Essex Rape purchased from you made a wonderful growth, and I consider it just the thing for hogs."—Frank Snyder, Renner, Iowa.

"The Dwarf Essex Rape was very satisfactory. I sowed June 1st and used it for hog pasture. I will seed more next year."—B. A. Samuelson, Sac Co., Iowa.

"I have been growing Dwarf Essex Rape for the last four years and find it a very satisfactory food for sheep, hogs and cattle. I would not think of farming without a good acreage of it. I plant between rows of corn or potatoes, or sow with rye or oats just before harvesting."—T. J. Kegley, Ames, Iowa.

"I sowed the Dwarf Essex Rape on the 20th of May with oats and it made a fine pasture for pigs. I will want more of the seed next spring."—D. Simmons, Creston, Iowa.

DWARF ESSEX RAPE

This is without question the most popular and profitable of all annual forage plants, and everywhere it is giving the best satisfaction. It is easily grown anywhere and stands unsurpassed as a pasturage plant for hogs, cattle or sheep. They eat it greedily and seem to prefer it to any other pasture during the summer till late in the fall or early winter. It can be sown early in the season to provide for early pasture for sheep and swine or sow in small grain a week or so before cutting to provide pasture after harvest, or sow on the stubble, but it is usually sown in June, July or August with corn or potatoes or on well-prepared land alone for summer and fall pasture. It is extremely cheap and very prolific, having yielded twenty tons of fodder per acre.

At the Iowa Experiment Station, 60 bushels of oats and 18 tons of Rape were grown on an acre, the oats and rape being sown together early in the spring. The rape interfered but slightly with harvesting the oats and afterwards produced a heavy growth which amounted to 18 tons when cut in October.

In the East it is usually sown in drills, two or three pounds per acre, and cultivated, but in western states it is almost invariably sown broadcast, four or five pounds per acre, and grows so rapidly that weeds are quickly smothered. A Nebraska farmer says that he sowed only three pounds per acre on a four and one-half acre field, and five weeks after sowing he turned eighty head of hogs and forty pigs into the field and pastured them constantly until October. The plants grew so rapidly that at no time could he tell where the hogs had been twenty feet away from the gate.

Leo Wolf, of Leando, Iowa, tells of the experience of himself and neighbors with a purchase of rape seed from us, showing the immense returns secured from a small outlay: "The lot of Dwarf Essex Rape purchased from you was divided between three neighbors and myself. All of us succeeded well with the crop. That which I sowed did extra well. I pastured 20 head of hogs on half an acre for 2½ months. I also turned in 10 or 12 head of cattle on Rape and they were very fond of it. My hogs had no corn nor other food except about three acres of grass. They did very well, but I think it would have been better to have given them some corn also."

Be careful! Buy only the genuine imported Dwarf Essex Rape seed. There are a number of varieties of seeds sold for "Rape" which are of no value for forage, and some are actually detrimental. Buy your seed of us. Pkt., 5c; 1lb., 25c; 3 lbs., 60c, postpaid.

Larger quantities priced on red ink price list.



A FEW REASONS WHY YOU CAN AFFORD TO TRY SAND VETCH.

Vetch is not only hardy and enormously productive of forage, but it will give better results on poor sandy soil than any other forage plant we have for fall sowing. We are confident that it will prove a plant of immense value on the semi-arid lands of the West which lie south of the Nebraska state line.

You can have green pasture nearly all winter by sowing Rye and Vetch in September.

You can have early spring pasture from the same sowing.

Frank B. White, expert agriculturist, for years connected in a business way with the leading agricultural papers of the country, writes us: "We are having splendid success with the Sand Vetch and we will want a quantity of it for covering crops this fall. I want you to keep me in mind and be sure that you will let us have some seed as good as the former was, and we will be satisfied."

For price of seed, see Red Ink Price List enclosed.

SAND OR WINTER VETCH

An exceedingly useful plant for the live stock grower

The Sand or Winter Vetch is a plant of comparatively recent introduction to the farmers of the corn belt and it is not fully appreciated except by those who have produced it. The demand is increasing each year as the farmers are becoming acquainted with its value. The Sand Vetch is primarily a plant for late fall, winter and spring pasturage, or if sown with rye, may be cut for a hay crop in the same manner, and under similar conditions as field peas. The plant is a low running vine, often growing to the enormous length of twenty-five feet and if sown alone never gets very tall and can only be pastured if sown in this way, since it is practically impossible to harvest it with ordinary haying tools. It will, however, produce an immense amount of green feed, as much as 15½ tons having been cut from a single acre of land. Sown with rye a crop of hay can be cut, and sheep or hogs turned in on the stubble immediately and the stock will not want for pasturage until the Vetch is entirely consumed. By sowing Vetch and rye in September the pasturage season for hogs and sheep can be prolonged a month after freezing weather begins, and in the ordinary season some feed can be found in the field nearly all winter.

The Vetch is a legume and like the clovers builds up the fertility of the soil by storing nitrogen through its roots. It is difficult to plow under if allowed to grow to any size, since the vines intertwine and entangle in a mass difficult to work, but if pastured closely it may be easily turned under and with much benefit to the soil. Seeds are round, about the size of large shot and will plant readily in an ordinary grain drill either alone or mixed with rye. If sown alone use one bushel Sand Vetch per acre, or use one-half bushel of Vetch and one bushel of rye per acre and prepare the soil as you would for crop of winter wheat.

Our picture illustrates the growth of the Vetch at the Minnesota Experiment Station, where it proved a wonderful producer of forage and while it did not live through the entire winter it remained green and succulent until covered with snow. It is highly recommended by the United States Department of Agriculture and is claimed to be frost proof as far north as the Iowa-Minnesota line. Hay is the most costly item of feed that the farmer produces, and the most business-like proceeding for the live stock grower is to regulate his pasturage and grain fields in such a way that a minimum amount of land is allotted for the production of hay, while the maximum area is given over to the production of pasturage, or forage that the live stock can eat, without expense for labor in curing or caring for roughage. To attain this end rape, cane and other forage plants are now sown in immense quantities for summer pasturage, and we urge our farmer friends to try Vetch and rye for fall, winter and spring and thus prolong to the farthest limit the period of pasturage.

TURNIPS

One oz. will sow 150 feet of drill. Two lbs. will sow an acre. For main crop sow broadcast in July and August, and before a shower if possible.



