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Henderson's Farmers Manual

1847-

-1912



HENDERSON'S
IMPORTED
CLYDESDALE OATS
DESCRIBED ON PAGE 19

HARVESTING
40 ACRES OF
HENDERSON'S IMPORTED
CLYDESDALE OATS AT
MEADOWSWORTH FARM,
PELKESKILL, N. Y.

PETER HENDERSON & CO.
35 AND 37 CORTLANDT ST. NEW YORK.

FARM SEEDS **HENDERSON'S HIGH GRADE**

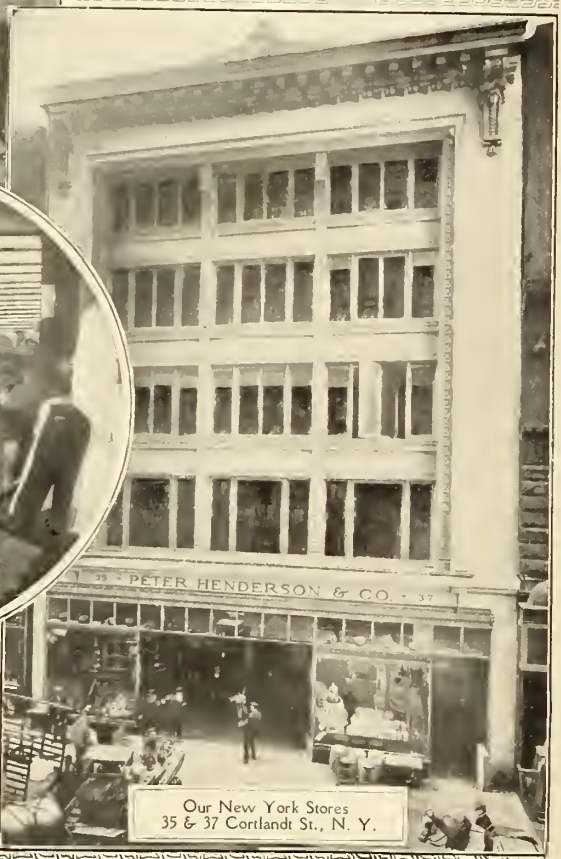
PETER HENDERSON & CO.'S
SEED-CLEANING PLANT
 and Warehouses A, B and C
 GARFIELD AVENUE JERSEY CITY, N. J.
 Capacity, 750,000 Bushels



A floor in our Order Department for Farm Seeds



Mixing Grass Seeds for Permanent Pasture



Our New York Stores
 35 & 37 Cortlandt St., N. Y.



Some of our modern Seed-Cleaning Machines

Our Potato Cellars occupy the basement of our Warehouses, Garfield Ave. Jersey City, N. J.



Hand-Picking Peas and Beans after they have been through the Machines

“SINCE 1847”

Successive Generations of American Farmers Have
Annually Planted **HENDERSON'S**
TESTED
FARM SEEDS



and were we to print the thousands of letters of appreciation and thankfulness, we have received, from all sections of the country, we could more than fill all the following pages.

The reason for this is not far to seek. There is 65 years of accumulated experience back of our seeds; so that the various operations necessary for the production of good seeds, viz.: growing, breeding, selecting, harvesting, cleaning and testing have been gradually brought by us well nigh to perfection.

On the opposite page we show some views of our warehouses for the storage and re-cleaning of seeds—in Jersey City and New York. From a modest beginning they have gradually expanded until now they occupy a site 450 x 50 feet in extent and have a total capacity of 750,000 bushels. They are filled with seeds of the choicest quality and of the highest germination, drawn from the agricultural centres of the world best adapted by nature to yield what is best for the American farmer; and our tests for purity and germination are severe. We not only test for germination in “mother earth,” which is the most natural way, but in addition we have these checked by sending samples of our stocks to the leading seed-testing stations in Europe and the United States so that our customers' interests are safely guarded in the very important matter of vitality and purity. By this means we secure nothing but the best, which are by far the cheapest in the end. Cheap seeds should be viewed with suspicion; they are usually the most expensive things the farmer can buy. For example: A pound of pure, highly-dressed

Red Top (*Agrostis Vulgaris*) at thirty-two cents will sow more land and is far cheaper than 2 lbs. costing half the money, but producing absolutely fewer plants than a smaller quantity of perfect seed. We, therefore, invite you with confidence to send us your orders and to plan in good time for your season's supply.

PETER HENDERSON & CO.

BUSINESS RULES

PETER HENDERSON & Co. give no warranty, express or implied, as to description, quality, productiveness, or any other matter of any Seeds, Bulbs or Plants they send out, and they 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.

ABOUT FORWARDING AND REMITTING.—Remittances should be made either in the form of a *P. O. Money Order, Express Money Order, Bank Draft, Express Purchasing Order or Registered Letter.*

PRICES in this catalogue are subject to market fluctuations.

We make no charge for packing or cartage of goods to any rail-

road station, steamship line or express office in New York City. Farm seeds we do not deliver free—consignee pays the transportation charges. In the event of small quantities being wanted by mail, 8 cents per lb. should be added to the prices.

CLOTH BAGS only we charge for, and these at cost, viz: 1 peck, 10c.; ½ bushel, 12c.; 1 bushel, 15c.; 2 bushels, 25c.; ALL GRASS SEED BAGS, excepting bags for Timothy and Clover, are furnished free.

SPECIAL PACKING FOR FOREIGN SHIPMENTS, in tin-lined cases or double sacks, charged at cost.

SPECIAL QUOTATIONS given to buyers of large quantities.

FARM MANAGERS— We have from time to time applications by competent men for positions as farm and estate managers, men who have been trained to the business, and are well posted on agriculture generally, and the raising and care of all kinds of farm stock. We will be very pleased to enter into correspondence with those who require the services of such. We make no charge to either employer or employee.

Peter Henderson & Co.

35 & 37 CORTLANDT ST., NEW YORK.

CHARLES HENDERSON, Pres.

DEPARTMENT
OF :: :: :: ::

GRASS SEEDS

It has been fully demonstrated by the careful trials conducted by the Agricultural Experiment Stations in various parts of the country that good pasturage, and good hay crops can be best secured by sowing grass seeds in mixtures. Pastures seeded naturally are always found to contain many varieties of grasses growing and flourishing side by side without detriment to each other, and attaining their maximum of growth at different periods of the year. It is to this notable characteristic that such pastures furnish continually an abundant bite, when meadows and pastures composed of but a few varieties are brown and bare.

Another great advantage in sowing grass seed mixtures is that full use is made of the land. The various grasses being of different habit, seek the food they require at unequal depths in the soil, some being shallow-rooted in habit and some deep-rooted; thus every strata of soil is utilized, and a far greater number of plants grow and flourish in a given space. We have been for years well aware of the above facts, through our own exhaustive experiments and studies, and no better meadows or pastures can be found than those laid down with our various grass seed mixtures. They comprise the following:

HENDERSON'S SPECIAL GRASS MIXTURE FOR HAY AND PERMANENT PASTURE
COMBINED

HENDERSON'S SPECIAL GRASS MIXTURE FOR PERMANENT PASTURE

HENDERSON'S SPECIAL GRASS MIXTURE FOR PERMANENT HAY

HENDERSON'S RENOVATING MIXTURE FOR IMPROVING OLD PASTURES

HENDERSON'S SPECIAL GRASS MIXTURE FOR WOODLAND PASTURES

Fully described on pages 3, 4, 5 and 6.

These famous mixtures have seeded thousands of acres of meadow and pasture land for progressive farmers and stock raisers in various parts of the United States, with most gratifying results. They are well-balanced combinations of a number of native and acclimated foreign grasses and clovers, blended and improved upon during exhaustive trials under widely varied conditions, soils and localities for several years, until practically perfect, our aim being to produce, under the extremes of the American climate of heat, drought and cold, a PERMANENT, dense and deep-rooting turf that would yield year after year the maximum quantity of forage. These grasses are of superior quality, inviting, sweet and nourishing, whether used as hay or pasture. That we have been successful is attested by the numerous letters of praise for these special grass mixtures that we have received

from the users, and the tributes to their merits published in many of the agricultural journals. Space permits us to print extracts from but a few of these encomiums.

A Description of Soil and Locality should be given when ordering. In the preparation of these mixtures for permanent pasture, the greatest care is exercised in selecting such varieties as are suited to the soil to be sown and are likely to realize the object in view. To facilitate this, a description of the soil and climate, and the purpose for which sown, and if with or without a grain crop, should accompany each order.

FULL DIRECTIONS FOR SOWING ENCLOSED IN EVERY BAG.

Prices, \$2.75 per bushel of 14 lbs.; 50 bushels @ \$2.65; 100 bushels @ \$2.60.

MIXED PERMANENT CLOVERS

10 POUNDS REQUIRED FOR 1 ACRE. \$3.50

JUST HARVESTED THE TENTH CROP OF MOST SATISFACTORY HAY

"It may interest you to hear as it is a pleasure to me to be able to inform you that from the Permanent Pasture Grass Seed purchased from you six years ago, I have just harvested the tenth crop of most satisfactory hay. This makes two good crops for each of the five years after sowing. The remarks, 'What a beautiful field it is' and 'It looks like a lawn' are often made and they please me greatly."
GEORGE MOORE, Fanwood, N. J.

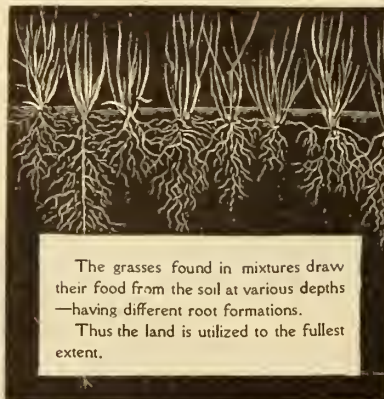
IT SELLS ITSELF

"The Special Grass Seed you sold me last September has turned out so well that I am ordering more to seed another field."

Mr. JOHN C. HUNT, Mt. Kisco, N. Y.

SURPASSED EXPECTATIONS

"I am pleased to report that your Special Grass Mixture for Hay and Pasture sowed by me three years ago on an eight acre field, has surpassed my expectations."
ARNOLD C. SAPORTAS, Pocantico Hills, N. Y.



The grasses found in mixtures draw their food from the soil at various depths—having different root formations.

Thus the land is utilized to the fullest extent.

Should be sown in addition to the above grass mixtures, but on account of greater weight the Clover should be sown separately, and in cold latitudes, in the spring. This mixed Clover comprises White, Mammoth Perennial or Cow Grass, Alsike, etc.

IT PAYS TO CHANGE FROM TIMOTHY

"I desire to advise you that I am changing all my fields from Timothy to your Permanent Grass Seed as I find the latter to be entirely satisfactory. My horses and cattle relish it very much more and my crops have been considerably increased."

W. D. HENRY, Irvington Farm, Sewickley, Pa.

SEVERE DROUGHT, BUT EXCELLENT PASTURE

"Your Special Grass Mixture has done well for me. It produced this season, the largest crop of hay that I ever saw cut off the ground, and has been yielding a most excellent pasture for over a month past, and this notwithstanding the extraordinary severity of the drought in this vicinity."
R. S. TAYLOR, Fort Wayne, Ind.

WOULD DO YOUR HEART GOOD TO SEE IT

"I wish you could see my Permanent Grass; it would do your heart good. I expect a very big crop."
R. P. McGRANN, Grand View Farms, Lancaster, Pa.

HENDERSON'S SPECIAL GRASS MIXTURE FOR

HAY AND PERMANENT PASTURE



PRODUCES WONDERFUL HAY CROPS AND LUXURIANT PASTURE

The Yield of Hay under favorable conditions averages 3 to 4 tons per acre at the first cutting, or nearly double that of Timothy and Clover, and larger yields are not unusual; then, if not pastured, the second crop is usually about one-half the quantity of the first. This shows the great value of this special mixture of grasses over Timothy which seldom yields a second crop, nor can it be pastured after cutting without seriously damaging the next season's yield, for Timothy after cutting throws its strength into its bulbous base, on which its yield the next season depends.

Pasturage. After the hay crop is cut the grass commences to grow at once, recovering its verdure in a few days' time and affording a continuous pasturage even through dry summer weather, until winter sets in; or the field may be pastured from earliest spring and still be in prime condition for yielding hay or pasture the next season, and so on year after year, for the various grasses composing this special mixture are all dense, fibrous-rooting varieties, sustaining no injury from cropping—proving its value over Timothy, which would be injured, probably ruined, under similar conditions.

In Earliness this special grass mixture is about two weeks ahead of Timothy, enabling the haying to be finished before grain harvesting presses. This earliness gives a longer growing season for the aftermath, whether it is to be pastured or again cut for hay.

Permanency. Henderson's Special Grass Mixture for Hay and Permanent Pasture, if properly laid down, will maintain its heavy cropping qualities twenty years and more if occasionally top-

dressed with manure or suitable commercial fertilizer, and it will steadily improve, whereas a stand of Timothy soon commences to become thin and in three or four years must be plowed up and resown or rotated—with all the attendant expense.

Heat and Drought-Resisting. The various kinds of grasses composing this special mixture are fibrous, deep-rooting varieties that spread and intermingle, forming a tough matted sod, free from stooling or tussock growth, and, in consequence, the grasses protect their own roots and are therefore less susceptible to extremes of heat and drought, retaining their verdure even through dry, hot weather, when Timothy is burned up.

The Seed Required. The amount of seed necessary to sow an acre largely depends on the quality of the land; the poorer the soil the larger the quantity required. Taking one soil with another, and owing to the fact that the seeds we use are of higher quality and better cleaned than ever, a fair average would be **3 bushels to the acre.** The thicker the seeds are sown the sooner will a fine, close turf be obtained. It may be sown either spring or fall.

The Initial Cost is More in seeding with Henderson's Special Grass Mixture, but the ultimate returns are much more profitable than those from ordinary hay and pasture fields, and when the other advantages are considered—including the permanency of a maintained yield—the first expense will be found a paying and satisfactory investment.

PRICES Henderson's Special Grass Mixture for Hay and Permanent Pasture

For Light Soils, Medium Soils or Heavy Soils (state which in ordering)

\$2.75 per bushel of 14 lbs.; 50 bushels @ \$2.65; 100 bushels @ \$2.60. Mixed Permanent Clovers, 10 lbs. sufficient to sow an acre, \$3.50; should be sown in spring. (See page 2.)

"The grass seed mixture I got from you last spring made a good sod and is admired by farmers here. It is all you claimed for it. Some think the price is high, but I tell them, 'I did not buy weeds to seed my land.'"

M. RILEY, Mt. Savage, Md.

"It may interest you to know that I am having good success with your grass seed mixture. I laid down one piece in 1906, and at the same time a piece with Herd's Grass and Timothy. The 'Special' looks better this year than ever, while I had to plow up the Herd's grass—all played out. I also laid another piece with your seed in 1907. It is looking nice." GEO. M. HOLMES, Bryantville, Mass.

HENDERSON'S SPECIAL GRASS MIXTURE FOR
PERMANENT PASTURE
 SUPPLIES CONTINUOUS AND ABUNDANT PASTURAGE FOR 20 YEARS AND MORE



Provides Nourishing Forage from Early Spring until Winter Snows,
 and is Green and Succulent All Summer Long,
 When Ordinary Grazing Lands are Burned Brown

There is no more important part of a farm than a good pasture, and that can only be obtained by the use of the proper grasses, varieties that have different root formations and different habits and seasons of growth, in order to maintain a **rich, close turf throughout the entire season**. Timothy should never be used for pasture, because it will *not* stand trampling, and soon runs out when heavily pastured and at best is short-lived, as compared with the permanent grasses used in our Special Mixtures. These Mixtures contain over a dozen of the best permanent grasses, both American-grown and imported. All are permanent, and when once established **will last indefinitely**, if the fertility of the soil is kept up by occasional top-dressing. Owing to the different habits of growth, the grasses grow closer together and form a rich, close turf, covering the soil completely and forming a protection to the roots during hot, dry weather, **thereby enabling these grasses to maintain a rich green appearance when Timothy and other grasses are burned up**. The thick turf also prevents animals poaching through and destroying the pasture.

We have for years studied the subject of pastures and their formation with exhaustive tests on our own trial farms, where we have had growing separately and in different mixtures all the grasses of which seed can be procured in commercial quantities. These trials have been broadly studied and the results watched with critical interest on the farms of our customers. We are in an unrivalled position to advise you on the subject and to supply suitable grass seeds for Permanent Pasture. While it costs a little more to seed an acre with this special mixture, yet results are so superior and permanent that they more than offset the original cost. Sow not less than 3 bushels per acre. Directions enclosed in every bag. **PRICE, \$2.75 per bushel; of 14 lbs. 50 bushels @ \$2.65; 100 bushels @ \$2.60.** (State whether wanted for light, medium or heavy soils.)

Mixed Permanent Clovers, 10 lbs. sufficient to sow an acre, \$3.50. Should be sown in spring. (See page 2.)

**DRY SUMMER. BUT IT FILLED
 OUT A FINE CROP**

"I sowed 2 acres with your Permanent Pasture mixture and am delighted with the quality. It was a very dry summer to start with and if it had been timothy would have been obliged to reseed, but it filled out a fine sod; cut a second crop when timothy cuts none."

W. E. HARRIS, East Douglass, Mass.

ONCE TRIED, ALWAYS TRIED

"I telegraphed you today to ship me enough Permanent Pasture Grass seed to sow 20 acres. About seven years ago I seeded a piece with your Pasture and Hay Mixture with wonderful results."

E. C. DUNCON, Clarkesville, Mo

**SEEDED 15 YEARS AGO—
 STILL LUXURIANT**

"Herewith is enclosed photograph taken in June, 1910, of Henderson's Permanent Pasture grass 15 years after seeding. (Photo shows luxuriant crop.)" JOHN B. MARCON,
 Woodside, Princeton, Mass.

**SPLENDID CROPS OF HAY
 FOR 8 YEARS**

"I wish to say that about 8 years ago I bought a large quantity of your Mixed Permanent Grass Seed, which has given us most splendid crops of hay every year since."