Turnip seed is sent postpaid at price named unless otherwise stated

PURPLE TOP STRAP LEAVED.

Main Crop Variety for Shallow Soils.

The standard for this part of the country for late planting, and we sell immense quantities of it every year. One of the best table and stock sorts on the market; fine grained and of mild flavor. Of good size, flat shape, pure white below with purplish red top. Good cropper and excellent keeper. Pkt. 5c, oz. 10c, $\frac{1}{4}$ lb. 20c, lb. 60c; 5 lbs. or more, not prepaid, at 45c.



Purple Top
Strap Leaf.



Purple
Top Globe.

PURPLE TOP GLOBE.

Main Crop Variety for Loam Soils.

Similar to the Purple Top Strap Leaved except shape. The largest yielder of any turnip on the list and always brings top market price. Desirable for table use or for stock. Pkt. 5c, oz. 10c, $\frac{1}{4}$ lb. 20c, lb. 65c, 5 lbs. or more, not prepaid, 50c per lb.

EXTRA EARLY PURPLE TOP MILAN.

One of the earliest sorts in cultivation. Bulb very flat, medium size, quite smooth, with a bright purple top; leaves few, short and light color; grows compact and makes exceedingly small strap-leaved top. Pkt. 5c, oz. 15c, $\frac{1}{4}$ lb. 40c, lb. \$1.20.

EARLY WHITE MILAN.

Much like the above, but is pure white all over, instead of having purple top. Quite popular with gardeners. Pkt. 5c, oz. 15c, $\frac{1}{4}$ lb. 50c, lb. \$1.50.

EARLY SNOWBALL.

A globe-shaped, white-skinned turnip, very fine grained, firm and of delicate flavor. One of best keeping of white-fleshed sorts, very early and particularly adapted for family or market use. Pkt. 5c, oz. 10c; $\frac{1}{4}$ lb. 25c, lb. 80c.

WHITE EGG.

A quick-growing, egg-shaped, perfectly smooth, pure white variety with small top and rough leaves. Flesh very sweet, firm and mild, never having any rank, strong taste. Pkt. 5c, oz. 10c, $\frac{1}{4}$ lb. 25c, lb. 75c.

GOLDEN BALL, or Orange Jelly.

A beautiful bright yellow turnip of medium size and universally sweet and delicious flavor. Is hardy and one of the best keepers. Flesh extremely firm and solid. Brings good price on market. If you have never tried yellow turnips we advise you to plant some of the Golden Ball in your home garden this year. Pkt. 5c, oz. 10c, $\frac{1}{4}$ lb. 25c, lb. 70c.

COW HORN.

This variety pure white; in shape like a carrot, growing nearly half out of the ground and slightly crooked. It is delicate and well flavored. Used also as a green manuring crop. Pkt. 5c, oz. 10c, $\frac{1}{4}$ lb. 25c, lb. 70c.

CLEAN YOUR SEED GRAIN

THE ADDED YIELD FROM GOOD SEED ON FIVE ACRES OF GRAIN WILL PAY FOR A FANNING MILL AND THE COST OF CLEANING

CLIPPER SEED CLEANER No. 1.—This is an up-draft fanning-mill and does the best work in cleaning all kinds of seed and grain; more of these are used by seed dealers than all other makes combined, and farmers would save the price of a mill in many cases by cleaning and grading up their grain before selling. A Clipper will pay for itself in one year by the increase in yield resulting from carefully cleaned seed grain.

FREEMAN FARM FANNING MILL.

Double Shoe Type No. 1.—The upper shoe holds the screens for coarse dirt, straw and large trash, while the lower shoe holds the screens for the very fine weed seeds, sand, etc., so that a first-class job of cleaning is easily done. Has a very large amount of screen surface and will easily clean 50 to 75 bushels per hour. Complete outfit has one 3-screen hurdle, 5 grain screens, 1 cockle board, 1 flax sieve, 2 clover sieves, 3 timothy sieves and 1 timothy or sand screen, all 22 inches wide. Shipped "knocked down" to save freight, unless otherwise ordered. Price f. o. b. Des Moines, \$17.00; or if shipped from factory in Wisconsin, \$15.00.

No. 2.—For grain only; does not have the sieves or screen for seeds, but is same otherwise. Price f. o. b. Des Moines, \$15.00; or if shipped from factory, price is \$13.00.

COLUMBIA BROADCAST SEED SOWER.

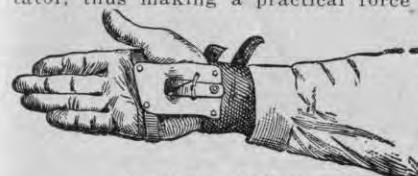
Has a solid malleable iron frame, but the hopper and most of the balance of the machine is made of steel. The bag will hold half a bushel. It is equipped with an agitator, thus making a practical force feed,

Price, only \$25.00, and also with a seed gauge for adjusting quantity of seed sown. The crank can be used either on the right or left side, and it is therefore the only seeder that we know of that a left-handed operator can use with ease. It weighs only 3½ lbs., will sow 50 feet of wheat or rye at a round, 30 to 36 feet of flax, clover, timothy or millet; light grass seeds 15 to 30 feet. Price only \$1.50 by express, not prepaid.

IMPROVED LITTLE GIANT SEED SOWER.—Every farmer ought to have a small hand seed sower for emergency use. This is an improved style, strong, well made and durable. Very easy to understand and operate. Each only \$1.50 by express not prepaid.



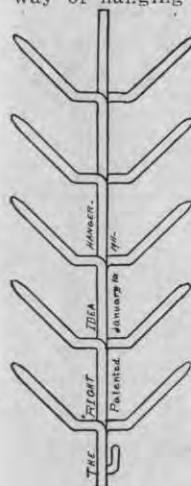
RAMSEY ADJUSTABLE CORN HUSKER.—Farmers say that with it they can husk 25 to 50 percent more corn and can do it with less labor. The strain does not come on the fingers and thumb, but is on the strongest part of the hand. The husker is attached with triple straps and three buckles, and fits the hand perfectly, leaving the fingers free and making a perfect wrist support. Price 50c each, postpaid; 6 for \$2.50.



THE RIGHT IDEA SEED CORN HANGER

NOT A GRAIN OF CORN IS TOUCHING ANYTHING BUT THE COB UPON WHICH IT GREW. THE RIGHT IDEA HANGERS ARE HERE SHOWN IN USE. This is the exact manner of caring for Seed Corn which is especially recommended by the Department of Agriculture in one of its recent bulletins.

Progressive farmers are interested in improved methods of caring for seed corn. The old-fashioned way of hanging it in a compact mass in the peak of a roof made fat mice, but the air circulated poorly through the corn with the result that it was still green when frost came. Result—frozen germ, much of it would not grow, much of that which grew was weak and spindling. Within recent years the better class of farmers built wooden racks on which to dry their seed, but where the corn came in contact with the rack decaying kernels were found, and something different and better was demanded. Some good genius finally hit upon the plan of impaling ears of corn on prongs radiating from a central stem. The right idea hanger is of rigid metal, each section with 10 spindles and with hook at one end and eye at the other so that they can be hung in continuous string any length desired. 10 hangers hold one hundred ears of corn, none of which touch each other. Price per 10 (weight 4 lbs.), \$1.00; per 100 (weight 38 lbs.), \$7.50, by express not prepaid.





INSECTICIDES

We cannot in this booklet give complete directions in the matter of destroying insect pests, but we have a leaflet "How Spraying Pays" which we will send free on application. As a general proposition we suggest Arsenate of Lead and Lime-Sulphur Solution for orchards or fruit plants after the crop of fruit is harvested, or Lime-Sulphur alone if fruit is still on the branches.

For blight and disease we recommend Bordeaux Mixture and Lime-Sulphur solution since this combination will be effective in most cases. For bugs, beetles and chewing worms Arsnate of Lead and Paris Green are most effective. Insecticides in powder form and for household use listed on last inside cover of this catalogue.

HOW AND WHEN TO SPRAY

APPLE TREES.—To prevent leaf blight and fungus diseases and also prevent ravages by insects, spray with Bordeaux Mixture just as the leaves develop. A second spraying should be made when the blossoms fall, using Arsenate of Lead and Bordeaux Mixture. The third spraying of Arsenate of Lead only should be applied late in July or in early August. For scale use Horicum.

CHERRY, PEAR AND QUINCE.—Treat about the same as the apple, except do not continue too late, so as to discolor the fruit.

PLUM.—Curculio.—This is the most difficult of all insect pests, as the eggs are laid in the blossoms. Trees should be sprayed when in bud. Spray the trees with arsenate of lead. For brown rot, and fruit rot, treat same as for the peach.

GRAPES.—For black rot, use the Bordeaux mixture before the leaves appear, and continue its use, but not too late to discolor the fruit when ripe.

GOOSEBERRIES.—Mildew.—Bordeaux mixture or sulphide of potassium. Weekly applications of the latter have given excellent results.

CURRENTS.—For currant worms, spray with hellebore, one ounce to three gallons of water, as soon as holes appear in the leaves. Spray again ten days later.

RASPBERRIES.—Anthraco nose (Cane Rust)—This disease has not been very successfully treated. The best recommendations that can now be given is to spray the bushes thoroughly with Bordeaux before the buds swell in the spring, and follow this with copious applications of Bordeaux mixture at intervals of two weeks.

STRAWBERRIES.—For leaf blight, spray during July and August with Bordeaux.

POTATOES.—For vine disease or blight, use the strong formulas of Bordeaux or copper sulphate solutions. For beetles use Paris green for liquid spraying or Slug Shot for powder spray, as preferred. Paris green in powder may also be used, but is only advisable where the field is isolated and not accessible to live animals or poultry.

CABBAGE.—Slug Shot is perhaps the best preparation to use against the cabbage worm, as it will not leave any injurious aftermath. Tobacco dust may also be used. Sulpho-tobacco soap makes a good liquid spray for all vegetables.

MELONS, CUCUMBERS AND SQUASH.—Use Slug Shot soon as leaves have formed, and repeat as necessary.

DOMESTIC ANIMALS.—Spray Fly Knock-er as indicated in description of that preparation.

POULTRY HOUSES AND OUTBUILDINGS—Whitewash, Fly Knocker, Liquid Lice Killer, Sulpho-tobacco soap, or powder preparations, as preferred.

HOUSEHOLD USES.—Insect powder, hellebore, tobacco dust, Sulpho-tobacco soap, applied as needed. Preparations listed on last inside cover page.



WHAT TO SPRAY WITH

All insecticides go by freight or express at customer's expense for charges.

ARSENATE OF LEAD.

Our stock of this is strictly fresh, from one of the best factories in the country, and will be found the best spraying preparation in the entire list for the destruction of insect pests. Use 3 lbs. to 50 gallons of water, or if preferred, use 50 gallons of Bordeaux mixture instead of water for dilution. Price arsenate of lead, 1-lb. can 25c, 5-lb. can \$1, 25-lb. keg, \$4.

PARIS GREEN.

For liquid spraying. Use one pound of Paris green to 100 or 200 gallons of water, according to strength desired. It will be found generally strong enough if one-half pounds is stirred in a barrel (50-gallon) of water, and allowed to stand twenty-four hours before using. Care must be taken in handling all poisonous liquids that animals are not allowed to get at them. In using Paris green in powder form use one pound of Paris green and 20 to 50 lbs. of flour; mix thoroughly and apply evenly, preferably when the dew is on the plants. Price, ¼ lb. 10c, lb. 35c, 5-lb. pkg. \$1.50.

BORDEAUX MIXTURE.

Bordeaux mixture is the standard spraying preparation for plant diseases, fungous growth, etc.; and this is in form of condensed liquid. You simply add water in proportion of 25 to 1 and it is ready for use. 1 lb. 25c, 5 lbs. \$1.00.

HAMMOND'S HORICUM.

A special liquid preparation of lime, sulphur and salt, which will destroy San Jose scale. All other fungus disease of plant life are eradicated by it. Quart 50c.

FORMALDEHYDE.

Used largely for destroying smut and fungus on grain for seed, and its use on seed potatoes will keep potatoes smooth and free from scab. Can usually be purchased of your local druggist. Per ½ pt. 30c, pt. 50c, 5 pt. \$2, gallon \$3.

NICO-FUME.

A condensed preparation of tobacco which is almost pure nicotine. The best spraying and fumigating preparation for greenhouse use, since it does not injure the plants or blooms and kills aphis, red spider and mealy bugs. For spraying use one ounce in ten to fifteen gallons of water, and it will be even better if a pound of whale oil soap is added in the liquid. Price Nico-fume, 4-oz. can 75c, pint \$2, ½ gal. \$7.