E. L. NEWBOLD, Irvine, Pa.



HENDERSON'S
SPECIAL GRASS MIXTURE
FOR
PERMANENT HAY

CUTTING A FIELD OF HENDERSON'S SPECIAL GRASS MIXTURE FOR PERMANENT HAY ON ESTATE OF PAUL D. CRAVATH, ESQ., LOCUST VALLEY, L. I.

HENDERSON'S SPECIAL GRASS MIXTURE FOR **PERMANENT HAY**

Produces Double
the Quantity of
Timothy and Clover

and Maintains the Yield 20 Years
and More

SUPPLIES A GOOD CROP OF
HAY

In Dry Seasons when Ordinary
Hayfields are Burned up

Quality Superior

Although the most widely cultivated hay grass in the United States is Timothy, or a mixture of Timothy and Clover, and while they answer the purpose admirably on farms where the soil is suitable and where the usual three and four years' rotation is carried on, yet there are many other grasses which will yield more profitable returns.

The competition of the Western States on wheat, corn and other grain has made the growing of grain in the Eastern States and the usual rotation farming unprofitable, but hay still yields a fair profit, and the farmer whose land is sown with a proper mixture of Permanent Grasses, requiring only an occasional top-dressing of manure or fertilizer to MAINTAIN THEIR HEAVY CROPPING QUALITIES FOR TWENTY YEARS OR MORE does away with the necessity for plowing and rotation cropping with all its attendant expense.

The most serious item of expense on the farm, the labor bill, can be largely reduced and thus give reasonable prospect of profitable annual returns at a minimum of labor and expense. The seed of these Permanent Grasses is more costly than Timothy, and more is required per acre, but by reason of their heavy cropping qualities and permanency they soon repay the extra cost and leave a handsome margin for the farmer, when the cost of plowing, harrowing and re-seeding Timothy every three and four years is taken into consideration.

The grasses used in this Mixture recover quickly after the hay crop is cut, and yield either a second crop or pasture in the greatest abundance during the summer and fall months. Within a few days after cutting, their rich green appearance as compared with Timothy is a desirable feature, especially in fields close to the house, as it gives a park-lawn effect to the surroundings. Sow 3 bushels per acre. Directions in every bag. Price, \$2.75 per bushel of 14 lbs.; 50 bushels @ \$2.65; 100 bushels @ \$2.60. (State whether wanted for light, medium or heavy soils.) Mixed Permanent Clovers, 10 lbs., sufficient to sow an acre, \$3.50; should be sown in spring. (See page 2.)

THE DIFFERENCE BETWEEN SEEDS AND HENDERSON'S SEEDS

Prof. WILLIAM P. BROOKS, of the Hatch Experiment Station, Amherst, Mass., writes us: "AFTER CAREFUL EXAMINATION OF SAMPLES from various sources and comparison of purity, germination and price I have decided on ordering of you the greater proportion of grass seed, etc., needed here."

Henderson's Renovating Mixture

FOR IMPROVING OLD PASTURES



Grass lands, in consequence of being constantly mown or pastured without being fertilized or manured, frequently become impoverished and deficient in the more valuable and nutritious grasses, and in time become unprofitable. It is frequently unnecessary to plow up such land unless it be full of weeds. The turf should be well harrowed with a sharp-tooth harrow, and, if possible, top-dressed with soil and well-rotted stable manure, which should be well harrowed in, and then sown with **HENDERSON'S RENOVATING MIXTURE**, at the rate of one bushel per acre, and five pounds of mixed

clovers. This mixture is composed of those sorts that are best suited for sowing on old pastures or meadows, and it will **speedily improve the quality and increase the produce**. March and April are the best months for sowing, choosing an interval between rains if possible, though, if inconvenient to sow then, very satisfactory results can be obtained by fall sowing. After sowing, the ground should be lightly harrowed and afterward well rolled.

Price, \$2.75 per bushel of 14 lbs.; 50 bushel lots, \$2.65 per bushel. Mixed Clovers, 5 lbs. sufficient to renovate an acre, \$1.75.

HENDERSON'S SPECIAL GRASS MIXTURE FOR

∴ ∴ **WOODLAND PASTURES**



Unless there is a superabundance of nitrogen in the soil and a consequent excessive wood growth, in which case it is desirable to sow the land with grasses, it is now customary to sow orchards with cover crops, such as Cow Peas, Clover, etc. These are plowed under and the orchard kept in constant cultivation. But where it is desired to sow the orchard with grass, or for woodland pastures, even when the shade is comparatively dense, we can with all confidence recommend this mixture.

It is composed of a selection of grasses which from exhaustive experiments we have found will thrive under trees. Orchard Grass is, of course, one of the best grasses for the purpose, but this mixture is much superior, as it will make a closer and more even pasture than Orchard Grass alone.

Price, \$2.75 per bushel of 14 lbs.; 50 bushel lots, \$2.65 per bushel.



PRODUCED WITH
"HENDERSON" LAWN GRASS SEED

The Most Beautiful
Lawns in America
ARE MADE WITH
The "Henderson"
Lawn Grass Seed

IT IS EQUALLY VALUABLE FOR
RENOVATING IMPERFECT
AND OLD, WORN OUT LAWNS

"This year under the most adverse conditions we secured one of the finest lawns from your seed that I have ever seen with absolutely no watering or coddling whatever. This speaks well for the vitality of your seed and its ability to make growth."

MT. HERMON SCHOOL, Mt. Hermon, Mass.

"The best lawns here at the National Soldiers' Home were produced with your Henderson Lawn Grass Seed."

PAUL P. MAILLARD,
Chief Gardener,
National Soldiers' Home, Maine.

"The Henderson Lawn Grass Seed from you made a perfect stand in 3 weeks from seeding and is the wonder of the neighbors."

JAMES W. BODLEY, Staunton, Va.

"I wish to say that your Lawn Grass Seed will do all you claim for it. My lawn keeping green when my neighbors' lawns were burned and brown with the drought. Now they are taking my advice and re-seeding with the "Henderson."

WILLIAM BURCH, Cortlandt, N. Y.

THE
"Henderson" Lawn Grass Seed

THE "HENDERSON" LAWN GRASS SEED produces a perfect and enduring lawn of luxuriant richness, with closely interwoven, firm, elastic turf, and is often "ready for mowing four weeks from sowing." This celebrated Lawn Grass composed of a thoroughly balanced combination of various native and foreign fine-leaved, deep-rooting grasses of interweaving habit, that flourish under our varied conditions, soils and climates, growing during different seasons of the year, so that a deep green, smooth, and velvety sward, free from clumps, is maintained from snow to snow, year after year, and without burning brown in summer, its constant luxuriance rivalling the famous old lawns of England.

The splendid lawns at the Columbian Exposition, Chicago; Cotton Exposition, Nashville, Tenn.; Pan-American Exposition, Buffalo; Lewis and Clark Exposition, Portland, Oregon, and the Jamestown Exposition at Norfolk, Va., were produced with The "Henderson" Lawn Grass Seed, which was awarded the highest medals at these Expositions, but what we prize more than gold medals are the hundreds of letters of praise we have on file from the users of The "Henderson" Lawn Grass Seed in almost every State in the Union.

THE "HENDERSON" LAWN GRASS SEED is, relatively speaking, the cheapest seed offered, because, while other lawn grass mixtures on the market will not average over 14 lbs. to the bushel, this weighs 20 lbs. per measured bushel. It is the **Purest, Cleanest and Heaviest** lawn grass seed ever offered and it is absolutely free from weed seeds.

We have made the formation of lawns a study for years, and thousands of the finest lawns and grass plots in America were obtained by following our instructions and using The "Henderson" Lawn Grass Seed.

The quantity required for making new lawns is 5 bushels per acre, or for renovating old lawns, 1 to 2 bushels. For a plot 15 x 20, or 300 square feet, 1 quart is required for new, or 1 pint for renovating old lawns. Full instructions in every package and bag.

Price of The "Henderson" Lawn Grass Seed DELIVERED FREE in the U. S., 30c. quart; \$1.00 for 4 quarts; \$1.75 Peck; \$6.00 per bushel of 20 lbs.

HENDERSON'S LAWN GRASS MIXTURES FOR SPECIAL SITUATIONS

"TERRACE SOD" lawn grass seed for terrace and embankments; 35c. quart; \$1.25 for 4 quarts; \$2.00 peck; \$7.00 bushel of 20 pounds. *Delivered free in the U. S.*

"SHADY NOOK" lawn grass seed for shady places; 35c. quart; \$1.25 for 4 quarts; \$2.00 peck; \$7.00 bushel of 20 pounds. *Delivered free in the U. S.*

"SUNNY SOUTH" lawn grass seed for Southern States; 35c. quart; \$1.25 for 4 quarts; \$2.00 peck; \$7.00 bushel of 20 pounds. *Delivered free in the U. S.*

"CRICKET, POLO and BALL GROUND" grass seed mixture; 30c. pound; \$25.00 per 100 pounds. *Delivered free in the U. S. Sow 50 to 100 pounds per acre.*

"SEA SIDE" lawn grass seed for sandy soil and saline surroundings; 25c. quart; 85c. for 4 quarts; \$1.50 peck; \$5.00 bushel. *Delivered free in the U. S.*

"PUTTING GREEN" grass seed mixture for golf courses, 35c. quart; \$1.25 for 4 quarts; \$2.00 peck; \$7.00 bushel of 25 pounds. *Delivered free in the U. S.*

"FAIR GREEN" grass seed mixture for golf courses; 30c. pound; \$25.00 per 100 pounds. *Delivered free in the U. S. Sow 40 to 50 pounds per acre.*

"TOUGH TURF" grass mixture for tennis courts, croquet grounds and bowling greens; 30c. quart; \$1.00 for 4 quarts; \$1.75 peck, \$6.00 bushel of 20 pounds. *Delivered free in the U. S.*

NATURAL GRASSES

Descriptions of Native and Foreign Grasses Suited to all Soil and Climatic Conditions in the United States

CREEPING BENT or FIORIN (Marsh or Broad Leaved Bent)

Botanical, *Agrostis alba stolonifera*. German, *Fioringras*.
French, *Agrostide blanche stolonifera*.

Perennial. Time of flowering, July. Height, 1 to 2 feet.

This grass is well adapted for moist situations, and valuable for affording herbage in early spring and late autumn, before other grasses have commenced or have stopped growing, and in consequence is advantageously included in permanent pasture mixtures. It is also excellent for lawns.

Sow (if alone) 2 bushels per acre.

Weight, about 20 lbs. per bushel.

Price, 45 cts. per lb.; \$8.50 per bushel; \$40.00 per 100 lbs.



CREEPING BENT.

MEADOW FOXTAIL

Botanical, *Alopecurus pratensis*. German, *Wisen Fuchsschwanz*.
French, *Vulpin des prés*.

Perennial. Time of flowering, May. Height, 2 to 3 feet

This grass closely resembles Timothy, but flowers much earlier, and thrives in all soils excepting dry sands or gravels. Its highest state of perfection is attained in strong, moist, rich soils, and it is particularly valuable as a permanent pasture grass, being of very early and rapid growth. It is highly relished by stock; endures close cropping and forms a luxuriant aftermath, and quickly revives after a long drought. It is very nutritious, but unfortunately loses a large percentage in weight after being cut for hay. Sow (if alone) 3 to 4 bushels per acre; weight, about 7 lbs. per bushel.

Price, 55 cts. per lb.; \$3.75 per bushel; \$50.00 per 100 lbs.



MEADOW FOXTAIL.

TALL MEADOW OAT GRASS

Botanical, *Arrhenatherum avenaceum*. German, *Franzosisches Raygras*.
French, *Avoine élevée*.

Perennial. Flowers in May and June.
Height, 2 to 4 feet.

(This is the *Avena Elatior* of Linnaeus.) Valuable for permanent pastures on account of its luxuriant early and late growth. It is also highly recommended for soiling, as it furnishes an abundant and early supply of fodder; after being mown it produces a very thick aftermath. It grows spontaneously on deep, sandy soils when once naturalized, and succeeds on tenacious clover soils. Sow (if alone) 4 to 5 bushels per acre; weight, about 10 lbs. per bushel. Price, 32 cts. per lb.; \$3.00 per bu.; \$28.00 per 100 lbs.



TALL MEADOW OAT GRASS

RHODE ISLAND BENT (Brown Bent or Dog's Bent)

Botanical, *Agrostis canina*. French, *Agrostide des chiens*.

Perennial. Time of flowering, June and July. Height, 1 to 2 feet.

Its hardy creeping habit renders it desirable for close sward, and it is found to be a very desirable sort in some parts of the country for lawns. Sow (if alone) about 3 bushels per acre; weight, 14 lbs. per bushel. Price, 45c. lb.; \$6.00 bushel; \$40.00 per 100 lbs.

AWNLESS BROME GRASS

Botanical, *Bromus inermis*. German, *Trespe de Hongrie*.
French, *Brôme de Hongrie*.

Perennial. Time of flowering, June to August. Height, 2 to 5 feet.

For price, full description and illustration of this valuable grass, see page 13.

ROUGH STALKED MEADOW GRASS

Botanical, *Poa trivialis*. German, *Gemeines Rispengras*.
French, *Paturin commun*.

Perennial. Time of flowering, July. Height, 2 to 3 feet.
The Lombardy "Queen of Meadow" Grass. An excellent grass for good, deep, rich, moist meadows and stiff, heavy clays. It gives a constant supply of highly nutritive herbage, for which horses, sheep and cattle show a marked partiality. Sow (if alone) 1½ bushels to the acre; weight, about 14 lbs. per bushel. Price, 55 cts. per lb.; \$7.25 per bushel; \$50.00 per 100 lbs.

ORCHARD GRASS (Rough Cocksfoot)

Botanical, *Dactylis glomerata*. German, *Gemeines Knaulgras*.
French, *Dactyle pelotonné*.

Perennial. Time of flowering, June. Height, 3 feet.
This is one of the most valuable and widely known of all the grasses, being of exceptional value in permanent pasture mixtures



ORCHARD GRASS.

on account of its earliness and its rapidity of growth. It is ready for grazing several days before any other grass, except Meadow Foxtail. After being mown it produces a luxuriant aftermath. It is quick to recover from close cropping, "five or six days being sufficient to give a good bite." It is relished heartily by all kinds of stock, sheep even passing all other grasses to feed upon it. It succeeds on almost any soil, especially in moist shady places, and in porous subsoils its roots extend to a great depth. It exhausts the soil less than many other grasses, and stands drought well, keeping green and growing when other grasses are dried up. It flowers about the time of Red Clover and makes a splendid mixture with it to

cut in blossom for hay, although it should be cut early or grazed close, as it becomes hard and wiry and loses its nutritious qualities, to a certain extent, when ripe. It should not be sown in mixture with Timothy, for, being three weeks earlier, it becomes pithy if allowed to stand until the Timothy is ready to cut. Cut at the proper time, however, there is no better or more succulent hay. It is inclined to grow in tufts, and should therefore have other grasses sown with it and be sown very evenly. This tufting characteristic unfits it for lawn purposes. Sow (if alone) 3 to 4 bushels per acre; weight, about 14 lbs. per bushel. Price, Choicest, *Re-cleaned Seed*, 30c. per lb.; \$4.50 per bushel; \$30.00 per 100 lbs.

SWEET-SCENTED VERNAL (True Perennial)

Botanical, *Anthoxanthum odoratum*. German, *Gemeines Geruchgras*. French, *Flouve odorante*.

Perennial. Time of flowering, May and June. Height, 1 to 2 ft.
Very valuable on account of its delicious perfume, to which our hay field and pastures owe their fragrance. The odor is more distinguishable when the grass is drying or dried, and when included in hay its aroma is imparted to the other grasses, making it relished by the stock and enhancing the value of the hay. Sow (if alone) 3½ bushels per acre; weight, about 10 lbs. per bushel. Price, 70c. per lb.; \$6.50 per bushel.

RED TOP

(Burden's Grass, Herd's Grass of the South, and in poor soils "Fine Top.")

Botanical, *Agrostis vulgaris*. German, *Amerikan red-top*.
French, *Agrostis d'Amérique*.



RED TOP.

Perennial. Time of flowering, July. Height 1 to 2 feet.

Valuable either for mixing in hay or permanent pasture grasses; is common throughout the country; succeeds almost everywhere, but reaches its highest state of perfection in a moist, rich soil, in which it attains a height of 2 to 2½ feet. If for pasture it should be fed close as it is not relished after it grows up to seed. It is often sown with Timothy and Red Clover; the latter of course soon disappears, the Timothy follows; then the Red Top takes

its place. Sow (if alone) 3 bushels per acre; weight, 14 lbs. per bush. Price, 18 cts. per lb.; \$2.40 per bushel; \$16.00 per 100 lbs. *Fancy*.—Weight, 32 lbs. per bushel. Sow (if alone) 1 bushel per acre. Price, 32 cts. per lb.; \$9.50 per bushel of 32 lbs.; \$28.00 per 100 lbs.

HARD FESCUE

Botanical, *Festuca duriuscula*. German, *Harter Schwingel*.
French, *Fatouque durette*.

Perennial. Time of flowering, June. Height, 18 to 24 inches.
A dwarf growing, very hardy grass of great value, and the most robust of the dwarf grasses.

Succeeds in dry situations, and is one of the most important of the Fescues for permanent pastures. In hay its presence indicates a superior quality, and after being mown it produces a very large quantity of food. It comes early, stands long droughts well; stock eat it with avidity, especially sheep. The common name solely applies to the flower heads, which, when ripe, become decidedly hard; the herbage, however, is decidedly



HARD FESCUE.

tender and succulent. From the fineness of its foliage and its resistance to drought in summer and cold in winter, it is well adapted for lawn grass mixtures. It is somewhat inclined to stool, but when sown with other grasses, if sown evenly, it will not show this characteristic. Sow (if alone) 2½ bushels per acre; weight, about 12 lbs. per bushel. Price 35c. per lb.; \$4.00 per bushel; \$30.00 per 100 lbs.

We are prepared to make up Special Mixtures of Grass Seeds for particular purposes—situations or conditions—and any correspondence in regard to such will receive our prompt attention.—P. H. & Co.

TALL MEADOW FESCUE

Botanical, *Festuca elatior*. German, *Hoher Wiesen-Schwengel*. French, *Fétuque élevée*.