CONKEY'S FLY KNOCKER.

Kills all flies and insects its strikes, and drives others away. A great relief to cows and horses. Especially valuable to dairy-men. Stock of any kind sprayed with Fly Knocker will not be troubled with insects while feeding. Can be economically applied by using our Faultless Sprayer. Price, one quart 35c, two quarts 60c, one gallon \$1. five-gallon can (Jacketed) for \$4.

SPRAY PUMPS



Daisy Spray Pump.

is steel and pump has best hose and two nozzles. Price \$1.90; 3-foot extension pipe 50c.

Sent by express at customer's cost for charges.

DAISY SPRAYING PUMP.—The general form and manner of using this popular little sprayer is shown by our illustration. We sell hundreds of these pumps, which are used for spraying insecticides and whitewash in the poultry house, also for spraying fruit trees and plants. It is the cheapest of the bucket pumps, and is really desirable for limited uses. For the beginner or the expert, the Daisy will be found valuable, as there are so many times when just a little work of some kind is needed that is more easily done with this light pump than with the larger, heavier types. Can be changed so as to throw a solid stream of water twenty to thirty feet high and used for washing windows, buggies, etc. Price, only \$1.00. Sent by express only.

LIGHTNING SPRAY PUMP.—This spray pump is constructed of heavy galvanized iron, with brass tops and valves, a material that is not affected by the poisonous arsenates used in different formulas for spraying fruit trees vines and shrubbery. It is made with large air chamber and has ball valves, the pressure being held in the air chamber and on the hose, so that the nozzle throws a continuous spray and is not affected by the movement of the plunger, as the downward stroke keeps a constant pressure on the nozzle with very little exertion. Will throw a continuous stream thirty feet high, and is of unusual value for spraying and whitewashing poultry houses and fences, also washing buggies and windows. It is used effectively in spraying liquid lice killers in crevices, perches and roofs of poultry houses. Stirrup

is steel and pump has best hose and two nozzles. Price \$1.90; 3-foot extension pipe 50c.

BRANDT COMPRESSED

AIR SPRAYER.—Comparison has led us to offer this as the best compressed air sprayer. Simple plunger action after manner of the

Faultless gives continuous uniform pressure, which can be shut off or released by small finger lever at nozzle end. Especially recommended for garden work. Can furnish extra nozzle attachment, by which two rows may be sprayed at once. Regular sprayer, galvanized iron, each \$5. All-brass

action after manner of the

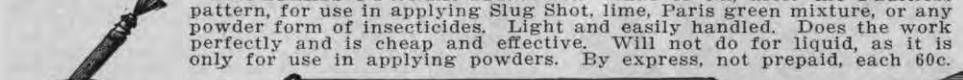
Faultless gives continuous uniform pressure, which can be shut off or released by small finger lever at nozzle end. Especially

recommended for garden work. Can furnish extra nozzle attachment, by which two rows may be sprayed at once. Regular sprayer, galvanized iron, each \$5. All-brass

Faultless Powder Sprayer.

sprayer, will not rust, each \$6.75. Double nozzle attachment, \$1.00 extra.

FAULTLESS POWDER SPRAYER.—Made of tin, after the Faultless pattern, for use in applying Slug Shot, lime, Paris green mixture, or any powder form of insecticides. Light and easily handled. Does the work perfectly and is cheap and effective. Will not do for liquid, as it is only for use in applying powders. By express, not prepaid, each 60c.



Faultless Insect Sprayer.

THE FAULTLESS INSECT SPRAYER.—An all brass hand sprayer. Will not rust. The best hand sprayer for applying liquids and insecticides to poultry houses and live stock. Has proven the most popular of all styles of small sprayers. It is large enough to hold about a quart of liquid, and is specially good for household use. Also valuable for spraying grape-vines, small trees and shrubbery. Made of heavy brass and very durable. Price, by express, not prepaid, \$1.00. Same, made of tin, 50 cents.

CONTINUOUS

FAULTLESS

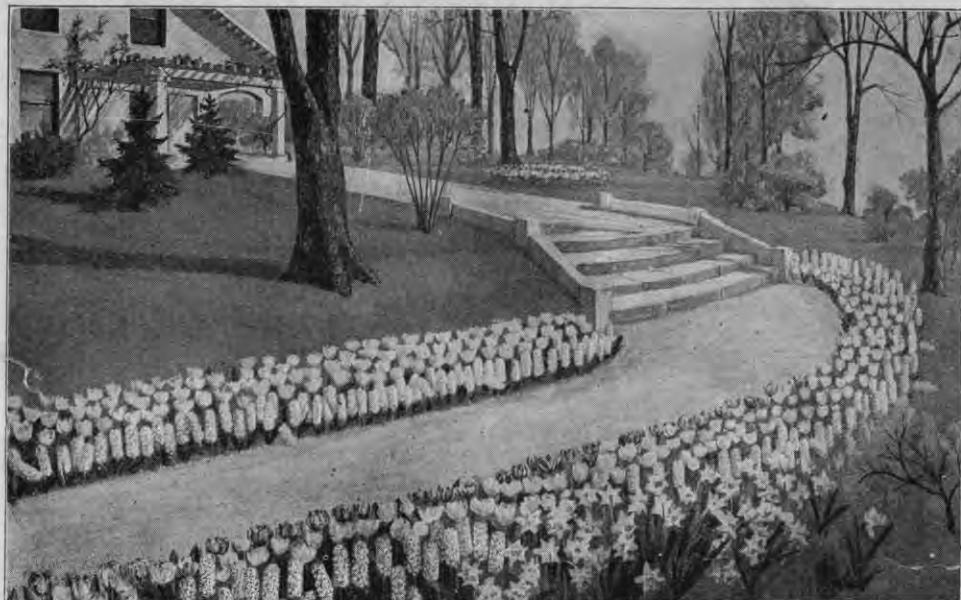
SPRAYER.

Made like the old standard Fauless Sprayer, which has for years been the most popular of this type. Made in such a way that action of the plunger forces a continuous fine-mist spray and the drawing back of the plunger does not stop the flow, as it does in the old-style Faultless. All brass, \$1.25; tin, 75 cents.