Perennial. Time of flowering, June and July. Height, 3 to 4 feet.

A coarse growing grass, nevertheless it is very nutritive and productive, and is naturally adapted to moist, stiff or clayey soils and shady woods, and is considered by some authorities to be one of the best grasses in cultivation. It is greedily eaten by stock when green, and should be included in all permanent pasture mixtures for moist or strong lands. It also makes a very good quality of hay, but is too robust for lawn purposes. Sow (if alone) $2\frac{1}{2}$ bushels per acre; weight about 14 lbs. Price 55 cts. per lb.; \$7.25 per bushel; \$50.00 per 100 lbs.



TALL MEADOW FESCUE.

VARIOUS-LEAVED FESCUE

Botanical, *Festuca heterophylla*. German, *Wechselblat-triger Schwengel*. French, *Fétuque feuilles variées*.

Perennial. Time of flowering, June and July. Height, $2\frac{1}{2}$ to 3 feet.

A native of France and a valuable grass for permanent pastures, especially on uplands, and is a very popular continental grass, well adapted where a heavy swath is wanted. It yields a large bulk of herbage, but produces little feed after mowing. Its beautiful, dark green foliage renders it suitable for park mixtures. Sow (if alone) 3 bushels per acre; weight, about 14 lbs. per bushel. Price, 40 cts. per lb., \$5.25 per bushel, \$35.00 per 100 lbs.



VARIOUS-LEAVED FESCUE.

SHEEP'S FESCUE

Botanical, *Festuca ovina*. German, *Schafschwengel*. French, *Fétuque des brebis*.

Perennial. Time of flowering, June and July. Height varies from 6 to 20 inches.



SHEEP'S FESCUE.

For good upland or dry pastures, a large portion of this grass should be included in the mixture, especially if it is used for sheep grazing, as it is greatly relished by them. The Tartars generally pitched their tents in proximity to this grass on account of its value to their herds. It is short and dense in growth, and its excellent nutritive qualities more than counterbalance its slight deficiency in quantity. Its fine foliage and compact habit render it desirable for lawn mixtures. Sow (if alone) $2\frac{1}{2}$ bushels per acre; weight about 12 lbs. per bushel. Price, 35 cts. per lb.; \$4.00 per bushel; \$30.00 per 100 lbs.

FINE LEAVED SHEEP'S FESCUE

Botanical, *Festuca ovina tenuifolia*. German, *Feinblat-triger Schwengel*. French, *Fétuque à feuille menue*.

Perennial. Time of flowering, June. Height varies from 8 to 24 inches.

This is similar to the Sheep's Fescue mentioned above, except that the leaves are much finer. Cattle are very fond of it, and it grows naturally in many parts of the world. It is found in the Arctic regions, in the wilds of New Zealand, and in Europe. In the northern districts of Great Britain it sometimes forms the whole food of the Highland cattle. It is very suitable for permanent pasture, especially on uplands and dry soils. Its rich, dark green gives a fine appearance to hay, and renders it also valuable for lawn mixtures for dry situations.

Sow (if alone) 3 bushels per acre; weight, about 14 lbs. per bushel. Price, 50 cts. per lb.; \$6.50 per bushel; \$40.00 per 100 lbs.

RED or CREEPING FESCUE

Botanical, *Festuca rubra*. German, *Rother Schwengel*. French, *Fétuque rouge*.

Perennial. Time of flowering, June and July. Height, 2 to $2\frac{1}{2}$ ft.

This grass is of a remarkable creeping habit and endures severe droughts. Its roots penetrate so deeply into the soil that it remains fresh and green when other varieties are apparently dried up. It is particularly adapted for dry pastures by the seaside and on loose, light soils, the slopes of railroad cuts, etc., if dry. It yields an average bulk of herbage of fair quality, although most nutritious at time of flowering. Sow (if alone) $2\frac{1}{2}$ bushels per acre; weight, about 14 lbs. per bushel.

Price, 35 cts. per lb.; \$4.50 per bush; \$30.00 per 100 lbs.



RED FESCUE.

MEADOW FESCUE (English Blue Grass or Sweet Grass)

Botanical, *Festuca pratensis*. German, *Wiesenschwingel*.
French, *Fetuque des pres*.

Perennial. Time of flowering, June and July. Height, 18 to 24 inches.



MEADOW FESCUE.

bushel. Price, 50c. per lb.; \$10.50 per bu.; \$45.00 per 100 lb.

One of the very best of our natural grasses; very valuable for permanent pastures. It is highly nutritious and greedily eaten by all kinds of stock and is very fattening; makes excellent hay and succeeds well in almost all soils, although it does best in moist land. It is robust in habit and never grows in tufts, although it should be sown with other grasses. It is one of the earliest grasses in the spring and one of the latest in autumn, being particularly valuable for fall and winter pastures. In the climate of Virginia it often remains green under the snow through the winter, and in consequence is frequently called "Evergreen Grass." Sow (if alone) 2½ bushels per acre; weight, about 22 lbs. per

ITALIAN RYE-GRASS

Botanical, *Lolium italicum*. German, *Italienisches Raygras*.
French, *Ray-gras d'Italie*.

Biennial. Time of flowering, June or July. Height, 18 to 30 ins.

A variety unequalled for producing an abundance of nutritious feed in the early spring, as well as throughout the season, and it gives quick and successive growths until late in the fall, even if cut several times providing the land is in good condition and not too dry. It is of succulent character and quickly responds to rich food and moisture. It thrives on almost any good soil, but reaches its most perfect state in moist, fertile land. As it is not perennial, it is not adapted for permanent pastures, but for one or two year's lay it is unsurpassed. Sow (if alone) 3 bushels per acre; weight about 18 lbs. per bushel. Price, 12c. per lb.; \$2.00 per bush.; \$9.50 per 100 lb.

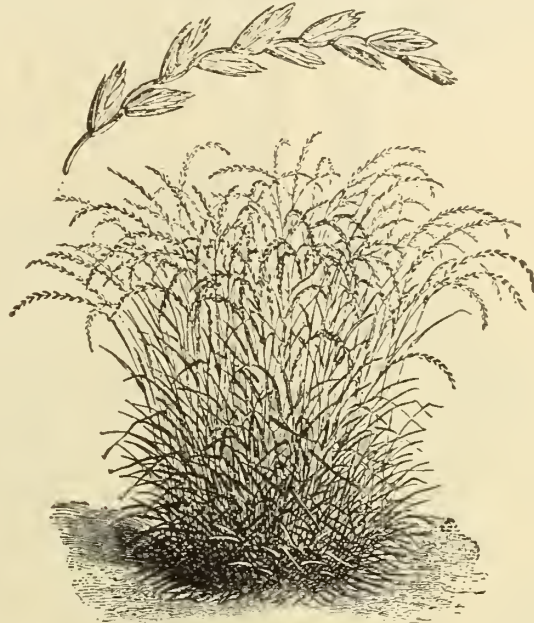


ITALIAN RYE-GRASS.

ENGLISH or PERENNIAL RYE-GRASS

Botanical, *Lolium perenne*. German, *Englisches Raygras*.
French, *Ray-gras Anglais*.

Perennial. Time of flowering, June. Height, 15 to 24 inches.



ENGLISH RYE-GRASS.

This grass is considered invaluable for permanent pastures. It produces an abundance of remarkably fine foliage, tillers out close to the ground and soon forms a compact sward. After being cut it grows up in a very short time and remains bright and green throughout the season; it consequently is well adapted for lawn mixtures. It is also a good variety for hay if cut when in blossom, as it is then most nutritious; if cut much later it becomes woody. It flourishes best in situations not too dry or subject to droughts. Sow (if alone) 2½ to 3 bushels per acre; weight per bushel, 24 lbs. Price, (extra fine sample), 12 cts. per lb.; \$2.25 per bushel, \$9.00 per 100 lbs.

WOOD MEADOW GRASS

Botanical, *Poa nemoralis*. German, *Hainrispengras*.
French, *Paturin des bois*.

Perennial. Time of flowering, June. Height, 1½ to 2 feet.

This grass is now classed among our good "Shaded Pasture grasses" and furnishes a fine succulent and nutritive herbage which is very much relished by cattle. It is splendidly adapted for moist, shady places and should be included in all mixtures for permanent pastures and lawns for moist soils. It is particularly valuable for lawns overshadowed by trees. It produces a much thicker growth than either *Poa pratensis* or *trivialis*. Sow (if alone) 2 bushels per acre; weight per bushel, about 14 lbs. Price, 75 cts. per lb.; \$10.25 per bushel; \$70.00 per 100 lbs.



WOOD MEADOW GRASS.

TIMOTHY or HERD'S GRASS of the North

Botanical, *Phleum Pratense*. German, *Thimotte-Gras*.
French, *Fléole des prés*.

Perennial. Time of flowering, June and July. Height, 2 to 3 feet.

This luxuriates in moist, loamy soils, and sometimes, in favorable situations, attains a height of 4 feet, and even on light soils it yields fair crops. It is exceedingly nutritious, particularly when ripe, but as it is then very hard and pithy, it is better to cut it soon after flowering. It then makes magnificent hay. On dry soils Timothy forms a bulbous swelling at the base of the stems from which the next year's growth starts. It is, therefore, highly injurious under such circumstances to pasture stock on the fall growth, as they trample and cut the leaves off that should protect it during the winter. Even in its most flourishing condition it is more or less injured by pasturing it. Sow (if alone) $\frac{1}{2}$ to 1 bushel per acre; weight per bushel, 45 lbs. Price, **Henderson's Standard Sample, 28c. per lb.; \$11.75 per bushel; \$25.00 per 100 lbs.** (Subject to change without notice.)



TIMOTHY.

A farmer who always looks for the cheapest and pays little or no attention to the quality and cleanliness of the Timothy, Clover and other grass seed he annually sows, will sooner or later find his farm overrun with weeds, and naturally conclude farming is a failure. The seeds of many of the most pernicious weeds so closely resemble the genuine seeds as to require an expert of long experience to detect them, and the farmer should be certain that the merchant has the expert knowledge. As an instance, hundreds of thousands of pounds of Red Clover heavily adulterated with Yellow Trefoil (a small yellow-flowered annual Clover of little or no value), have in recent years been sold to the unsuspecting farmer by country merchants who did not have the expert knowledge to detect it, and upon whom it had been foisted by unscrupulous dealers, who by means of this adulteration can undersell the market and still make more than a legitimate profit.

CRESTED DOGSTAIL (Gold Grass)

Botanical, *Cynosurus cristatus*. German, *Kammgras*.
French, *Crotelle des prés*.

Perennial. Time of flowering, July. Height, 1 to 1 $\frac{1}{2}$ feet.



CRESTED DOGSTAIL.

A fine, short grass that should enter into all permanent pasture mixtures, especially for dry, hard soils and hills pastured with sheep, as it is very hardy and but little affected by extremes of weather. Sheep fed in pastures where this abounds are less subject to foot rot. It is tender and nutritious and relished by all stock until it commences to ripen; it then becomes wiry. On account of its close growing habit, the dense turf it produces and its evergreen foliage, it is particularly desirable for lawn mixtures. Sow (if alone) $\frac{1}{2}$ bushels per acre; weight about 21 lbs. per bushel. Price, 35 cts. per lb.; \$6.75 per bushel; \$30.00 per 100 lbs.

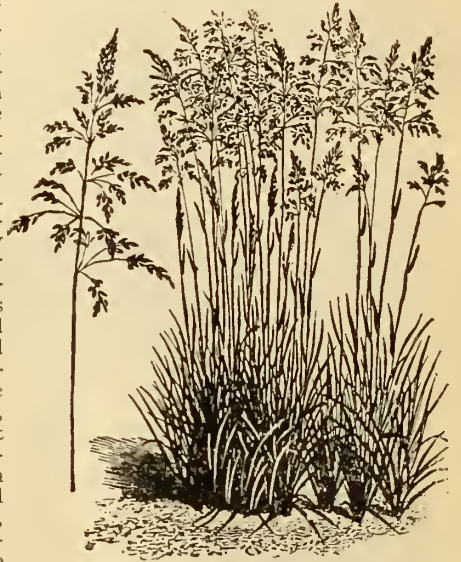
KENTUCKY BLUE GRASS

Also called **June Grass, Smooth Stalked Meadow Grass, Green Meadow Grass, and Spear Grass**

Botanical, *Poa pratensis*. German, *Hiesen Rispengras*.
French, *Paturin des prés*.

Perennial. Time of flowering, June. Height, 10 to 15 inches.

This valuable grass is suited to a variety of soils, from an average dry one to moist meadows. It is exceedingly popular in most parts of the country as a pasture grass. It is very productive, unusually early, and presents a beautiful green appearance in early spring, while other grasses are yet dormant. It furnishes delicious food for all kinds of stock all through the season—unless there should be a protracted drought, which would cause it to slowly dry up—until the fall rains, when it springs forth and grows luxuriantly, and furnishes pasturage until frozen up in winter.

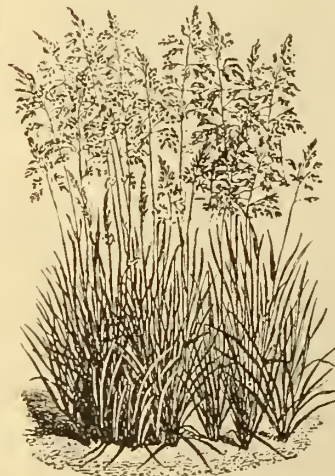


KENTUCKY BLUE GRASS.

In Kentucky and similar latitudes, when allowed its full fall growth, it makes fine winter pasture, and sheep, mules and horses will paw off the snow and get plenty to live on without other food. It makes a splendid lawn grass, forming a thick turf, and being of very even growth, producing only one flowering stem a year, while many other grasses continue to shoot up flower stalks throughout the season. Kentucky Blue Grass also makes hay of excellent quality, but the yield for this purpose is not equal to some other grasses. Sow (if alone) 3 bushels per acre. Though offered at the standard weight of 14 lbs. per bushel, we keep nothing but fancy re-cleaned seed, free from chaff, the natural weight of which is 20 to 25 lbs. per measured bushel. Price, 45 cts. per lb.; \$5.00 per bushel of 14 lbs.; \$40.00 per 100 lbs.

CANADA BLUE GRASS (Poa Compressa)

Perennial. Time of flowering, July. Height, 6 to 12 inches.



CANADA BLUE GRASS.

A valuable grass for hard, dry soils. It grows on land so poor and thin as to exclude the growth of other grasses. It is especially valuable for dairy pastures. Cows feeding on it yield the richest milk and finest butter. Being of an extensive, creeping habit, it forms a strong turf. Not recommended for highly cultivated land, as it is liable to become troublesome owing to its creeping rootstocks. It is an exceedingly valuable pasture grass on dry, rocky knolls and should form a portion of the mixed grasses for such soils; as it shrinks very little in drying, it makes heavy hay in proportion to its bulk. Sow if alone, 3 bushels per acre. Weight of bushel, 14 lbs.

Price, 35c. per lb., \$4.50 per bushel. \$30.00 per 100 lbs.

Your Special Mixture of Grasses for Permanent Pasture has given entire satisfaction. No more Timothy for me. CHARLES EVERING, Branford, Conn.

DROUGHT-RESISTING GRASSES.

Especially Adapted for Hot Southern Climates.

AWNLESS BROME GRASS

INTRODUCED INTO THIS COUNTRY IN 1889

By Peter Henderson & Co.

Withstands Protracted Drought Better than Any Other Grass

Does Equally Well North, South, East or West

This luxuriant drought-resisting, hardy perennial Grass, introduced into this country by us in 1889, has proven to be a most important and valuable hay and pasture grass, thriving under the trying conditions of the dry regions of the West and Northwest. It is very hardy, living through winters where the temperature falls many degrees below zero. It roots deeply, grows rapidly, in good soils attaining a height of 4 feet, yielding up to four tons of cured hay per acre. Even on very poor, sandy land it gives fair crops, having yielded 1 to 1½ tons per acre when Timothy was a failure. As a permanent pasture grass, especially for dry sections, it is very valuable, starting into growth very early in the spring, usually 3 to 4 weeks before other grasses; it forms a tough, close turf, stands grazing and the trampling of stock, does not dry up in summer, remaining green until late in the fall. It is very nutritious either as hay or pasture. Stock relish it and thrive on it; experiment stations place its feeding value ahead of Timothy, though it does not equal Alfalfa as a milk and butter producer, but it is always safe to feed. Brome Grass is a splendid humus former and greatly improves the physical condition of the soil, the roots penetrating 4 to 6 feet deep. Sow the seed broadcast (20 to 25 lbs. per acre) in spring or early summer. (See cut.)
Price, 18 cts. per lb.; \$2.30 per bushel (of 14 lbs.); \$14.00 per 100 lbs.



(BROMUS INERMIS)

BERMUDA GRASS (CYNODON DACTYLON)

Good for both Pasture and Hay. Especially adapted for the South where other grasses will not grow.

This perennial grass, of low-creeping habit, is eminently adapted for the Southern States, as it withstands drought and the scorching rays of the sun better than any other variety. In all tropical countries this grass is highly esteemed for its drought-resisting qualities, and also for the peculiar habit of its growth; the wiry roots of the grass in running over the surface of the ground form a strong, fibrous matting. This has caused it to be sown largely for the purpose of binding banks of creeks and dams, etc. It is, however, pre-eminently a pasture grass, rooting at the joints and forming a closely interwoven turf that withstands the grazing and trampling of stock; the numerous leaves produced from the base of the plant furnish excellent summer pasturage in sections where other grasses burn out. It also supplies a nutritious hay if cut early and often, yielding under ordinary conditions 1 to 2 tons per acre. It thrives on most soils, preferring a rich, sandy loam. As it spreads rapidly and soon takes possession of the soil, it is in consequence principally used for permanent pastures and also for lawns. For lawns in the hot Southern States it is highly prized, as while all other grasses are burned up during the hot season, Bermuda Grass will remain green, and, if regularly mown, it will make quite a velvety carpet. The only drawback is that in winter it looks a little brown, but in the Southern States an all-the-year-round green lawn can be maintained by sowing English Rye Grass every fall at the rate of 50 lbs. per acre and harrowing or raking it into the Bermuda Grass sod. Bermuda Grass seed should be sown in the spring, as it will not germinate until

warm weather comes. As a grass for hay or pasture, it matures and gives its first cutting ordinarily in June. It does not succeed further north than Virginia. Sow 6 lbs. per acre.