Continuous Faultless Sprayer



THE LITTLE GIANT BUCKET SPRAY PUMP.—Constructed entirely of brass, and is provided with a large air chamber, and has ball valves, and the pressure is held uniformly in the air chamber and on the hose, so that the nozzle throws a continuous spray. In our opinion, this is the best of the small bucket pumps for use by a single person. It is practically indestructible and with good care will answer for most spraying needs for many years. It will throw a solid stream fifty to sixty feet, is fitted with hose and imperial combination fine and coarse spray and solid stream nozzle, and has a malleable foot rest, by which you can keep the pump firmly in position while in operation. Price, \$3; with eight-foot pipe extension, \$3.50.



DUTCH BULBS

Offered for the adornment of the home during winter and early spring, both in and out of doors. We issue a special fall catalogue of Dutch Bulbs, Hardy Shrubs, hardy and greenhouse plants and general floral supplies for fall use, and we will mail a copy to any of our friends on request. We only offer in this book the more popular sorts of bulbs, such as are familiar to nearly all.

ORDER EARLY.—Bulbs arrive from Holland about September 15th. The best time to order is just as soon as you receive this catalogue; then your order will be filled as soon as the bulbs are received. Orders filled in rotation upon arrival of stock, and if yours is on file you are sure to receive choice fresh bulbs and get your order in full.

Sometimes stock is exhausted later in fall and some items cannot be supplied to late customers. Please use the order sheet, as it makes it more convenient for us in filling orders. Terms are invariably cash with order, as we keep no book accounts in our mail order department, and the expense of sending goods C. O. D. is quite large. Postage stamps received as cash.

OUR PRICES.—Our constant aim is to make the highest quality the first consideration, and next to put our prices as low as good stock can be sold.



OUR GREAT BARGAIN BEDDING COLLECTION

130 Fine Bulbs for only \$1.25, postpaid to you, each item packed separately and plainly marked for effective planting.

5 Single White Tulips	5 Double Scarlet Tulips
5 Double White Tulips	5 Single Yellow Tulips
5 Single Pink Tulips	5 Double Yellow Tulips
5 Double Pink Tulips	5 Single Striped Tulips
5 Single Scarlet Tulips	5 Double Striped Tulips
10 White Crocus	10 Striped Crocus
10 Yellow Crocus	10 Blue Scilla
10 Purple Crocus	10 Snowdrops
10 Light Blue Crocus	10 Scarlet Anemones

CHARGES PREPAID.—All Bulbs and Plants, except those noted, are sent prepay'd by mail or express by the quickest and most direct routes unless ordered otherwise, and we guarantee their safe arrival.

HYACINTHS

The Hyacinth is undoubtedly the "Queen of Bulbous Flowers." It has been improved for centuries and there are thousands of varieties, but after personal inspection of the fields in Holland we offer the following named varieties as being suited for general culture and believe they will give satisfaction. Personally, we prefer the single flowered sorts.

FOR INDOOR PLANTING—In Glass.—Fill glass with pure soft water until the water touches bottom of the bulb, drop in a piece of charcoal to keep water from fouling, and place glass in a cool, dark place until the roots nearly fill the glass. Change the water if necessary to keep it pure. When fully established bring to light and sunshine. **In Pots.**—Use compost of sand, well-rotted cow manure and garden mould in equal parts. Plant one bulb in a four-inch pot. Set in cool, dark place about four weeks then bring to light and sunshine.

FOR OUTDOOR PLANTING.—Make beds a foot in depth, of compost outlined above, raised slightly above the surrounding surface for drainage. Plant bulbs six inches apart and when ground freezes cover with a few inches of leaves or coarse litter.

Iowa Seed Co.'s Best Named Varieties

SINGLE VARIETIES.

GERTRUDE.—This is the most beautiful of all and is well illustrated by the accompanying cut. It is a single, bright red, with large, superbly shaped truss, compact and attractive in every way. Often has twin spikes. Each 15c; dozen \$1.50.

GIGANTEA.—Grows to enormous size, with broad spikes of blush-pink color; very handsome. Each 15c; dozen \$1.50.

CZAR PETER.—Finest porcelain-blue; has large, perfect spike and color is unusually attractive. Each 15c; dozen \$1.50.

BARONESS VON TUYLL.—Single pure white; very large, close bloom, early and fine for glasses. Ea. 10c; dozen \$1.15.

IDA.—Color a most beautiful golden yellow; large spike; best of all single yellow sorts. Don't fail to get at least one of these. Each 20c; dozen \$2.00.

DOUBLE VARIETIES.

BOUQUET ROYAL.—Fine light pink or blush. Extra large spike and very beautiful flowers. Each 12c; dozen \$1.25.

LA TOUR D'AUVERGNE.—Very early flowering, and the best of all double whites. Flowerets large and wax-like and spikes of immense size. Very early and the finest double Hyacinth for pots. Each 12c; dozen \$1.25.

KING OF BLUES.—Blackish purple. The darkest shade we offer. A strong flower of good quality, valuable for contrast as it cannot fail to attract the eye. Ea. 20c; dozen \$2.00.

BLOKSBERG.—Light blue; large spike. Color of this Hyacinth exceptionally fine. Ea. 15c; dozen \$1.50.

BOUQUET TENDRE.—A beautiful double flower of deep crimson color. Best double red we know. Large bulbs, each 12c; dozen \$1.25.

GOETHE.—Large, fine truss of handsome citron yellow. Each 15c; dozen \$1.50.

CHOICE UNNAMED SORTS IN SEPARATE COLORS

To those who do not wish to pay the highest price for best named Hyacinths, we especially recommend this grade for both house and garden culture. Though not so large as the named varieties, they are all choice, selected bulbs; will produce large, symmetrical trusses; especially fine for bedding.

DOUBLE VARIETIES.

	Each Doz.	Each Doz.	
Pure White.....	8c \$0.80	Pure White.....	8c \$0.80
Rose and Pink....	8c .80	Rose and Pink....	8c .80
Red	8c .80	Red	8c .80
Light Blue	8c .80	Light Blue	8c .80
Dark Blue	8c .80	Dark Blue	8c .80
Yellow	10c 1.00	Yellow	10c 1.00
All colors mixed... 7c .75		All colors mixed... 7c .75	

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Dark Blue	8c .80	Dark Blue	8c .80
Yellow	10c 1.00	Yellow	10c 1.00
All colors mixed... 7c .75		All colors mixed... 7c .75	

ROMAN HYACINTHS

The florists' favorite. Slender and graceful about one-half the diameter of ordinary Hyacinths. Romans are the earliest bloomers of all fall bulbs and may be readily grown by the most inexperienced in pots of soil or in water and pebbles. Planted in September they flower from Thanksgiving to Christmas time and a succession may be had by potting the bulbs at intervals. Bulbs throw up from two to seven spikes of bloom which follow each other in flowering. Three bulbs may be placed in a five-inch pot. Very fragrant. Do not forget these when making up your order.

PURE WHITE.—The most popular. Exquisite bells, white as snow and fragrant. Each 5c; dozen 55c.

LIGHT BLUE.—Sky blue bell. About ten days later than the white. Each 5c; dozen 50c.

DELICATE ROSE.—Beautiful, clear, bright rosy pink color. A charming and delicate tint. Each 5c; dozen 50c.

CANARY YELLOW.—Beautifully shaped bells, in color a soft, pleasing canary yellow. Each 10c; dozen \$1.00.



Gertrude Hyacinth.



Roman Hyacinths.

EARLY TULIPS

A most gorgeous and satisfactory spring flower, and nothing is more showy on the lawn than a nice bed of Tulips, blooming, as they do, so early in the spring. They are unsurpassed in brilliancy of color. Their ease of culture, combined with beauty of form and gorgeous coloring, makes them the most popular bulbs for spring blooming, and for winter flowering in the greenhouse and window garden they are incomparable. Usually planted about 15 inches apart and 3 inches deep. Many planters use Snowdrops, Scillas, or Crocus to plant between the Tulips in fall-planted beds, so that they may have earlier flowers than furnished by the Tulips and a longer display of blossoms in one bed. It is suggested also that early and late flowering Tulips planted alternately in a bed will furnish Tulips in bloom for fully thirty days in spring. Others set pansy plants between the Tulip bulbs and after frost cover the beds so that the pansies survive and come into bloom in spring just as the tulips are fading away.

Many prefer to destroy the Tulip bed as soon as the blooms have passed and set the bed to Geraniums or other summer bedding plants. No matter in what manner you choose to use the Tulip it will certainly give you abundant returns in flowers for the small sums invested.

QUANTITY PRICE ON BEDDING TULIPS

Customer to Pay Cost of Transportation—50 sold at 100 Rate.

	Per 100
Single White	\$1.50
Single Rose Pink	1.40
Single Crimson	1.50
Single Scarlet	1.35
Single Yellow	1.35
Single Orange	1.40
Double White	2.00
Double Rose Pink	1.85
Double Crimson	2.00
Double Scarlet	1.75
Double Yellow	1.75
Double Orange	1.85



SINGLE, DOUBLE AND PARROT TULIPS.
ALBANC.

Named Tulips, Postage Paid

Single Early Varieties.

BELLE ALLIANCE.—Scarlet flower. Each, 4c; dozen, 45c; 100 for \$3.00.

COULEUR PONCEAU.—Rosy crimson, and tipped white. Each, 3c; dozen, 30c; 100 for \$2.00.

CRIMSON KING.—Showy, having large bright crimson flowers with yellow base. Each 3c; dozen 30c; 100 for \$2.00.

DUCHESS OF PARMA.—Orange-yellow, shading to terra cotta, with fiery yellow and brown shadings. Each 3c; dozen 30c; 100 for \$2.00.

COTTAGE MAID.—Carmine pink, center of petals feathered with white, base yellow. Each 4c; dozen 40c; 100 for \$3.00.

YELLOW PRINCE.—Bright yellow. Each 4c; dozen 40c; 100 for \$3.00.

LA REINE.—White, sometimes tinged with rose. Each 3c; dozen 30c; 100 for \$2.00.

SILVER STANDARD.—White, feathered crimson, Each 4c; dozen 40c; 100 for \$3.00.

GOLDEN STANDARD.—Bright red with golden stripes. Each 6c; dozen 60c; 100 for \$4.00.

KEIZERSKROON.—Rich crimson with a broad gold margin. Each 5c; dozen 50c; 100 for \$3.50.

SINGLE EARLY FINE MIXED.—All colors. Each 3c; dozen 25c; 100 for \$1.50.

IOWA SEED CO.'S BEST SINGLE MIXED.—From very best named varieties. Each 4c; dozen 35c; 100 for \$2.50.

Double Early Varieties.

LA CANDEUR.—Pure white. Beautiful with Rex Rubrorum. Each 4c; dozen 40c; 100 for \$3.00.

REX RUBRORUM.—A brilliant double scarlet. Each 4c; dozen 45c; 100 for \$3.50.

DUKE OF YORK.—Carmine rose, edged broadly with white, suffused rose. Each 4c; dozen 35c; 100 for \$2.50.

LA CITADELLE.—Purplish red, bordered yellow. Each 4c; dozen 35c; 100 for \$2.50.

TOURNESOL.—Orange scarlet with broad yellow tips and yellow base. Ea. 5c; dozen 50c; 100 for \$2.50.

MURILLO.—(Albino).—Blush white, and shaded rose. Each 5c; dozen 50c; 100 for \$3.50.

DOUBLE EARLY FINE MIXED.—An excellent assortment. Each 3c; dozen 25c; 100 for \$1.50.

IOWA SEED CO.'S BEST DOUBLE MIXED.—Made from choicest named varieties. Each 4c; dozen 35c; 100 for \$2.50.



BELLE ALLIANCE TULIPS.

PARROT TULIPS.—A bed of these in bloom is a wonderful sight, paying a hundred fold for all the care bestowed upon them. Flowers are very large and showy; petals are fantastic in form, being so toothed and corrugated as to resemble a parrot's beak. Yellow, crimson or white, feathered with green, gold and scarlet. Bloom late; every garden should have a bed. Each 3c; dozen 30c; 100 for \$2.00.

NARCISSUS

The Narcissus listed on this page are hardy sorts suitable for outdoor growing and can also be used for indoor planting. They can be grown with success in permanent plantings and will continue to flower year after year without attention. Are recommended by the foremost authorities for ornamental planting in borders or shaded situations and give delightful effects in woodland landscapes.

INCOMPARABLE DOUBLE—(Butter and Eggs).—Full double of rich yellow and orange. Very rich colors and a grand variety for growing in the house or outdoors. Each 4c; dozen 40c; 100 for \$3.00.