Price, \$1.50 per lb.; 100 lbs., \$1.40 per lb.

JOHNSON GRASS (SORGHUM HALAPENSE)

As a meadow or hay grass, this variety is highly esteemed in the South, where during the hottest and driest seasons it can be relied upon to yield heavily. The aggressiveness of this grass has caused it to be considered a veritable curse by some farmers by spreading into cultivated fields, but it is highly esteemed by those who understand it. Where it is desired to keep it within bounds, the seed should never be allowed to ripen, as it spreads from the seeds disseminated though hay much more than is generally supposed. Besides, when fully ripe, the feeding value is little better than corn stalks, but, cut before the seed tops emerge from the sheaths, its value as shown by chemical analysis is better than Timothy hay. When cut at time recommended, the embryo seeds are unpollinated and imperfect, and are incapable of sprouting, so there is no possibility of introducing this grass where it is not wanted by using such hay. We only advise the sowing of Johnson Grass where it is desired to remain as permanent meadow. Should be sown August to October, or in spring, at the rate of one bushel per acre.

Price, 30 cts. per lb.; \$7.00 per bushel of 25 lbs.; \$25.00 per 100 lbs.

We are always glad to advise with our Farmer Friends—There is 65 years of accumulated Experience back of our advice

HENDERSON'S SUPERIOR
RE-CLEANED

CLOVER SEEDS



Cutting a Field of Henderson's Medium Red Clover at Heart's Delight Farm, Chazy, N. Y.

FACTS ABOUT CLOVERS

Important to Every Farmer

GROWN FOR

Hay

AS

Pasture

AS

Fertilizers

AND

Soil

Improvers

Clovers yield 2 to 3 tons of cured, nutritious hay per acre; and furnish a better balanced ration, than almost any other kind of food. Red Clover makes two crops in one season.

All farm animals thrive on the clovers, particularly cattle, sheep and hogs. Few pasture crops grown will furnish as much grazing in a season as Red Clover.

All clovers have the power to gather Nitrogen from the air, and store it in the soil in the form of nodules on the roots; thereby providing rich food for crops of cereals, etc., which follow.

Thus they save the cost of expensive commercial fertilizers, and the labor of loading and spreading farm yard manure.

The long roots of clover penetrate deeply into the soil, improve its drainage, render it more friable, and increase its capacity for holding moisture.

When plowed under, clover crops add humus to the soil, and further improve its mechanical condition.

RED CLOVER

(Common or Medium Clover, June Clover.)

Botanical, *Trifolium pratense*. German, *Kopfklee*, *roth bluhender*. French, *Trefle rouge*.

This is by far the most important Clover grown in the Northern, Eastern and Central states, though it is also largely grown in some parts of the West and South. It thrives most luxuriantly on strong, well drained loams, though it does well on a great variety of soils excepting sour, or acid soils, when lime, plaster or woodashes must be applied to counteract the acidity. Red Clover according to locality is a biennial or short-lived perennial. It grows one to two feet in height and usually makes two crops a year, yielding two to three tons of cured hay per acre. Clover hay is very nutritious; all stock fed on it require less grain; chopped and steamed it is a good substitute for green food for poultry during the winter. As pasturage all animals thrive on it, particularly cattle, sheep and pigs, and as a green manuring and soiling crop it is very valuable, adding humus and nitrogen to the soil. In Northern states Red Clover seed is usually sown in the spring; the earlier the better. If grown alone, use 12 to 14 pounds of seed per acre if broadcasted and cover not over half an inch deep. Red Clover may be seeded with a number of different grasses as Timothy, Orchard Grass or Tall Oat

Grass, but usually it is grown with Timothy, 8 to 10 pounds of Clover and half a bushel of Timothy seed being sown per acre. A very satisfactory combination is 10 pounds of Red Clover, 20 pounds of Timothy and 10 pounds of Fancy Red Top per acre. This makes a fine quality of merchantable hay and the field does not run out so soon as Clover and Timothy alone. (See cut.)

CAUTION.—Every care should be exercised in buying Red Clover, for there are always on the market at a cheap price large quantities, badly infested with weed seeds, which in size and appearance closely resemble Red Clover, and cannot be cleaned out. Our seed is of high germination, pure and free from weed seeds and foreign matter.

Price, (subject to change without notice) Henderson's Superior Sample (extra recleaned), **33c. lb., \$18 75 bushel of 60 lbs., \$30.00 per 100 lbs.**

"The Clover I bought from you last spring is the best they have had on the farm in twenty years, so I am told by the family that occupied it for sixty years."
THOMAS SKIPPER, Woonsocket, L. I.

PRICES OF CLOVERS ARE SUBJECT TO MARKET FLUCTUATIONS

Mammoth or Pea Vine Red Clover

(PERENNIAL RED CLOVER, COW GRASS)

Botanical, *Trifolium pratense perenne*. German, *Bullenklee*. French, *Trefle vivace d'Angleterre*.

Perennial. Time of flowering, July. Height, 2 to 3 feet. Quite distinct from the common Red Clover, being of larger and coarser growth and valuable for purposes for which the latter is entirely unsuited. It lasts longer and is two or three weeks later than common Red Clover. Of very robust growth, yielding enormous bulk, valuable for reclaiming exhausted lands. Sow (if alone) about 12 lbs. per acre; weight, 60 lbs. per bushel. Henderson's Superior Sample (extra re-cleaned). Price, 35c. per lb., \$19.75 per bushel, \$32.00 per 100 lbs.

White Clover (DUTCH or HONEY-SUCKLE CLOVER)

Botanical, *Trifolium repens*. German, *Weissklee*. French, *Trefle blanc*.

Perennial. Time of flowering, May to September. Height, 6 inches (creeping).

A very hardy, creeping Clover, which accommodates itself to a great variety of soils and climates; being found in every state in the Union. It grows most luxuriantly in moist ground or during wet seasons, but succeeds wherever there is enough rainfall to grow cereal grains. It is a perennial plant, the stems having the habit of creeping along the ground and taking root at the joints, so that plants are multiplied indefinitely. White Clover also remains in bloom so long, that blossoms are forming and maturing seeds most of the summer, and vast numbers of young plants spring up from these self-sown seeds. It will therefore readily be seen, that once it takes possession of the land—even though grazed—it will be permanent for a number of years.

White Clover is also a very valuable addition to mixtures for permanent pastures, as it furnishes considerable plant food to the other Grasses composing such mixtures. This is owing to the ability of its stems to continually produce new plants which occupy the soil when the old plants die and are turned into fertilizer.

In mixtures for lawns, White Clover is always used, as there is no plant more suitable for the formation of a dense sward, and also to prevent the washing out of soil during heavy rains. As a bee plant it is famous the world over, and there is probably no other plant in existence which furnishes more or better honey. Sow (if alone) 8 lbs. per acre; weight, per bushel, 60 lbs. (See cut.) 50c. per lb., \$28.00 per bushel, \$45.00 per 100 lbs.

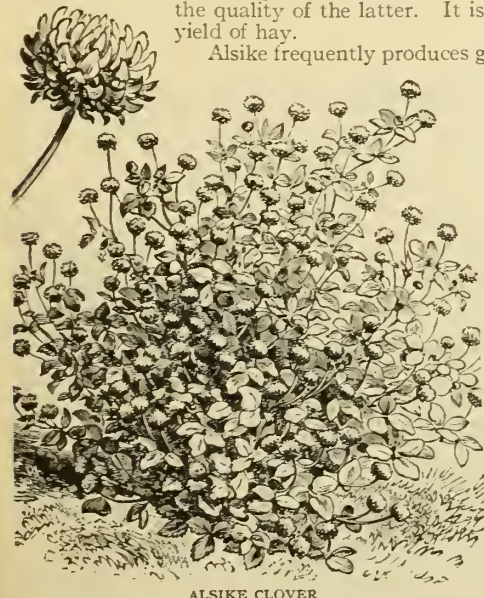


(SWEDISH CLOVER) Alsike or Hybrid Clover

Botanical, *Trifolium hybridum*. German, *Bastard Klee*. French, *Trefle hybride*.

Perennial. Time of flowering, July and August. Alsike or Swedish Clover is a hybrid intermediate in growth and appearance between Red and White Clovers. The blossoms are pinkish white. It is a perennial and one of the hardiest of all Clovers, thriving particularly well in cool and cold climates and stands freezing well, but also adapts itself to most climates where Clovers grow, and will grow in moister soil than Red Clover; in fact, has produced splendid crops under irrigation. The plants attain a height of one to two feet; stems and leaves, though smaller than those of Red Clover, are much more numerous, making hay of finer texture. It is very nutritious, its feeding value equalling that of Alfalfa and is good for either green forage, pasture or hay. When mixed with Red Clover it improves the quality of the latter. It is valuable for sowing with other Grasses and Clovers as it forms a thick bottom, increasing the yield of hay.

Alsike frequently produces good crops on soils on which Red Clover will not grow. We strongly advise farmers to add 2 or 3 lbs. per acre to their usual seeding of Red Clover and Timothy. Sow (if alone) 8 lbs. per acre; weight 60 lbs. per bushel. (See cut.) 30c. per lb., \$16.25 per bushel, \$26.00 per 100 lbs.



White Bokhara Clover (SWEET CLOVER)

Botanical, *Melilotus alba*. German, *Wunderklee*. French, *Trefle de Bokhara*.

Biennial. Time of flowering, June to September. Height, 3 to 5 feet.

A perennial leguminous plant of tall, shrub-like growth, occasionally grown as a forage plant, and often for bees; the numerous small white flowers possess a sweet, honey-like fragrance. The importance of Bokhara Clover, however, is its value for plowing under for green manuring, particularly to prepare poor soils where it is difficult to get other crops to grow. Sow 10 lbs. per acre; weight 60 lbs. per bushel. 30c. per lb., \$16.25 per bushel, \$26.00 per 100 lbs.

Japan Clover (LESPEDEZA STRIATA)

An annual leguminous plant considerably grown, particularly in the South, as a summer pasture, green forage and hay crop. It also has much value as a soil enricher when plowed under as green manure. It will flourish on poor and exhausted soils, too poor to produce profitable crops of any other forage plant. Though an annual, once sown it re-seeds itself from year to year, and in that way will last indefinitely, and is pronounced by competent authorities as the best pasture plant for impoverished soil in the Southern states. Sow 14 lbs. per acre; weight 20 lbs. per bushel. 30c. per lb., \$5.50 per bushel of 20 lbs., \$25.00 per 100 lbs.

ALFALFA SEEDS

MAGNIFIED TO FOUR DIAMETERS

See the Contrast BETWEEN

Henderson's Re-Cleaned Seeds

AND THOSE USUALLY SOLD

U. S. Government Analysis Proves
HENDERSON'S
Re-Cleaned Alfalfa Seed the Purest of All

"Henderson's Sample of Alfalfa, I am glad to say, stood at the head of twelve other samples sent by me to the Government for analysis. Kindly ship to me at Wilcox Wharf, James River, Va., enough to seed sixty acres."

E. A. SAUNDERS, Jr., Richmond, Va.

A seed expert testifies to the purity and high germinative power of Henderson's re-cleaned seeds:

Prof. WILLIAM P. BROOKS, of the Hatch Experiment Station, Amherst, Mass., writes us—"After careful examination of samples from various sources and comparison of purity, germination and price, I have decided on ordering of you the greater proportion of grass seeds, etc., needed here."

Price, 30c. per lb.; \$16.25 per bushel of 60 lbs.; \$26.00 per 100 lbs.

FOR FULL DESCRIPTION SEE OPPOSITE PAGE



ALFALFA IN SHOCK
HEARTS DELIGHT FARM
CHAZY, N.Y.



ALFALFA ON LONG ISLAND
Cutting a field sown with Henderson's R-Cleaned Alfalfa Seed, on estate of Paul D. Cravath, Esq., Locust Valley, L. I., N. Y.

Alfalfa

ALFALFA or LUCERN

(MEDICAGO SATIVA)

The Deepest Rooting Soiling and Hay Plant Grown, Opens up the Subsoil. Adds Nitrogen and Humus to the Land.

This clover-like, leguminous plant is perhaps the most valuable permanent cropper for forage and hay that is grown, yielding, when established, regardless of drought, enormous crops annually for many years. Three to six cuttings are usually harvested per season, aggregating three to eight tons of cured hay per acre, and a yield of eight to twelve tons under favorable conditions is not unusual. The feeding value of Alfalfa is very high, being rich in protein—the blood, muscle and bone-forming elements required for growing animals; it is also a rich milk and butter producer when fed to cows. It is greatly relished by all stock either in pasture or cut and fed green or as cured hay, and they all thrive on it, though there is danger that cattle and sheep may bloat if turned into a luxuriant pasture of Alfalfa while the dew is on.

Alfalfa is a great improver of the soil, gathering nitrogen from the air and adding it with humus to the soil when the deep-rooted stubble is plowed under, thus putting the land in fine condition for following crops. Alfalfa may be successfully grown in almost every State in the Union when the essential conditions can be supplied.

Its best development is attained under the particularly congenial conditions in the Western and Pacific Coast States, yet its cultivation is rapidly increasing in the Middle and Eastern States, as its requirements and culture are better understood. The Alfalfa plant grows three to five feet high and sends a single tap root down into the soil eight to twelve feet, and in deep, sandy soils twenty to thirty

feet; in consequence, it thrives best where soil and subsoil will permit of deep penetration of the roots about which water must not stand. A congenial soil is sandy loam with permeable subsoil, though it will thrive in any sweet, well-drained soil excepting heavy clay and low, wet land. Calcareous soil suits it especially well.

Another essential is to get the plants well established. The young seedlings being rather delicate, the best results have been attained in the East where the seed has been drilled in during the summer in rows twelve to eighteen inches apart and then cultivated; by this method, the young plants keep ahead of the weeds and get a good, strong start, after which they are able to care for themselves. A small crop may then be taken off late in the season, provided it is cut early enough to allow five or six leaves to develop before winter sets in, or is cut about six inches above the ground. Full cropping must not be expected until the second year, but after a field of Alfalfa is established it lasts for a lifetime, continuing to yield annually, regardless of droughts, phenomenal crops, amply repaying the expenditure of time and trouble. Alfalfa should be cut as soon as it begins to flower.

The time to sow in the North and Eastern States is June, July or August, 30 to 40 lbs. per acre if broadcasted or 25 to 30 lbs. if drilled in; in the South sow in February or September. (See cut.)

Price, Henderson's Superior Alfalfa Seed, 30c. per lb.; \$16.25 per bushel of 60 lbs.; \$26.00 per 100 lbs.

The Alfalfa Seed I got from you a year ago did fine. Have had two crops, and good prospects for a third.

C. E. SCHMUCKER, Watsontown, Pa.

Please send me 1/2 bushel of your Alfalfa Seed. That I got from you last season did splendidly.

FRANK HOFFMAN, Analomink, Pa.



ALFALFA ON ALLEGHANY CO., HARD PAN,
From Country Gentleman, Albany, N. Y.

TWELFTH CONSECUTIVE CUTTING ON HARD-PAN LAND
That Alfalfa can be grown on a great variety of soils, we are continually having proved to us. The letter printed below gives the experience of a practical farmer in growing Alfalfa on hard-pan land.

HILL CREST FARM
"The Home of the Jerseys"

J. F. LANGWORTHY,
Owner.

ALFRED, N. Y., Sept. 26th, 1910.

PETER HENDERSON & Co.:
I am sending you a photo of my Alfalfa field, which has been growing five years last May and this is the twelfth cutting, yielding something over two tons per acre. I now have a fine field with the third crop, showing an even stand from eighteen to twenty inches high, nearly ready to cut, which proves conclusively that Alfalfa can be grown on hard pan hill land if rightly managed. You are at liberty to print this in your spring Catalogue. I have had quite a number of the State institute people to see it. They have contended that it was not possible to raise Alfalfa on clay subsoil. I think I have proved otherwise.—Respectfully,
JOHN F. LANGWORTHY.

Henderson's Superior Recleaned CRIMSON or SCARLET CLOVER

Botanical, *Trifolium Incarnatum*. German, *Incarnat Klee*.
French, *Trèfle incarnat*.

Annual. Time of flowering, June. Height, 2 feet

A Boon to Agriculture, A Gold Mine on Your Farm
Valuable as a Pasture, Green Forage and Hay
Crop, and most Valuable for Quickly Re-
storing Fertility to Worn-Out Soils

The importance of this Annual Clover is realized more and more every year, not only as a pasture, green forage and hay crop, but as a cover crop and soil renovator. While it grows most luxuriantly on fertile loam, yet it will thrive better on thinner and poorer soils than Red Clover and is more efficient for green manuring than the latter.

Crimson Clover forms an upright branching plant 1 to 2 feet in height, according to soil, locality and season. It roots very deeply and is a bountiful provider of nitrogen.

As Hay—Cut when coming into full bloom, not later—and properly cured—it is even superior to Red Clover, is more nutritious, richer in protein and especially adapted for growing and working animals. The yield of cured hay on average soils is 2 to 3 tons per acre, on lighter soils less and on heavier, richer soils, phenomenally large crops have been produced.

For Green Forage and Silage it is of high feeding value, especially for dairy stock and is much relished by them. The average yield cut green before the flowers commence to mature is 8 to 15 tons per acre, though up to a 20-ton yield per acre is sometimes reported.

As Pasture Crimson Clover makes one of the best early spring pastures, supplying an abundance of nutritious herbage for several weeks if stock is turned on it when about 6 inches high.

As a Green Manuring Crop Crimson Clover is of the greatest value, particularly as its season of growth permits it to be sown in summer or early autumn after a grain or vegetable crop has been removed and then be plowed under the next spring. Thus it does not in any way interfere with other crops.

Plowing under a good crop of Scarlet Clover is equivalent to 20 tons of stable manure per acre and even if the Clover be harvested or pastured, the benefits derived from the wonderful nitrogenous root formation will alone many times repay the cost of seed and labor.