DOUBLE VON SION.—The first of the list in popularity. It is the true Daffodil, of beautiful golden yellow color which is so highly prized among lovers of spring flowers.

Double Nozed Bulbs.—Mammoth bulbs (larger than a hyacinth) which will produce two or more flower stalks; solid and heavy. Each 6c; dozen 60c; 100 for \$4.00.

First Size Bulbs.—The ordinary first-grade containing many double nozed bulbs, are large and strong and will give satisfaction. Each 4c; dozen 40c; 100 for \$3.00.

Von Sion Narcissus.

Second Size Bulbs.—A good grade, not so large or strong as the above, but satisfactory for outdoor planting. Each 3c; dozen 30c; 100 for \$2.25.

POETICUS—("The Pheasant's Eye" or "Poet's Narcissus").—Pure white flowers with orange cup edged with crimson; splendid flower. Hardy and fine for garden planting. A beautiful and popular variety, specially desirable for landscape planting. Each 3c; dozen 25c; 100 for \$1.50.

POETICUS ORNATUS.—Similar to above, but the cup is a shade lighter color, and this variety blooms somewhat earlier. Is preferred to the above for indoor planting. Each 3c; dozen 30c; 100 for \$2.00.

ALBO PLENO ODORATA—(Double Poeticus).—Each 4c; dozen 30c; 100 for \$2.00.

JONQUILS.—Belong to the Narcissus family, and are treated in the same manner. Quite hardy. Produce large, golden and deliciously fragrant flowers. For indoor planting, two or three bulbs should be put in a 4-inch pot. Fine for planting with the larger flowered Narcissus in landscape or border work. Each 3c; dozen 30c; 100 for \$2.25.

CHINESE SACRED LILY

This is now the most popular of all bulbs for winter blooming; always satisfactory and of the easiest culture. Produce a profusion of bloom in a short time, usually not more than four to six weeks from time of planting. Foliage is luxuriant and of a dark green color, surmounted by a wealth of large, satiny white, fragrant flowers with golden yellow cup.

CULTURE.—Being partly aquatic, this plant must have plenty of water. If grown in soil, make it light and sandy, but they are usually grown in vases or dishes of water. Put an inch of gravel in the dish, set the bulbs on this and put gravel around them to keep from falling over; fill dish with water and set in a dark closet for several days until the roots start freely; then bring to light and keep in any ordinary living room. A dozen bulbs started in this way at intervals will give a succession of bloom all winter. The bulbs offered by us are large, solid and well matured. They can be relied upon to be the true Chinese, and not inferior Bermuda grown stock. Price 15 cents each; \$1.40 per dozen, postpaid; not postpaid, each 10 cents; dozen \$1.00.

CROCUS

One of the first flowers that peep through the snow to announce the approach of spring. For massing in beds, planting in clumps in the grass or for edging beds of other bulbs, these spring-flowering bulbs are unexcelled. Plant about same time as Hyacinth. To force in the house, plant five or six to a 4-inch pot.

White, Mixed Shades of Yellow, Mixed Blue and Purple, Striped and Variegated, doz. 12c; 100 for 75c. Cloth of Gold, doz. 15c; 100 for \$1. Mammoth Yellow, doz. 15c; 100 for \$1. All colors mixed, doz. 10c; 100 60c.

SNOWDROPS

This is one of the daintiest of early spring flowers—the advance agent of April showers and summer suns. Very desirable to plant with Crocus and Scilla. The small bulbs should be planted in clusters of ten or twelve to secure best effect. Single, doz. 15c; 100 for \$1.15. Double, doz. 25c; 100 for \$1.75.



Chinese Sacred Lily.

WINDOW GARDEN SUPPLIES

All articles in this department go by freight or express at your cost for transportation unless otherwise stated.

WIRE PLANT STANDS.—We carry a much larger stock than any firm in the west, and in place of common iron frames we have them manufactured with steel frames, and they are far stronger, handsomer and lighter than any yet offered. They are well braced in every direction, with good strong casters, and will easily support all the plants that can be placed on the shelves. Nicely finished with green paint and gold bronze. Will last twenty years with proper usage, and as they weigh only 15 to 40 pounds each, the freight is trifling. Notice reduced prices.

NO. 3.—Similar in style to No. 10, but much larger. Height of stand and arch about 6 feet, width 4 feet, depth 31 inches. Has four legs. List price \$8.00. Our net price only \$6.50.

NO. 4.—Like above, but without arch or hanging basket. List price, \$6.50. Net, \$5.00

NO. 6.—One of our most popular styles, quite ornamental, and for persons having but few plants, one of the most desirable. A vining plant set at each end of top shelf and trained over arch adds greatly to its attractive appearance. Height 6 feet, shelves 36 inches long. List price \$5.50. Our price \$4.50.

NO. 7.—Exactly like No. 6, except that it has no arch or basket. List price \$4.00. Our price \$3.40.



No. 3.



No. 6.



No. 8.

NO. 8.—Holds a large number of plants and all get equal light. Size 42 inches high, 26 inches deep; has three shelves each 36 inches long; will hold about 30 pots. List price \$6.50. Our price only \$5.00.

NO. 9.—Same as No. 8, with arch and basket added. List price \$8.00. Our price \$6.50.

NO. 10.—A very popular stand, well shown by the engraving, but the arch is Gothic pattern, same shape as No. 3. Holds 20 to 30 plants. Height 5 feet 10 inches; width 49 inches, and 26 inches deep. We sell more of these than any other pattern and are thus enabled to make a specially low price. List price \$7.00. Our price, including arch and hanging basket, only \$5.00.



WIRE WINDOW SHELF.

WIRE WINDOW SHELF.—These can be fastened to window frames, either inside or outside. They are strong and attractive, 36 inches long, 6 or 7 inches wide. The border is not as high as shown in the engraving. Price \$1.00 each.

WIRE BRACKET.—This new pattern is a very cheap, handsome bracket, made of tinned wire. It is easily put up, adjustable, can be instantly removed, is simple, practical and durable. Price, 4-inch 10c each, \$1.00 per dozen; 5-inch, 12c each, \$1.25 per dozen; 6-inch, 15c each, \$1.50 per dozen. Postage, each 8c extra.