It is the cheapest source of nitrogen, and has revolutionized the methods of farming in many States, has restored to profitable cultivation thousands of acres of poor land.

As a Cover Crop and winter soil mulch it is peculiarly well adapted. It may be sown among corn, tobacco, sorghum and other crops after the last cultivation and when the primary crop is removed the Crimson Clover will come on and cover the ground fall, winter and early spring. It is one of the best cover crops for orchards and small fruits, and also one of the best sources of nitrogen for them.

Harvesting and Feeding. Crimson Clover should not be fed either cured or green after the flowers begin to mature for the hairs of the calyx then begin to stiffen and harden and are apt to form troublesome "hair balls" in the stomachs of animals.

Seeding. Sow at the rate of 15 pounds of seed per acre, either broadcast or drilled. Cover lightly with a harrow. If sown too early, especially in Southern States, Crimson Clover is apt to mature and form seeds the same season without making full growth. In the latitude of New York City sow from July 15 to September 15, and in the South as late as October.

Price.—Henderson's choicest new Crop Crimson clover seed of highest growing quality, thoroughly recleaned and free from weed seeds (*See cut.*) 18c. lb., \$9.75 bushel of 60 lbs., \$15.00 per 100 lbs.



CLOVERS AND HOW TO GROW THEM

By THOMAS SHAW

Author of "Forage Crops other than Grasses." "Soiling Crops and the Silo," etc., etc.

This book treats on the growth, cultivation and treatment of Clovers as applicable to all parts of the United States and Canada. The whole work is written from the standpoint of the practical farmer and cannot fail to exert a potent influence in the promotion of progressive agriculture. Price, postpaid, \$1.00.

THE BOOK OF ALFALFA

History, Cultivation and Merits. Its Uses as a Forage and Fertilizer

By F. D. COBURN, Secretary Kansas Department of Agriculture

The most authoritative, complete and valuable work on this crop ever published.

One of the most important movements in American agriculture is the general introduction of Alfalfa as a hay and pasture crop.

Price, postpaid, \$2.00.

Farmers' Cyclopedia of Agriculture. By Messrs. Wilcox and Smith. Experiment Station Editors in U. S. Dept. of Agriculture. A thoroughly up-to-date, practical, concise and complete presentation of the whole subject of agriculture. Farm, orchard and garden crops, animals, feeding, dairying, poultry, irrigation, drainage, fertilizing, spraying, etc., 6,000 topics, 700 pages, 500 illustrations. Cloth bound, \$3.50; half morocco.....\$4.50

Farm Crops. By C. W. Burkett. Containing brief and popular advice on the seeding, cultivation, handling and marketing of farm crops and on the management of lands for the largest returns.....\$1.50

Cereals in America. By Prof. T. F. Hunt, of Cornell Agricultural College. A comprehensive treatise of wheat, maize, oats, barley, rice, Kafir corn, buckwheat, etc.....\$1.75

We are always pleased to hear from our farmer friends and offer any advice free on subjects connected with farm crops, etc.

DEPARTMENT OF :: :: :: CEREAALS

HENDERSON'S IMPORTED CLYDESDALE OATS

THE MOST POPULAR HIGH-GRADE WHITE OAT IN THE UNITED STATES

Early and Productive—Free from Disease—Does not Shell Out in Handling—And Weighs 50 Pounds to the Measured Bushel

Since we introduced this Grand Oat it has steadily and deservedly gained in popularity, until today it is the most popular High-Grade White Oat in the United States.

The climate of America is unsuited to the production and maintenance of the highest grade of Oats, and unless a heavy imported (British) Oat be used for seed purposes at least every second or third year, they become light, "chaffy," inferior in quality and unprofitable. The ultimate financial benefit accruing to the American farmers by the annual distribution of several thousand bushels of Henderson's Clydesdale Oats cannot be overestimated. These Oats weigh naturally 50 lbs. per measured bushel, and they deteriorate in weight only from three to four lbs. each year they are grown here, so that the produce is worth for seed purposes at least double the market value of ordinary Oats.

No other Oat can show such a record—75 to 100 bushels per acre, and double the usual quantity of straw. Another most important advantage of Henderson's Clydesdale Oats to the farmer is the fact that they have been thoroughly cleaned by the latest and most improved machinery, and are absolutely free from foreign and weed seeds. Sow 3 bushels per acre. (See cut.)

PRICE, Imported Clydesdale Oats, per peck \$0.65
Per Standard bushel of 32 lbs. 2.00
10-bushel lots and upward, per bushel 1.95
100-bushel lots, per bushel 1.90

Genuine ONLY When Direct From Us

In the Ohio Farmer, Mr. J. T. Hickman of the Ohio Experiment Station tells how samples of Henderson's Imported Clydesdale Oats, and Clydesdale Oats procured from other sources, were grown together in a series of experiments and resulted greatly in favor of Henderson's Clydesdale. The average yield of Henderson's Clydesdale was nine bushels per acre ahead of the others.



Gleaned from Our Daily Mail

GRATEFUL FOR BENEFITS RECEIVED

"Last spring I sowed 100 pounds of your celebrated Clydesdale Oats on 1 1/4 acres of ground and have just thrashed 170 bushels of the finest oats ever seen in this part of the country. I write you this statement to acknowledge the great benefit you have bestowed on the grain-growing sections of our country by furnishing such seed."
ROBERT WOLF, Canvas Prairie, I. T.

THE STRAW WAS FIVE FEET, SIX INCHES HIGH

"I had a fine crop of your Imported Clydesdale Oats this year. They stood five feet six inches high, and in many places higher and headed out nicely. I thrashed 10 acres of them and had 531 bushels of the finest oats I have seen in the country. I will feed the straw to the dry cows this winter."
JOHN WILSON, Walpole, Mass.

INCOMPARABLY GOOD.

"The Imported Clydesdale Oats I bought of you are incomparably good. Such vigorous growing oats I never saw."
W. W. NEWSON, Ft. Worth, Tex.

15 LARGE 2 HORSE LOADS FROM 4 ACRES

"The crop of Clydesdale Oats averaged 5 feet 3 inches high and was cut in the milk: from about 4 acres I got 15 large two horse loads."
JOHN B. MARCON, Woodside Farm, Princeton, Mass.

HENDERSON'S AMERICAN-GROWN CLYDESDALE OATS

In order to give Henderson's Clydesdale a still wider distribution and make their value universally known, and to enable us to offer them at a price within the reach of every farmer, we have had several thousand bushels specially grown for us in Northern New York during the past year. These we have thoroughly re-cleaned, and are extra choice and heavy, free from all foul seeds and light and imperfect grains. We are within the mark when we say that these Oats will yield under ordinary cultivation 70 to 80 bushels per acre, and under favorable circumstances 100 bushels per acre can reasonably be expected. Sow 3 bushels per acre.

PRICE, American-Grown Clydesdale, per peck \$0.50
Per Standard bushel of 32 lbs. 1.40
10-bushel lots and upward, per bushel 1.35
100-bushel lots, per bushel 1.30

LONG'S WHITE TARTAR OATS

AN IDEAL OAT FOR THE AMERICAN FARMER

Very Early Vigorous Constitution
Immense Yields



LONG'S WHITE TARTAR OATS

LONG'S WHITE TARTAR OATS

This grand Side Oat, imported by us in 1901 and grown for us by Mr. I. S. Long, a prosperous, scientific farmer of Lebanon County, Pa.—in compliment to whom it was named—has proven remarkably adapted to American climates and conditions, more than fulfilling our anticipations when introduced. Reports from those who grow it—covering many sections of the country—fully verify our first praise and statements regarding this variety and indicate that it holds up well in size, weight and yield, year after year, even in sections where other varieties rapidly deteriorate. The past season was a very favorable one for all grain crops, it has maintained its reputation as the earliest, heaviest and most prolific Oat in cultivation. It is suitable for all soils, of robust and vigorous constitution, is remarkably early and an immense cropper: the straw, usually 4 to 5 feet in length, is stout, stands up well and does not readily lodge or twist. The heads are very long, measuring from 8 to 10½ inches, and the kernels are of immense size, thick, plump and heavy. It has proven its superiority, and is undoubtedly the heaviest cropping domestic white Oat ever offered. Planted alongside some of the older varieties, it usually yields more than double the number of bushels per acre of any of the other sorts: 100 to 125 bushels per acre may be expected of it under fair conditions.

Had Double the Yield of His Neighbors

"About five years ago I began sowing the famous Long's Tartar Oats and ever since then I have averaged a crop yield ranging from 50 to 70 bushels per acre, weighing from the machine 36 to 38 lbs. per bushel; as compared with my neighbors who have been persistent in sowing other varieties, my yield has been double in comparison with theirs."

J. A. KUNKEL, Pennington, N. J.

A field of this Oat in any farming community invariably attracts the attention, admiration and envy of neighboring farmers.

Its extreme earliness, great length and strength of straw, thick, plump grains and the heavy yields it is capable of producing give Long's White Tartar all the necessary qualifications which go to make an ideal Oat. Sow 3 bushels per acre. (See cut.)

| | |
|--|--------|
| PRICE, Long's White Tartar Oats, per peck..... | \$0.50 |
| Per Standard bushel of 32 lbs..... | 1.50 |
| 10-bushel lots and upward, per bushel..... | 1.45 |
| 100-bushel lots, per bushel..... | 1.40 |

IMPORTED STORM KING OATS

We have pleasure recommending this true White Tartarian or Side Oat. It is a heavy cropper; the grain is short, plump, thin skinned and of the highest feeding value. The straw as its name implies is very strong and stiff, enabling it to resist the severest weather. The average weight of the grain per measured bushel is 48 lbs. For several years we have distributed a limited quantity of Storm King Oats which has proven highly satisfactory. The repeated successful trials warrant us cataloging and recommending it. We advise every grower of Oats to try this variety. Sow 3 bushels per acre.

| | |
|--|--------|
| PRICE, Imported Storm King Oats, per peck..... | \$0.65 |
| Per Standard bushel of 32 lbs..... | 2.00 |
| 10-bushel lots and upward, per bushel..... | 1.95 |
| 100-bushel lots, per bushel..... | 1.90 |

HENDERSON'S SUPERIOR SEED OATS

Especially grown from selected stock for seed purposes. Recleaned by the most improved machinery, free from weed seeds, small and imperfect grains.

IMPORTANT.

A change of Seed Oats is even more necessary than a change of Seed Potatoes, and they should be renewed at least every second or third year. At the low prices at which we offer below choice recleaned Seed Oats, **it will pay every time to even renew stock every year.** Oats grown on the same soil or in the same neighborhood year after year deteriorate rapidly and soon become light, chaffy and unprofitable.

EARLY NEWMARKET. (Imported.) A grand new breed of English pedigree Oats of wonderfully vigorous growth, producing very early a heavy crop of unusually large, plump Oats, remarkable for their thinness of husk, which greatly adds to their feeding value. The straw is tall and strong, withstanding unfavorable weather well, and is practically immune from rust. For quality, earliness, vitality and productiveness the Early Newmarket Oat is unsurpassed. (See cut.)

Price, per bushel (32 lbs.) \$1.80; 10 bushels @ \$1.75; 100 bushels @ \$1.70.

LINCOLN. On its merits this has become one of the most popular. Is very strong-strawed, is very early, and is more nearly rust-proof than any other variety. The grain is heavy, handsome and thin-skinned. You cannot go wrong in sowing this variety.

Price, \$1.40 bushel (32 lbs.); 10 bushels and upward, \$1.35 bushel; 100 bushels and upward, \$1.30 bushel.

PROBSTEIER. A leading white variety. It is very productive and heavy, and straw very strong. It is of Scandinavian origin, but well adapted to this climate; it ripens two or three days later than many varieties, but yields better.

Price, \$1.30 bushel (32 lbs.); 10 bushels and upward, \$1.25 bushel; 100 bushels and upward, \$1.20 bushel.

WHITE RUSSIAN. Is a side oat somewhat coarse, but is much appreciated for its rugged hardiness. It stools freely, has strong stiff straw, heads large with plump grain. A heavy cropper.

Price, \$1.50 bushel (32 lbs.); 10 bushels and upward, \$1.45 bushel; 100 bushels and upward, \$1.40 bushel.

BLACK TARTARIAN. A side oat and the most prolific and distinct variety of Black Oat grown. Its ear is carried all on one side; it is very early, long and strong-strawed, and bears a short, plump grain.

Price, \$1.50 bushel (32 lbs.); 10 bushels and upward, \$1.45 bushel.

WINTER OR TURF OATS.

WINTER or TURF OATS are quite extensively grown in the Southern States, where they are in high favor. Sown in the fall they either afford excellent pasturage during the winter or give abundant yield the following season. The demand for oats of this character has been gradually extending northward, and to meet it we have been growing in Northern Pennsylvania, for several years, an acclimatized strain which is remarkably hardy and will stand the winter as far north as New Jersey. They are incomparably superior to the Winter or Turf Oats of Virginia; they stool out strongly, are earlier, more vigorous and less susceptible to rust; they have stiff straw, stand up well, and are much more productive than Spring Oats. Sow in September, at the rate of 1½ bushels per acre, and sow deep. They will stand much more severe weather when planted four inches deep than near the surface.

Price, 50c. peck; \$1.50 bushel (32 lbs.); 10 bushels and upward, \$1.45 bushel.

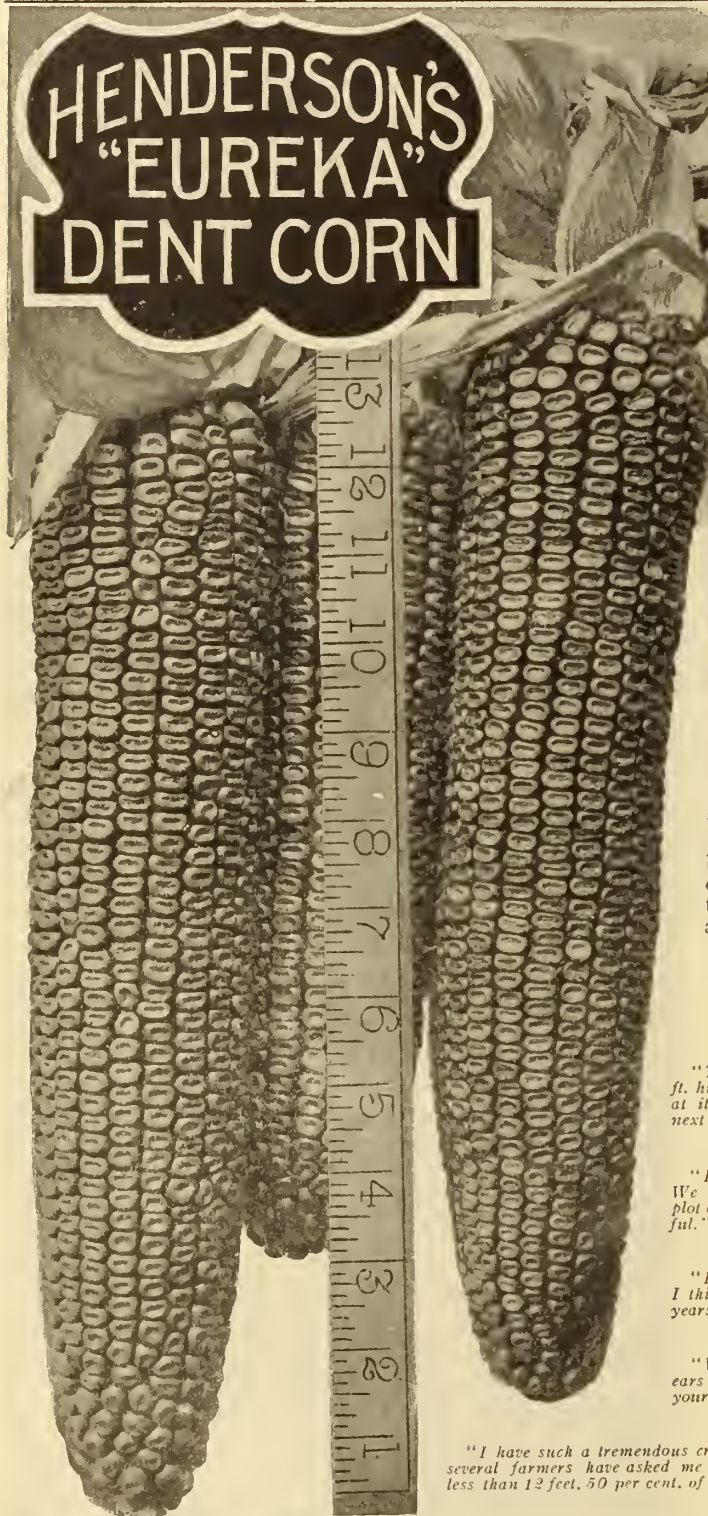


We are always pleased to hear from our farmer friends and offer any advice free on subjects connected with farm crops, etc.

FIELD CORN.

HENDERSON'S SUPERIOR SEED CORN is grown from pedigree strains carefully selected in the field, consideration being given to the plant, as well as to the ears, truthness to types, uniform maturity, and other essential points.

If wanted by mail, add 15 cents per quart for postage. Corn planted in hills requires 8 to 10 quarts per acre.



Henderson's EUREKA .. YELLOW DENT.. CORN

Large, Handsome Ears, 12 to 15 Inches Long,
Weighing 1 to 2 Lbs. Each
Heavy Yields; 150 Bushels Shelled Corn Per
Acre Not Unusual

This is one of the finest and most productive field corns grown: it is a tremendous yielder—150 bushels of shelled corn per acre is not unusual. The plants grow 12 to 15 feet high, a large proportion of them bearing two immense ears to the stalk; the ears are very handsome, averaging 12 to 15 inches long, with small red cob covered full, and over both butt and tip ends, with 18 to 22 even rows of large, deep grain of a rich orange-yellow color. It is fairly early for so large a dent corn, but, of course, does not mature as quickly as the small early dent and flint varieties, but where 105 to 110 days of "corn weather" are assured, it is the corn to grow. It gives unqualified satisfaction from Connecticut to Ohio and south, but north of that latitude we do not advise planting it unless in favored localities. (See cut.)

Price, 20c. per qt.; 75c. per peck; \$2.50 per bushel; 10 bushels and upwards, \$2.40 per bushel.

For ensilage or fodder, cured or green, Henderson's Eureka can be safely planted even in Northern States and is not equalled by any other corn grown, being of leafy, luxuriant growth, with large ears, though only half grown, thus giving a great quantity of fodder per acre.

ACTUAL EXPERIENCES OF PRACTICAL PLANTERS IS THE BEST ARGUMENT

15 FEET HIGH AND EARS 1 FOOT LONG

"The Eureka Corn that I got from you last Spring is certainly remarkable, about 15 ft. high, and the ears 1 foot long. The farmers from my section are coming to look at it, and they advise me to show it at Grahamsville Fair which opens October 5th next week."
S. THOMAS, Fallsburgh, N. Y.

IT PAYS TO PLANT SELECTED SEED

"In sending the enclosed order we wish to add our appreciation of your Eureka Corn. We planted some last season, and harvested three times the quantity from a smaller plot of ground than our predecessor did from his own seed. For this we feel duly grateful."
W. W. JANSSENS, Marlton, N. J.

I HAVE FOUND IT

"I ordered Eureka Field Corn from you last year, and was surprised how it yielded. I think it is the best corn I ever planted in my days, and I am farming now for 25 years."
JOHN C. OLEY, c-o W. C. Casey, Katonah, N. Y.

NEVER SAW SUCH EARS

"We planted with great success your Eureka Corn. It grew over 12 feet high, with ears larger around than a man's arm. Never saw such ears. Farmers here will plant your seed next year."
GEO. A. VOORHEES, Poughkeepsie, N. Y.

SOME STALKS WERE 17 FT. HIGH

"I have such a tremendous crop of your Yellow Dent Field Corn (Eureka) that it attracts general attention, and several farmers have asked me where I got the seed; the stalks average 14 feet high, some are 17 feet, and none less than 12 feet, 50 per cent. of the stalks bore two large ears each."
H. De B. SCHENCK, Ridgefield, Conn.
Per Wm. C. Nash, Manager.

LONG'S CHAMPION YELLOW DENT CORN

Here is a corn that yielded 160 bushels shelled corn per acre and has yielded an average of 133 bushels per acre for the last 10 years on a breadth of 80 to 90 acres

EARS WEIGH 2 to 2½ LBS. AT CRIBBING TIME

20 to 24 uniform rows of long, broad kernels.

A luxuriant grower 12 to 15 feet high

Long's Champion Yellow Dent Corn is the climax of 25 years of Corn breeding and selection by one of the most successful and progressive farmers in the Pennsylvania corn belt.

Will mature in the latitude of New York if planted during the first week of May. Early planting is essential, even though there may be some risk of injury by the frost, which could be overcome on emergency by replanting. This King of Corns is without doubt the finest, the largest and the most productive Yellow Dent Corn ever produced, and will be found to be of great value to the farmer, especially in the corn belt of the Middle and Eastern States, on account of its immense yield, at least 25% and often 50% more than can be obtained from the average old-type corns generally planted.

It is a luxuriant grower, about 12 to 15 feet high, and in Lebanon County, Pa., has never failed to mature by September 20th when planted during the first week of May.

There is but a limited quantity of seed grown by the originator, which can be had through us. (See cut).

Price, \$1.10 per peck; \$3.50 per bushel; 10-bushel lots, \$3.40 per bushel.

LONG'S CHAMPION CONQUERS

"The enclosed photograph shows a picture of myself standing amongst my bumper crop of Long's Champion Corn. As you will notice, it is at least 14 ft. high. The ears are immense, fully 14 in. long, well developed at the tip, and growing close to the butt.

The crop ripened inside of 110 days, and certainly yielded one-third more to the acre than any corn I ever grew before on my farm.

JOHN LYONS, Attorney-at-Law,
Rockville Centre, L. I.

FEW WORDS, BUT GOOD NEWS

"I wish to speak of your Long's Champion Yellow Dent Corn. It was simply great."

F. N. COLBERG, Cannon Falls, Minn.

EXCEEDED EXPECTATIONS

"Last year I bought of you one peck of Long's Champion Yellow Dent Corn and my experience with it leads me to say that it more than warrants all you claim for it."

Mr. E. A. PALMER, Stockton, N. J.

OTHER DENT VARIETIES

All the varieties offered below, in lots of 10 bushels and upwards, deduct 10 cents per bushel.

EARLY MASTODON. (The Earliest Large Dent Corn.) Produces large ears for an early variety. It grows strong at a medium height, with broad, heavy leaves, and makes a fine shelled corn in appearance, being purely Dent.

Price, 15c. per qt.; 75c. per peck; \$2.25 per bushel.

GOLDEN BEAUTY. This corn has given most excellent satisfaction. It is exceedingly productive; a large proportion of the stalks produce two fine ears. The ears are of perfect shape, with from ten to fourteen rows, and filled out completely to the extreme end of cob. The cobs are unusually small. The richness of color and fine quality of grain makes it very superior for grinding into meal.

Price, 15c. per qt.; 75c. per peck; \$2.25 per bushel.

EXTRA EARLY HURON. As early as most of the flint corns, and may be grown even in the most Northern States and in Canada. The grain is somewhat narrow, but long and deep, with small cob.

Price, 15c. per qt.; 60c. per peck; \$2.00 per bushel.

QUEEN OF THE PRAIRIE. (Pride of the North.) This variety is valuable to grow North as it matures early. Planted as late as July 4th, it has fully matured by October 1st. The ears grow 8 to 10 inches in length, from 14 to 16 rows, slightly tapering. The kernels are closely set together on the cob, of a light orange color at the outer end, darker in color lower, and makes excellent meal.

Price, 15c. per qt.; 60c. per peck; \$2.00 per bushel.

EARLY BUTLER. A cross from Pride of the North, and has the smallest cob of any Dent Corn in cultivation. It is also the very earliest Dent Corn and is very profitable to grow. It is just the Dent Corn for Northern farmers—grows quick and strong, and has small cobs, very long grains, and good-sized ears.

Price, 15c. per qt.; 60c. per peck; \$2.00 per bushel.



LEAMING. Ears are of good size, set low down, and nearly always grow two to each stalk. Very small, red cob, with a deep, long grain, of a rich golden color. It matures reasonably early, and if planted not later than the first of June, will generally ripen, and be fit to husk and crib early in September.

Price, 15c. per qt.; 75c. per peck; \$2.25 per bushel.

WHITE CAP YELLOW. An early variety, said to produce better results on poor, thin or sandy soil than any other variety, and is less affected by drought. The grain is handsome yellow in color, with white tips.

Price, 15c. per qt.; 75c. per peck; \$2.25 per bushel.

HICKORY KING. Has the largest grains with the smallest cob of any white corn. The stalks, of strong, vigorous growth, generally bear two good ears each, and occasionally three. It is not, however, considered a safe crop north of Philadelphia. Will make more shelled corn to a given bulk of ears than any other variety.

Price, 15c. per qt.; 75c. per peck; \$2.25 per bushel.

Wood's Northern White Dent Corn

THE CLIMAX OF 40 YEARS' SELECTION

Extraordinarily Prolific. Yields 110 Bushels Per Acre (Shelled)

Ripens thoroughly
south of Albany
and Buffalo

Large ears 10 to 12 inches long, 7
to 8 inches in circumference,
borne 2 to 3 feet from the
ground

Long kernels, small cob
Leafy, luxuriant plant
making fine fodder..



THE
LARGEST
WHITE
DENT CORN

While the raiser, Mr. James Wood, of Westchester County, N. Y., ex-President of the New York State Agricultural Society, does not claim this to be a new variety, having originally been a white Southern Corn, yet by forty years of intelligent selection, it has become the earliest large white Dent Corn we know of and is quite distinct from the original parent. It will ripen in Connecticut, New York State (except in that portion north of Rochester and Troy), Southern Michigan, Southern Wisconsin, etc., and being vastly superior in every respect to the flint varieties and the small Dent Corns usually raised, will be by far the most profitable sort in latitudes north of New York City, where the Eureka cannot safely be planted. (See cut.)

Price, 20c. per qt.; 80c. per peck; \$2.75 per bushel; 10-bushel lots, \$2.65 per bushel.

Wood's Northern White Dent Corn

was referred to in the *New York Tribune Farmer*, in an article on Mr. Wood's farm, as follows:

"Forty years ago Mr. Wood set out to find the most profitable variety of Corn for him to raise. He had learned that his farm was nearly on the dividing line between the south and the north, agriculturally considered, so he tried the White Southern Dent, obtaining his seed from Long Island, where it had been grown for twenty years. It did well, but the ear was from 4½ to 5 feet from the ground, leaving a nearly valueless stalk-butt, and the cob was too large a portion of the ear. For forty years he has been breeding out the butt and the cob. The lower ear on the stalk is now only 2 feet or so from the ground, and the relative size of this cob has been greatly reduced.

"Corn breeding is exciting much attention at this time. Here are the results of forty years of experiment on that line and a better object lesson could hardly be found to establish its value and hint at its enormous possibilities. Mr. Wood always looks for one and a half bushels of ears from twenty-five hills and this represents a larger proportion of shelled corn than is usually estimated. He has often raised 110 bushels of shelled corn to the acre."

POP CORN

The dried grain being exposed to a high temperature explodes or "pops" into a fluffy, snow-white, palatable mass. There are two distinct types of Pop Corn, Rice and Pearl, although the Amber is also a well-defined variety of the Pearl. The White Rice is usually grown for commercial purposes, about 4 lbs. being required to plant an acre. All varieties are hardy, from Canada south. If desired by mail, add 8c. per pound.

WHITE PEARL. Smooth-grained ears, 4 to 5 inches long, by ¾ to 1½ inches diameter, good for either family or market use. 10 cts. lb.; 100 lbs., \$8.00.

AMBER PEARL. A new and distinct shade of color; it matures very early and is in every respect a first-class pop corn. 15 cts. lb.; 100 lbs., \$12.00.

WHITE RICE. (*Rat Tooth.*) A very fine white variety, ears 4 to 5 inches in length, and 1 to 1½ in diameter. Kernel pointed. Especially salable among the retail grocers. 10 cts. 100 lbs. \$8.00.

Henderson's Superior Seeds are procurable only from us direct—we do not supply through dealers.

Extra Early Yellow Flint Corn

NEVER BEFORE OFFERED BY ANY SEED HOUSE

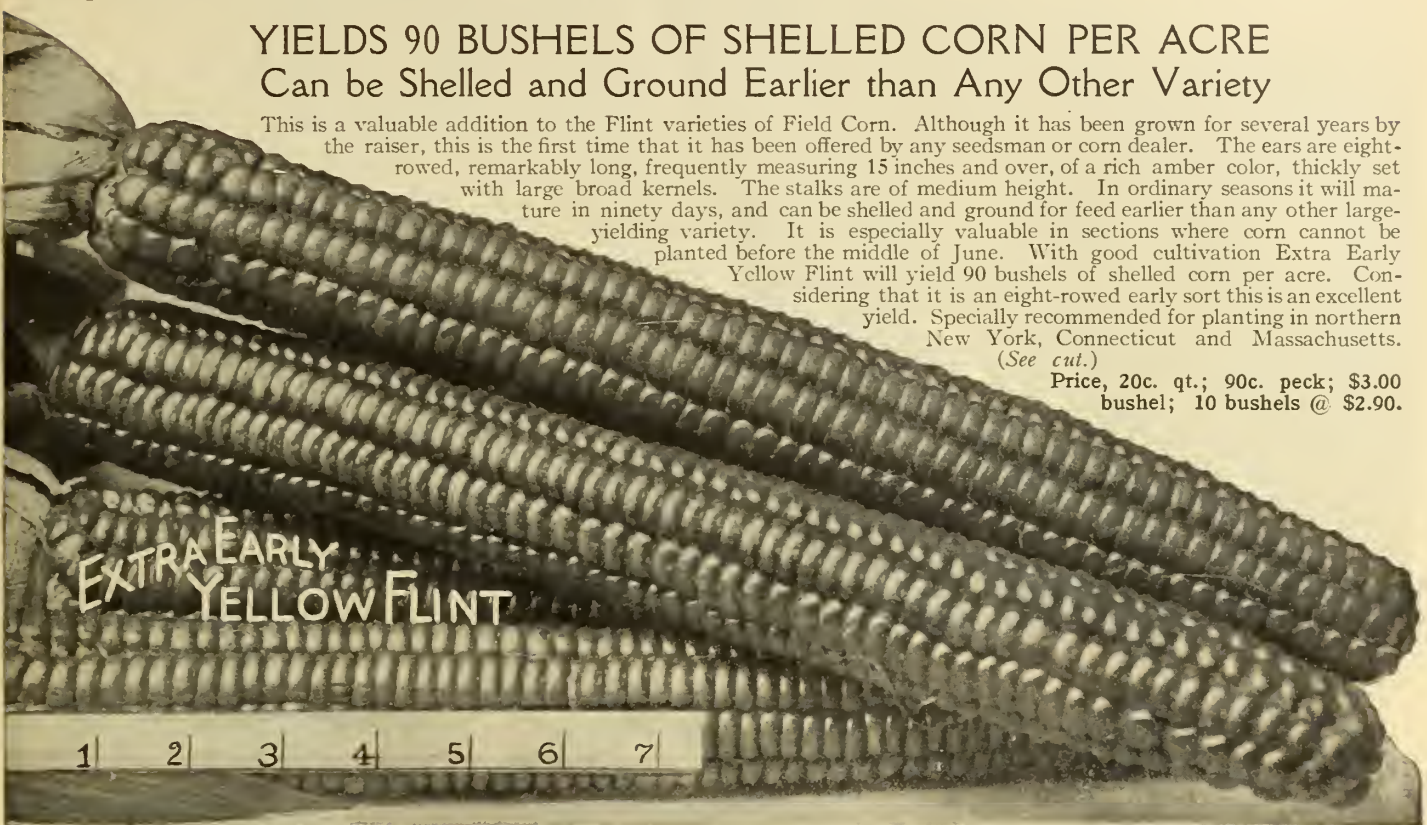
YIELDS 90 BUSHEL OF SHELLED CORN PER ACRE

Can be Shelled and Ground Earlier than Any Other Variety

This is a valuable addition to the Flint varieties of Field Corn. Although it has been grown for several years by the raiser, this is the first time that it has been offered by any seedsman or corn dealer. The ears are eight-rowed, remarkably long, frequently measuring 15 inches and over, of a rich amber color, thickly set with large broad kernels. The stalks are of medium height. In ordinary seasons it will mature in ninety days, and can be shelled and ground for feed earlier than any other large-yielding variety. It is especially valuable in sections where corn cannot be planted before the middle of June. With good cultivation Extra Early Yellow Flint will yield 90 bushels of shelled corn per acre. Considering that it is an eight-rowed early sort this is an excellent yield. Specially recommended for planting in northern New York, Connecticut and Massachusetts.

(See cut.)

Price, 20c. qt.; 90c. peck; \$3.00 bushel; 10 bushels @ \$2.90.



OTHER FLINT VARIETIES.

In Lots of 10 Bushels and Upwards Deduct 10c. Per Bushel

LONGFELLOW. A large 8-rowed yellow flint variety well adapted for the Northern States. The ears are long, some of them measuring 15 inches, and oftentimes two or more good specimens grow on one stalk. Grain large and broad and yellow. The cob is quite small. It is the largest variety of yellow field corn safe to plant in the latitude of Massachusetts, where it is quite extensively grown. Price, 15c. qt.; 75c. peck; \$2.50 bushel.

RURAL THOROUGHbred WHITE FLINT. In appearance this closely resembles the old white flint, but the plant branches and suckers more, and is therefore valuable for ensilage in the Northern States, as well as for the grain. Price, 15c. qt.; 65c. peck; \$2.25 bushel.

Longfellow Produced a Great Crop.

"A year ago my husband ordered a bushel of your Longfellow Yellow Flint Corn. I thought you might be interested in knowing what a success the crop was. He took great pains with it, and though the year was not as good as usual, he has 275 bushels from 2 3/4 acres. Some ears were 15 inches long. All were well filled."
Mrs. Myron S. Howland, West Winfield, N. Y.

COMPTON'S EARLY. The earliest known yellow flint variety, ripening in from 76 to 85 days. It is a handsome 10 and 12-rowed sort very productive, and will ripen in the Northern States. Price, 15c. qt.; 75c. peck; \$2.50 bushel.

LARGE WHITE FLINT. Handsome ears, large and well filled kernels, white and of fine quality. Price, 15c. qt.; 75c. peck; \$2.25 bushel.

LARGE YELLOW FLINT. (Early Canada Yellow.) Similar to the above excepting in color; largely grown in the extreme North. Price, 15c. qt.; 75c. peck; \$2.25 bushel.

KING PHILIP. Coppery-red. Very early. Usually matures three months after planting. Ears large sized and handsome, 10 to 12 inches long. Price, 15c. qt.; 75c. peck; \$2.25 bushel.

A Good Word for King Philip.

"I have pleasure in writing you about your King Philip Corn, with which I planted a quarter of an acre last year. From it I harvested 40 bushels of sound corn ears, and no soft corn among them. It is the best corn I ever planted."
George Flint, Ashby, Mass.

It Pays to Plant Selected Seeds—An Object Lesson.

At the state Agricultural College of Iowa, 100 different samples of Corn were procured from farmers near Ames, Ia., and planted all on the same land. They were all cultivated and grown under the same conditions. The yield at harvest time varied from as low as 20 bushels per acre to as high as 100 bushels per acre in a few instances.

As everybody knows it costs just as much to grow an acre of corn yielding 20 bushels per acre, as it does to grow an acre of corn which will yield 100 bushels per acre. What a waste then, of time and money to plant low grade seed.

Buy CORN for FEED; But Buy SEED-CORN for SEED



HENDERSON'S
IMPROVED
EARLY HORSETOOTH CORN.

CORN FOR FODDER AND ENSILAGE.

EVERGREEN SWEET FODDER CORN. Fodder grown from the Evergreen Sweet Corn is superior in quality to that of the ordinary field varieties, being richer, sweeter and more digestible. The best plan is to sow in rows 24 to 30 inches apart, using one bushel of corn per acre. \$1.00 peck; \$2.90 bushel.