WIRE HANGING BASKET.—Made of wire. If lined with moss and filled with soil they are quite attractive. Light, strong and durable. By express, 8-in., 25c, 10-in. 35c. Postage, each 15c.

HANGING BASKET CHAINS.—Plain 3-strand steel chains each 10c, by mail 18c.

BIRD CAGE HOOKS.—Useful for suspending bird cages or hanging baskets; made of cast iron with screw to fasten in the woodwork or window casing. Each 12c, postpaid.



No. 10.

OUR WINTER WINDOW GARDEN

One 36-inch wire window shelf; six 5-inch wire window brackets; one 8-inch wire hanging basket; one hanging basket chain, and one bird cage hook, by express, not prepaid, for only \$1.75.



WIRE HANGING BASKET

SULPHO TOBACCO SOAP.—For a cheap, effective, clean and harmless insecticide for amateur and professional growers this is unexcelled. Quickly exterminates all insect life on plants and flowers in and out of doors. Unsurpassed for rose bushes. For domestic purpose it rids the house of cockroaches, and is a superior wash for dogs and all animals. Prevents poultry lice. A trial will give highly gratifying results. Three-ounce cake, sufficient for 1½ gals. prepared solution, 10c; by mail, postpaid, 13c. Eight-ounce cake, sufficient for 4 gals. prepared solution, 20c; by mail postpaid, 28c.

WHALE OIL SOAP.—An excellent preparation for plants infested by vermin. Also used against fungus diseases and will keep trunks of trees from borers or other bark destroyers. Pound 40c, postpaid.

TYRIAN PLANT SPRINKLER.—Fine for house plants. You can without injuring plants or soaking earth, quickly and very effectively sprinkle them. Will keep foliage fresh and healthy and free from insects of all kinds. The bent neck enables you to spray the under sides of the leaves which are hiding places for insects. Each 75 cents, postpaid.

SCOLLAY SPRINKLERS.—Indispensable for floral work. Excellent for washing the foliage of house plants, and used for sprinkling clothes. Large, each \$1.00; small, 60c, postpaid.

BOWKER'S FOOD FOR FLOWERS.—A fertilizer made especially for plants; clean, free from offensive odor, and soluble in water, producing healthy plants and abundant blossoms to which it imparts brilliant color. A box sufficient for 20 plants for one year 25c, or postpaid 40c; small packages 15c, or postpaid 25c.

WALKER'S EXCELSIOR PLANT FOOD.—A concentrated fertilizer. Use by dissolving in water and apply in liquid form. Put up in tin to prevent loss of strength. Half lb. pkg. 30c, postpaid; 1 lb. (will make 20 gals. liquid), 50c, postpaid. 5 lbs. by express, not prepaid, \$1.50.

STERLINGWORTH PLANT TABLETS.—A highly concentrated food for plants, put up in small tablets to be dissolved in water and used as needed. No. 1 pkg. (30 tablets) each 10c; No. 2 pkg. (100 tablets) each 25c; No. 3 pkg. (250 tablets) each 50c; all postpaid at prices named.

HAMMOND'S SLUG SHOT.—A combination of the most potent insecticides and soluble plant food. It destroys all insects injurious to house and garden plants, shrubs, trees, vines, potatoes, melons, cabbage, currants, vegetables and fruits of all kinds. This preparation, though poisonous to insects, does not injure the foliage in the least, nor does it render vegetables unfit for food. Not prepaid, 5 lbs. 35c, 10 lbs. 60c, 25 lbs. or more at 5c per lb.; postpaid, 1 lb. 25c, 4 lbs. 95c.

HAMMOND'S GRAPE DUST.—A fungicide in light powder form, easily dissolved in water and applied in liquid form. Keeps plants free from diseases of blight and mildew and kills plant lice, aphis, black fly and insects that destroy blooming plants. Five-lb. package 50c by express, not prepaid.

"CROW BRAND" INSECT POWDER.—Best grade, fresh and nice. It does not pay to use cheap ordinary grades. Pound 50c; 5 lbs. or more at 45c; postage 16c per pound extra.

TOBACCO DUST.—Destroys rose bugs, lice, cut worms, vine bugs, tomato worms, cabbage lice and parasites of all descriptions. Should be applied when the foliage is wet. Also a most complete fertilizer for plants and vines. Will not burn or injure the plants. Price per lb. 10c. 5 lbs. 25c; 16c extra if by mail.

HELLOBORE.—Mild poison which is used for destroying insect pests. May be used by dusting it over plants either pure or mixed with flour or plaster. If to be used pure, you should exercise care, and not dust it too freely. If to be used as a liquid spray, dissolve one ounce of hellebore in 3 gals. of water. Not prepaid, ¼ lb. 10c; ½ lb. 15c; 1 lb. 25c; 5 lbs. \$1. If by mail add 20c per lb.

STAR INSECT POWDER GUN.

Handy size for house use to blow powder in cracks and crevices. Largely used for killing houseflies. Ea. 10c, postpaid 13c.



FLOWER POTS.

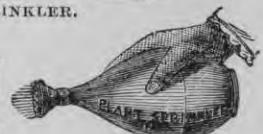
These prices per dozen are for the pots and saucers: 4-inch 60c, 5-inch 75c, 6-inch \$1.00, 7-inch \$1.50, 8-inch \$2.10, 9-inch \$3.00. We make no charge for packing or delivering at the depot here. Orders for these must amount to at least \$1.00. Many styles of handsome pots, jardinières and vases and hanging baskets at extremely low prices.

PAPER FLOWER POTS.—Made of heavy waterproof paper. Fine for growing vegetable plants, pansies, asters, etc. By using these you do not have to disturb the roots of plants when setting out in the open. 2½-in., per doz. 10c, 100 45c; 3-in., per doz. 15c, 100 65c; 4-in., per doz. 20c, 100 \$1.00. Postage 10c per dozen extra.

PLANT TUB.—Strong, well made, wooden tubs for large plants. Afford a permanent place for plants too large for ordinary earthen pots and are much more cleanly and easy to handle. 12-in., each \$1.25; 15-in., each \$1.75; 18-in., each \$2.25; 21-in., each \$2.75; 24-in., each \$3.25.



TYRIAN SPRINKLER.



SCOLLAY SPRINKLER.

CATALOGUE *of* SEASONABLE SEEDS

IOWA SEED
COMPANY

DES MOINES
IOWA