SWEET FODDER CORN. Best for cutting and feeding green during the summer months. This is better than any field corn, from the fact that it is so very sweet and nutritious that cattle will eat every part of the stalk and leaves with relish. Drill thickly, in rows three feet apart, using $1\frac{1}{2}$ bushels of seed per acre. 75 cts. peck; \$2.75 bushel.

SOUTHERN HORSE TOOTH. Grows to a large size, is very leafy and well adapted for ensilage. Large quantities of this corn are sold by feed and other stores which usually result in disappointment to the farmer. There is no corn more difficult to cure or keep properly, and much of it is kiln-dried, while large quantities have been stored in elevators and gone through a sweating process which has destroyed the germ. The stock we offer is carefully selected and sun-dried and of high germination. \$1.85 bushel; 10 bushels and upwards, \$1.75 bushel.

IMPROVED EARLY HORSE TOOTH. Being nearly two weeks earlier, this variety is better adapted for fodder and ensilage in the Northern States than the ordinary Southern Horse Tooth. (See cut.) \$2.00 bushel; 10 bushels and upwards, \$1.90 bushel.

RURAL THOROUGHbred WHITE FLINT. An early variety, valuable for the Northern States. Owing to its suckering and branching habit, it yields enormously. \$2.25 bushel. 10 bushels and upwards, \$2.15.

SUGAR CANE AND BROOM CORN.

SUGAR CANE, Early Amber. Of great value for cutting green and feeding green during hot weather in summer, when pastures are apt to be burned up. Being a tropical plant, it makes its best growth during just such weather, and cattle, horses and sheep relish it, and it may be fed to them with safety. Sow in drills, 10 to 12 lbs. per acre; broadcast, 20 to 25 lbs. per acre. Should be cut when about 2 feet high, and will yield several such cuttings. Earlier than the Orange and may be grown even in Northern States. Cured in the same way as a heavy crop of Clover, it makes an excellent quality of hay. (See cut.) 10 cts. lb.; 100 lbs., \$8.00.

SUGAR CANE, Early Orange. Produces a larger and heavier growth than the Amber but is later. 10 cts. lb.; 100 lbs., \$7.00.

BROOM CORN, Evergreen. Entirely free from all crooked brush, and remains strictly green, consequently always commands the highest market price 10 cts. lb.; 100 lbs., \$7.00.



EARLY AMBER SUGAR CANE.



Japanese Buckwheat

THE BEST VARIETY
 YIELDS DOUBLE THAT OF OTHER SORTS
 VERY EARLY
 MAKES THE FINEST BUCKWHEAT FLOUR

Customers
 PRAISE
 Henderson's

JAPANESE BUCKWHEAT

"I had a small quantity of Japanese Buckwheat from you last year, which I planted on the 5th day of July, and from this I cut, and had in good, clean Buckwheat, 1,392 pounds, which ripened earlier and has produced more than three times the yield of the Silver Hull with the same culture."

DAVID BEAM, Midvale, N. J.

"The Japanese Buckwheat ripened about one week sooner than the old-fashioned kind, and produced more than as much again to the same amount of sowing the past season."

LEMUEL VAN NESS, Pompton, N. J.

"Truly, the Japanese Buckwheat is one of the greatest improvements, in a single line of grain, of the present age. All other kinds of buckwheat can be well thrown aside; and not only the bee-keepers of our land, but farmers in general, can unite in tendering a vote of thanks to our enterprising seedsman, Peter Henderson."—GLEANINGS IN BEE CULTURE.

"I prefer the Japanese Buckwheat to all other kinds."

F. N. HILTON, Pontiac, Mich.

"The Japanese Buckwheat I got from you beats any I ever saw."

C. A. DEAN, Meshoppen, Pa.

"The Japanese Buckwheat I purchased from you is distinct, and stands the sun better than any other sort."

JOHN WILSON, Sandwich West, Essex Co., Ontario, Can.

The Iowa Agricultural Experiment Station reports that it has grown Henderson's New Japanese Buckwheat for two years and has found it superior to the old varieties in several important respects. It is larger and stronger, and stands up better during storms, and its seeds are larger; but what places it far ahead of other varieties is that of setting full crops of Buckwheat in dry, hot weather. It can also be sown much earlier than other varieties, thus avoiding loss by early frost.

GROWN FROM IMPORTED SEED

SINCE we introduced the Japanese Buckwheat nearly twenty years ago, the tendency, on account of the hot, dry summers in the United States, has been for the grain to gradually grow smaller. The seed we offer is grown from the largest type imported from Japan and is much larger in grain than that usually offered, and it will pay all growers to renew their seed. The seed we offer is only one year removed from imported Japanese seed. This variety is now more generally grown than any other, but to those to whom it may still be unknown we would say that the kernels are at least twice the size of any other variety and of a shape peculiar and distinct from all others. The color of the kernels is also most distinct, being of a rich dark shade of brown. It ripens fully a week earlier than the Silver Hull, the straw is heavier, and it branches more and does not need to be sown so thickly as the other kinds. There is always a good market for the grain as it is in demand for all purposes, the export demand now being enormous. For bees it is of the greatest value and for this purpose has displaced all other varieties.

ALWAYS SOW WITH CRIMSON CLOVER

An excellent plan is to sow Crimson Clover along with buckwheat, especially when put in late from middle of July to first of August. They come up together, but the buckwheat is the stronger grower and the Crimson Clover makes but little showing until the buckwheat is removed. If frost should kill the buckwheat before ripe, it may be left as a protection, the dead buckwheat being just the sort of mulching and protection needed by the clover. The Crimson Clover and mulching of buckwheat can be plowed under in May and for potatoes or corn there is no better preparation. Japanese Buckwheat is one of the most satisfactory crops to sow on new or rough land, but buckwheat should invariably be sown as a second or catch crop, and we would advise all growers to sow Crimson Clover along with it as recommended above for, even though the buckwheat be killed by an early frost, the value of its own humus is worth more than the cost of the seed in addition to its value as a winter protection to the clover.

Price, \$1.75 bushel of 48 lbs.; 10-bushel lots, \$1.65 bushel.

"Last year I raised 116 bushels, 85 of Japanese and 31 of Silver Hull. I think the Japanese quite a bonanza."

J. H. KENNEDY, Queenmo, Osage Co., Kan.

"Your Japanese Buckwheat is a grand success and an acquisition of sterling worth, out-yielding all other varieties fourfold, with ordinary culture."

JACOB SENS, Cheswold, Del.

:: :: BARLEY :: ::

Should be more grown than it is. The straw makes excellent rough feed for all kinds of stock. It is also one of the best grains with which to sow down to grass in spring.



BARLEY

NEW WHITE HULLESS. A valuable new variety, which should be sown at the rate of $1\frac{1}{2}$ bushels per acre about the time of sowing Oats. It is two or three weeks earlier than ordinary Barley, grows about the same height, and will not shatter in the field, even when very ripe. The grain is not unlike Wheat, and weighs about 60 lbs. per bushel, instead of 48 lbs. as other Barley. For feeding to horses and hogs, when ground, it is unequalled, and is also exceedingly valuable as hay, if cut and cured just before ripening. **80c. per peck, \$2.50 per bushel of 48 lbs.; 10-bushel lots, \$2.40 per bushel.**

TWO-ROWED DUCK-BILL. The heads are of great length, and when maturing become slightly curved; the grains are large and plump and brighter than any other variety of two-rowed Barley. The straw is stronger than the old popular Chevalier Barley, and has yielded nearly 70 bushels per acre. **70c. per peck, \$2.00 per bushel of 48 lbs., 10-bushel lots, \$1.90 per bushel.**

VERMONT CHAMPION. Two-rowed, early, hardy and prolific. **70c. per peck, \$2.00 per bushel of 48 lbs.; 10-bushel lots, \$1.90 per bushel.**



RYE

Is a valuable crop for either soiling, green fodder, straw or grain. It is largely used by farmers to seed down with in the fall, and is considered preferable to wheat for this purpose, as it protects the young grass and matures two weeks earlier in the summer than wheat. It is also extensively used for fall pasture when sown early and for cutting green in late spring and early summer, but when wanted for cutting it is best sown with the sand or winter vetch.

GIANT WINTER. Unquestionably the heaviest cropping Rye in existence, having in fair tests outyielded all other varieties both in straw and grain. The heads average six to eight inches in length and are filled from end to end with large, plump, heavy grains. The straw is giant in length and strength and of extraordinary stiffness, resisting severe wind and rain storms to a remarkable degree without lodging. (See cut.) **\$2.00 per bushel of 56 lbs.; 10-bushel lots, \$1.90 per bushel.**

WINTER. The variety most commonly cultivated, whether sown for grain, straw or cutting green. **\$1.80 per bushel of 56 lbs.; 10-bushel lots, \$1.70 per bushel.**

THOUSANDFOLD WINTER. One of the most productive sorts in cultivation; the straw is tall and strong, with long, heavy heads, and stands up well. Especially recommended where Rye is grown more for the straw than the grain. **\$1.90 per bushel of 56 lbs.; 10-bushel lots, \$1.80 per bushel.**

EXCELSIOR WINTER. A variety from Vermont, that has never failed to yield at the rate of from 40 to 50 bushels per acre. With the originator, a four-acre field yielded 52 bushels to the acre. **\$1.90 per bushel of 56 lbs.; 10-bushel lots, \$1.80 per bushel.**

SPRING. A variety produced by planting Winter Rye in the spring for several years, and selecting the seed until the type was fixed. It is an excellent "catch crop" where fall-sown grain has been winter-killed, and also for fodder and grain. **\$2.70 per bushel of 56 lbs.; 10 bushel lots \$2.60 per bushel.**

A NEW BOOK—THE CEREALS IN AMERICA

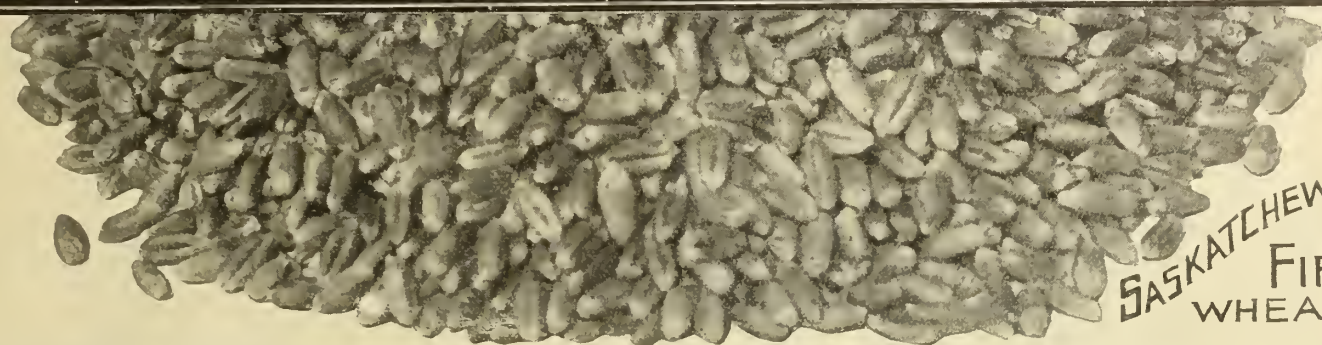
By Thomas F. Hunt, M. S. D. Agr., Professor of Agronomy in College of Agriculture, Cornell University. It is written by an author than whom no one is better qualified. An accurate and comprehensive treatise of wheat, maize, oats, barley, rye, rice, sorghum (kafir corn) and buckwheat, as related particularly to American conditions. First-hand knowledge has been the policy of the author, and every crop treated is presented in the light of individual study. Illustrated with 100 entirely new and original drawings. 450 pages. Price, postpaid, \$1.75.

We are always pleased to hear from our farmer friends and offer any advice free on subjects connected with farm crops, etc.

HENDERSON'S
SUPERIOR

SPRING SEED WHEAT

GROWN FROM
PEDIGREE STRAINS



SASKATCHEWAN
FIFE
WHEAT

HENDERSON'S SUPERIOR SEED WHEAT is not only grown especially for seed purposes from choicest selected cross-bred and pedigree strains, but it is all re-cleaned at our warehouses (750,000 bushels capacity), which are equipped with the most modern seed-cleaning machinery in America. This enables us to supply direct to the farmer plump and heavy seed, of undoubted superiority, at lowest possible prices, where quality is considered. Often through pressure of other work, the seeding of Winter Wheat is neglected until too late and is either not sown at all or results in failure. With the two varieties of Spring Wheat here offered, this difficulty can be overcome by Spring sowing. They are the best of the Spring Wheats, yield well, and the milling quality of the grain surpasses even the best of the winter varieties. Spring wheat is also a satisfactory crop to sow along with grass seed.

The prices herein named are those ruling at this date (February, 1912), for the crop of 1911 but they are subject to market fluctuations. Delivery f. o. b. New York, bags extra. Special quotations to large buyers.

Saskatchewan Fife

The favorite variety in the great Spring Wheat sections of the Northwest, where it is much esteemed by the farmer for its carliness, productiveness, vigorous growth and freedom from smut and diseases, and by the miller on account of its unsurpassed milling qualities. (See cut.)

Price, \$2.60 per bushel (60 lbs.); 10-bushel lots, \$2.50 per bushel.

"Last spring I purchased one quart of the Saskatchewan Fife Spring Wheat. I sowed the same on five square rods of land where one crop had been grown before. I threshed four bushels and forty-four pounds of very fine wheat, weighing sixty-five pounds to the bushel. I found some stools that contained as many as eighty stalks of bearing size from one kernel. Most of the stools contained from forty to fifty stalks. That was more than I expected to raise, and I think more than ever will be raised again from a like amount of seed."

J. W. NOOTNY, Angus, Minn.

Wellman Fife

The best of all the Spring Wheats, having large heads and grain, and tall, strong straw, with white chaff heads and dark amber kernels. The grain is very hard and produces the finest grade of flour. Enormously productive, and is invaluable for spring sowing where the Winter Wheat has been killed, or where it was not sown.

Price, \$2.70 per bushel (60 lbs.); 10-bushel lots, \$2.60 per bushel.

HENDERSON'S
SUPERIOR

WINTER SEED WHEAT

GROWN FROM
PEDIGREE STRAINS

LET US BOOK YOUR ORDER NOW FOR SOME OF HENDERSON'S SUPERIOR WINTER SEED WHEAT FOR NEXT FALL'S SOWING TO BE SHIPPED, CROPS PERMITTING, FROM 1912 CROPS AS SOON AS READY AT OUR LOWEST PRICES AT THE TIME OF SHIPMENT

"Bearded" Rural New Yorker

Has heavily-bearded symmetrical heads pointed at the tip, broad in the middle, and tapering towards the stem. The straw is unusually tall and strong and stools freely, frequently having 35 to 40 stalks from a single grain. The heads are compact, averaging three kernels to a spikelet or "breast," and ten breasts to a side. The kernels are of medium size and of an attractive color, between the so-called "red" and amber, possessing the requisite degree of hardness for the production of the finest grade of flour, and is much sought after by millers. The chaff is clear white, with a trace of velvet sufficient to make it difficult for the green fly to attack it, and the heads do not mildew as the full velvet chaff varieties are liable to do. Price, 80c. per peck; \$2.50 per bushel; 10 bushel lots, \$2.40 per bushel.

"Beardless" Rural New Yorker

This beardless variety is a hybrid between Rye and Armstrong Wheat, though all traces of Rye have disappeared and it now appears a handsome, beardless Wheat. It succeeds and produces heavy crops on poor, thin land, where Wheat could not be successfully or profitably grown, and it also has extreme hardness to recommend it. The gold-colored straw is very thick and strong, easily supporting the heavy grain without breaking. The large amber kernels are placed four to a breast, eight breasts to a side, with long symmetrical heads having a brown chaff. One of our growers says:

"It stools as strong as any wheat I ever saw. It had a vigorous, healthy growth all the season, and stood well without lodging. It is very hardy."

Price, 80c. per peck; \$2.50 per bushel; 10-bushel lots, \$2.40 per bushel.

Gold Coin (Beardless)

A very popular wheat that the increasing demand for the seed would indicate is a most satisfactory variety over a large extent of territory. It is unusually productive, having yielded over 60 bushels per acre—while 50 and over is not unusual—and even on large acreages it seldom runs under 40 bushels per acre. One of its enthusiastic users writes:

"It is the best variety for yielding and standing up ever placed before the American farmer, and fairly crowds out other kinds where it has been tried in this section."
"Clawson and Fife do well on my farm, but the Gold Coin does best of all. You should call it 'Henderson's Best of All Wheat.'"

The straw is very stiff and does not lodge even on the richest land. The head is long and compactly filled with choice white grain, frequently having five kernels abreast. Price, 80c. per peck, \$2.50 per bushel; 10-bushel lots, \$2.40 per bushel.

Pride of Genesee (Bearded)

One of the most productive varieties, having a long, well-filled head, and the fact that it will give a reasonably good crop on land so poor that common sorts would be a failure, cannot fail to make it a popular sort, as the head does not decrease in proportion to the straw, being large and well filled on a very short, light growth of straw. Price, 80c. per peck; \$2.50 per bushel; 10-bushel lots, \$2.40 per bushel.

(Continued on next page.)

HENDERSON'S SUPERIOR WINTER SEED WHEAT

MAY WE NOT BOOK YOUR ORDER NOW? Continued

To be shipped from new 1912 Harvest as soon as ready next Autumn--crops permitting. We will give you the benefit of our lowest prices on the varieties ordered--ruling at time of shipment.

It is an advantage to make plans and order the Seed before sowing season, for during the press of summer work, it is apt to be forgotten or put off until too late for best results.

Prices are subject to the Fluctuations of the Market. Delivery F. O. B. New York, bags extra
The Prices herein named are those ruling February, 1912



Silver Sheaf Longberry Red (Bearded)

The most perfect Longberry Red Wheat grown, and will make a sensation among wheat growers and millers as soon as known. This marvel originated from a cross between the well-known American Bronze and a cross from Lancaster and a seedling Longberry. It is one of the hardiest of all wheats, a strong, healthy grower and can be sown very late. If sown early, 1½ bushels of seed per acre will be enough on strong soil. Straw of light yellow color, medium tall, thick-walled and strong; head long, wide and full; chaff thin and silvery-white; grain large, dark and flinty, and nearly as long as rye kernels. It will command the highest market price of any Longberry yet grown, and will be the leading fancy milling wheat of this country. (See cut.)

Price, 80c. per peck, \$2.50 per bushel. 10-bushel lots, \$2.40 per bushel.

Jones' St. Louis Grand Prize Wheat (BEARDLESS)

This grand new wheat is destined to become a standard "rough-and-ready" variety, being equally at home on all soils, thriving on light sandy, gravelly, clay loam or river bottom lands, and it is as nearly fly proof as it is possible for a wheat to be. It is a strong healthy grower with dark, wide foliage, starting into growth among the earliest in spring. Straw medium tall, very stocky and thick-walled; heads square and compactly set from base to tip; kernels short but very large and plump; color medium dark red and of good milling quality. We expect St. Louis Grand Prize Wheat to make a big record everywhere. Mr. Jones says his field of it in northern New York was noted as the best field of wheat in all of that section. Just as even as a floor. Every head standing erect.

Price, peck, \$1.25; ½ bushel, \$2.25; bushel, \$4.00; in 10 bushel lots, per bushel, \$3.75.

Jones' Red Wave (Beardless)

This grand wheat has fully maintained the good opinion expressed when first sent out in 1906. It is a cross between early Red Clawson and an unnamed crossbreed of Russian parentage. It is a bald wheat with brown chaff, dark, medium long, large grain; heads very long and broad, filled with medium long, large, hard, dark kernels, rich in gluten. Straw, golden; above medium height, stocky, very strong, thick-walled and not liable to go down; heads slightly leaning, hence not liable to sprout in the field. This variety last season gave a yield of 49 bushels and 2 pounds per acre in a field, the balance of which was sown to Dawson Golden Chaff that produced only 27 bushels per acre. Part of the first swath between the two going into the Dawson for fear of stray heads of Dawson; also raking adjoining, thus cutting the yield nearly a bushel. A plot on trial grounds 1½ by 2 rods square produced at the rate of 68 bushels and 5 pounds per acre. Price, 90c. per peck, \$2.75 per bushel; 10 bushel lots, \$2.65 per bushel

Clawson Longberry (Beardless)

This grand cross-bred Longberry was produced from the same blood that bore the famous Red Clawson crossed with Longberry stock. It resembles, in some respects, Red Clawson in the field, but is a stronger grower and more prolific stooler, and has sturdy, wiry straw. Heads long, wide and full; chaff, brown and free from beards; grain, dark amber of the finest quality, large, long, and of true Longberry type. Like its parents, it delights in strong clay loam, and on such soil, with thorough preparation, it will often yield fifty bushels or more per acre. It is largely grown by some of the best wheat growers, by whom it is highly recommended. Sow 1½ bushels per acre.

Price, 90c. per peck; \$2.60 per bushel; 10-bushel lots, \$2.50 per bushel.

Early Red Chief (Beardless)

A very superior new wheat, for which we predict a grand future. It originated from Early Red Clawson and Red Arcadian. Without doubt, Early Red Chief will prove a wonder in the wheat line, being a rough-and-ready sort that can be depended upon for a granary filler even in unfavorable seasons. It is one of the strongest-growing and most productive sorts yet introduced; its growth in the fall is strong, foliage large, thick and dark, covering the ground early in the season, and can be sown very late. It is one of the first to start in spring. Straw exceptionally thick-walled; strong heads, long and wide, carried erect, of a reddish-brown shade, completely packed with large, dark red kernels. Price, 90c. per peck, \$2.60 per bushel, 10 bushel lots @ \$2.50 per bushel.

A New Book—The Cereals of America

{ By THOMAS F. HUNT, Professor of Agronomy, } \$1.75 Postpaid
College of Agriculture, Cornell University



JAPANESE MILLET. (PANICUM CRUS-GALLI MAJOR.)

The best recent introduction for the Silo and Cutting Green.
Especially valuable for the Northern and New England States.

Entirely distinct from any other millet, grows tall and produces an enormous crop. It grows 6 to 8 feet high, stands remarkably well notwithstanding its great height, and yields from 10 to 12 tons green fodder per acre. When cured it makes an excellent quality of hay, and its feeding value is far superior to corn fodder, and it is much relished by all kinds of stock, whether green or cured. If to be made into hay, cure as you would a heavy crop of clover. An ideal ensilage mixture may be composed of two parts of this millet to one part of soja beans (*see page 34*), mixed when filling the silo. The soja beans supply the albuminoids and fat in which the Corn and Millet are deficient. **This mixture forms a complete balanced ration for milch cows without the addition of grain**, though it is, of course, advisable to feed grain occasionally as a change. This ensilage combination will certainly become popular, and when generally used, as we predict it will be, it will result in a saving of hundreds of thousands of dollars annually to the dairymen and farmers of the United States. This Millet does not endure drought well, except it be sown early in retentive soil, and it is not adapted to the climate, nor is it recommended for the Southern States; but north of Washington, D. C., and especially for good, rich soils, we confidently recommend its general cultivation. It will produce a fair second cutting, if sown early in May, and cut when in blossom. It may be sown from the middle of May to the 1st of July, broadcast, at the rate of 15 lbs. per acre, but it is better to sow it in drills, 12 to 18 inches apart, using 10 to 12 lbs. per acre, and hoed between the rows to keep down all weeds until the plant attains a height of 12 to 18 inches when its rapid growth will smother all weeds. (*See cut.*)

FROM EIGHTH ANNUAL REPORT
OF THE
HATCH EXPERIMENT STATION,
OF THE
MASSACHUSETTS AGRICULTURAL COLLEGE.

FOR GREEN FODDER AND THE SILO. "Of Japanese Millet several pieces, of an acre or more each, were sown for feeding green or for the silo. The earliest, sown broadcast about the middle of May on rich land, one peck of seed to the acre, averaged about six feet in height, and produced over 15 TONS PER ACRE. This was cut from day to day, beginning before the millet had blossomed. Another field of about an acre, sown the last of June, yielded at the rate of rather over 18 tons per acre. Another field, sown July 26th, after a crop of hay was removed, yielded about 12 tons per acre. The crop of the two last fields was put into the silo. That cut from day to day, and fed to cows, was much relished. Its superiority to well-eared flint corn fodder was very apparent. Cows with both before them always take the millet first; they consume it without waste, while they are apt to leave a part of the stalks of the corn as it approaches maturity. In alternating this feed with corn fodder, the cows invariably increased in milk when put upon the millet, and fell off when changed to corn.

"It has been ensiled with soja beans,—about two parts by weight of the millet and one of beans. This combination makes very superior silage."

FOR HAY. "A more extensive trial of this millet for hay has been carried out this year, than ever before. It is coarse and difficult to dry. I have always felt that these qualities would render it undesirable as a crop for hay. We have, however, cured it successfully this year, mostly in small cocks, as clover is often cured; and the result is encouraging. The hay is coarse, but is freely eaten by horses, being preferred to a good sample of timothy, red top and clover mixture. The yield of the millet is very large, having on good land amounted to 6 tons per acre of well-cured hay. It will produce a fair second cutting if sown early in May and cut when in blossom."

Hundreds of our customers who have procured seed of Japanese Millet from us can endorse the above.

Price, 10c. lb.; 10 lbs., 80c.; 100 lbs., \$7.00.

Prof. William P. Brooks, of the Hatch Experiment Station, Amherst, Mass., writes us:—"AFTER CAREFUL EXAMINATION OF SAMPLES from various sources and comparison of purity, germination and price, I have decided on ordering of you the greater proportion of grass seed, etc., needed here."

MILLET

Millets though quite largely grown in some sections deserve greater recognition on account of their adaptability to soils, localities, and their many uses. Their chief importance is as dry weather, summer catch crops, supplementing other early summer maturing crops, and of value to succeed crops that fail, such as corn etc. Millets are also one of the best crops for planting on newly broken land—useful in certain kinds of rotation, excellent for soiling. May also be grown in place of summer fallow without detriment to succeeding crop. Splendid for land foul with weeds, restoring it to good condition. May be profitably used in silage combinations, may be pastured—in fact being of special value for this purpose where grass pastures are exhausted or burned out. Millets, if cut in blossom, before they get too woody, make excellent hay—and therefore are of great value in seasons of short hay crops. Millet crops are less subject to the attacks of insects and fungous diseases than any other cereal.

HUNGARIAN. Is the quickest of catch crops for hay, and as it may be sown any time during the summer months up to the middle of August, it is invaluable for overcoming a shortage of the regular hay crop, it is fairly drought resistant. Many farmers now occupy their land with other crops, and for their hay depend entirely upon Hungarian Grass, which they can sow after other crops have been harvested. Sow 1 bushel per acre. (See cut.) \$2.50 bushel of 48 lbs.; 10 bushels and upwards, \$2.40 bushel.

GERMAN or GOLDEN. This variety is considerably larger than Hungarian and yields a much heavier crop, but is later and not so quick growing, consequently cannot be sown much after the fourth of July in this latitude. To maintain its heavy cropping character, seed of this variety needs to be specially cultivated.

Our seed is specially grown and selected, and will produce nearly double the crop of seed not so grown and which can be offered at a cheaper price. Sow one bushel per acre. (See Cut.) \$2.50 bushel of 50 lbs.; 10 bushels and upwards, \$2.40 bushel.



HUNGARIAN MILLET.

PEARL MILLET

(*Pennisetum Spicatum*)

This has been cultivated for some years in some of the Southern States, under the names of African Cane, Egyptian Millet, Cattail Millet and Horse Millet. It grows with tropical luxuriance in strong, loamy soil, particularly if well enriched, and then attains a height of from 7 to 9 feet, and produces an enormous quantity of green fodder, for which purpose it can be cut several times during the season, as it immediately starts a new growth after cutting, and grows with great rapidity. Is not so hardy as the other varieties, and succeeds best in latitudes south of New York. The first cutting should be made when about 3 feet high; this will cause it to tiller and spread, and as the season advances and becomes warmer, it grows with marvelous rapidity. No other crop will yield as much forage as Pearl Millet when sown on richly manured land. It will prove of exceptional value if grown in sections subject to protracted droughts, where natural grasses dry up, as it will keep on growing, though of course not so luxuriantly. Sow in drills, 5 to 6 lbs. per acre; if broadcast, 8 lbs. per acre. Weight, per bushel, 56 lbs. Clean seed, 15 cts. lb., \$12.00 per 100 lbs.

If in need of a Farm Manager please write us. We are often able to recommend a Competent Man.



KAFFIR CORN

A type of non-saccharine Sorghum of greatest value for both fodder and grain.

Kaffir Corn is a valuable forage plant, growing 4½ to 6 feet high; it is stocky, erect, and produces wide, luxuriant, succulent foliage, making excellent fodder, either green or dried, and is highly relished by all kinds of stock. Each stalk produces from 2 to 4 heads of grain. These heads are long and narrow. Kaffir Corn has the quality common to all Sorghums, of resisting droughts, and in this fact is to be found its peculiar value, especially in southern sections; it has yielded paying crops of grain and forage even in seasons so dry that corn utterly failed. The culture is the same as for Field Corn.

WHITE KAFFIR CORN

Grows 4 to 5 feet high, with numerous wide leaves. (See cut.) 10c. lb.; 100 lbs., \$8.00.

RED KAFFIR CORN

This very leafy and juicy variety is taller but more slender than the white, ripens a little earlier and yields heavier. It is also valuable for sowing on poor land, as it will give better results under these conditions than the White Kaffir Corn, as well as other Sorghums, most of which require a well-enriched soil. (See cut.) 10c. lb.; 100 lbs., \$8.00.

RURAL BRANCHING DOURA

(Millo Maize, Sorghum Vulgare.)

A wonderfully productive fodder plant that makes a great amount of foliage, and can be cut several times in the season. Plant 4 to 5 lbs. to the acre. 12c. lb.; 100 lbs., \$10.00.

YELLOW BRANCHING DOURA

(Yellow Millo Maize.)

Earlier than the Rural Branching, and of taller growth, often attaining a height of 9 to 12 feet, but it does not stool out quite as much from the ground, although it branches out from the joints. It produces an enormous quantity of fodder, for which stock show a marked partiality. Plant 4 lbs. to the acre. 12c. lb.; 100 lbs., \$10.00.

JERUSALEM CORN

Grows about five feet high, and is one of the surest crops for dry countries and seasons, having in the driest season in the past 15 years in Kansas produced a crop, without irrigation, when other forage plants perished. Five pounds will plant an acre. 12c. lb.; 100 lbs., \$10.00.

"I cannot say too much for your Jerusalem Corn. I drilled in about 15 acres after the ground was so dry in May that I did not think it would sprout, and with not a bit of rain, on dry upland, I now have over 15 tons of fine seed. I tell you it is the crop for dry land and for very late planting. It seems to me it should be better advertised, so all farmers in dry sections could know how valuable it is."
C. W. GAMMON, Walnut Grove, Cal.

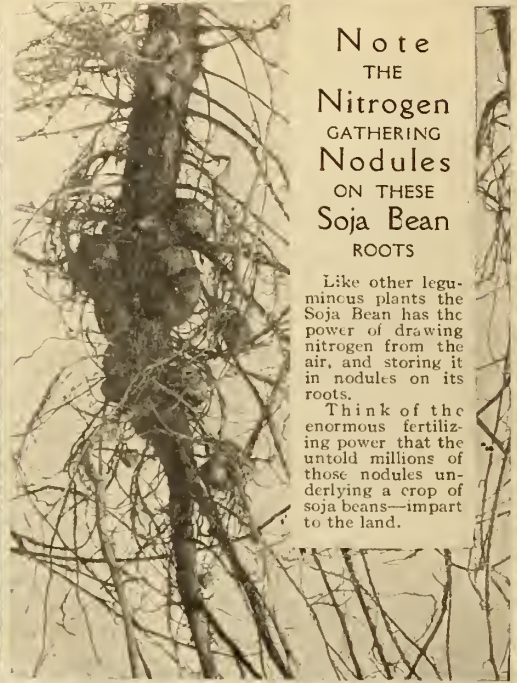
TEOSINTE

(Reana Luxurians.)

The plant resembles Corn, but is more leafy and tillers enormously. After cutting it grows again with remarkable rapidity. Those having only a small amount of land on which it is desired to produce the maximum amount of forage should sow Teosinte. Plant in drills, 6 to 8 lbs. per acre. (See cut.) 50c. ¼ lb.; \$1.25 lb.

"I bought a few pounds of Teosinte Seed from you last spring to try the stuff and must say that I am more than pleased with the results. Besides getting a tremendous crop it is relished better by the cattle than any other green feed I have ever grown. The Soja Beons were also a great success—but not such a surprise as the Teosinte."
W. C. BAIKIE, Castle Gould Estate,
Port Jefferson, L. I., N. Y.





Note THE Nitrogen GATHERING NODULES ON THESE Soja Bean ROOTS

Like other leguminous plants the Soja Bean has the power of drawing nitrogen from the air, and storing it in nodules on its roots. Think of the enormous fertilizing power that the untold millions of those nodules underlying a crop of soja beans—impart to the land.

EARLY SOJA BEANS

FIELD OF EARLY SOJA BEANS AT CENTRAL EXPERIMENTAL FARM, OTTAWA, CANADA

Early Green Soja or Soy Beans

Valuable for Either FODDER or GRAIN

PRODUCES ENORMOUS CROPS as far North as Canada
Ripening Seed as far North as Massachusetts

A GREAT SOIL ENRICHER
Gathering Nitrogen from the Air

SPECIALLY VALUABLE (In Combination with Japanese Millet and Fodder Corn) FOR ENSILAGE
Supplying the Albuminoids or Flesh-Forming Food

SOJA BEANS have attracted much attention in recent years on account of their high feeding qualities, but all were too late to be of value in the Northern States. This early green variety has proved its earliness and value in the Northern States by not only producing large fodder crops, but ripening the seed as far north as Massachusetts. It is worthy of a place on every farm, either as a grain crop or fodder crop to feed green, or for the silo. The grain is the richest known vegetable substance, and when ground and fed to cattle gives a milk richer and better than cotton seed or other meal.

For Ensilage it forms a Complete, Balanced Feed Ration. While corn is the most servicable crop for ensilage, though ever so well preserved as to succulence, odor and flavor, it is an incomplete feed for cattle, being deficient in albuminoids or protein (the flesh formers), as well as fat. This deficiency has hitherto been supplied by feeding, in addition to the corn silage, such grain as oats, wheat, etc., or concentrated feeds, such as meal, oil cake, or some other commodity, rich in the elements in which corn silage is deficient. But the American farmer can now, by the aid of the Soja or Soy Bean and Japanese Millet, grow on his own farm, at small cost, a combination which furnishes a wholesome, economical and completely balanced feed for milch cows. This combination should be composed of two parts millet or corn to one part Soja Beans, grown separately, but mixed thoroughly, at the time of cutting and filling of the silo. This combination ensilage develops a most agreeable aromatic odor, and is greedily relished by cattle—both dairy cows and fattening stock. It certainly will be generally used by all up-to-date farmers and dairymen, and will revolutionize the

dairy industry of the United States. We do not recommend the feeding of this combination to the entire exclusion of grain or other concentrated feed. We recommend that grain be fed occasionally as a change, but four-fifths of the grain bill can be saved. We recommend all farmers to plant this year at least an acre or two of our early Green Soja Beans and an equal area of Japanese Millet, to test and prove for themselves the value of the combination, and we are confident that, thereafter, all who try it will each year grow a larger acreage. Planted the latter part of May, in latitude of New York, the Beans are ready for harvesting in about 100 days. Japanese Millet comes quicker to maturity than Soja Beans, and on the authority of Prof. W. P. Brooks, of Hatch Experiment Station, Mass., should be sown from four to five weeks later, so as to be in the best condition for the silo, along with the Soja Beans. Sow the Beans from the middle to end of May, and the Millet from last week in June till first week in July; both will then be ready for silo about the end of August.

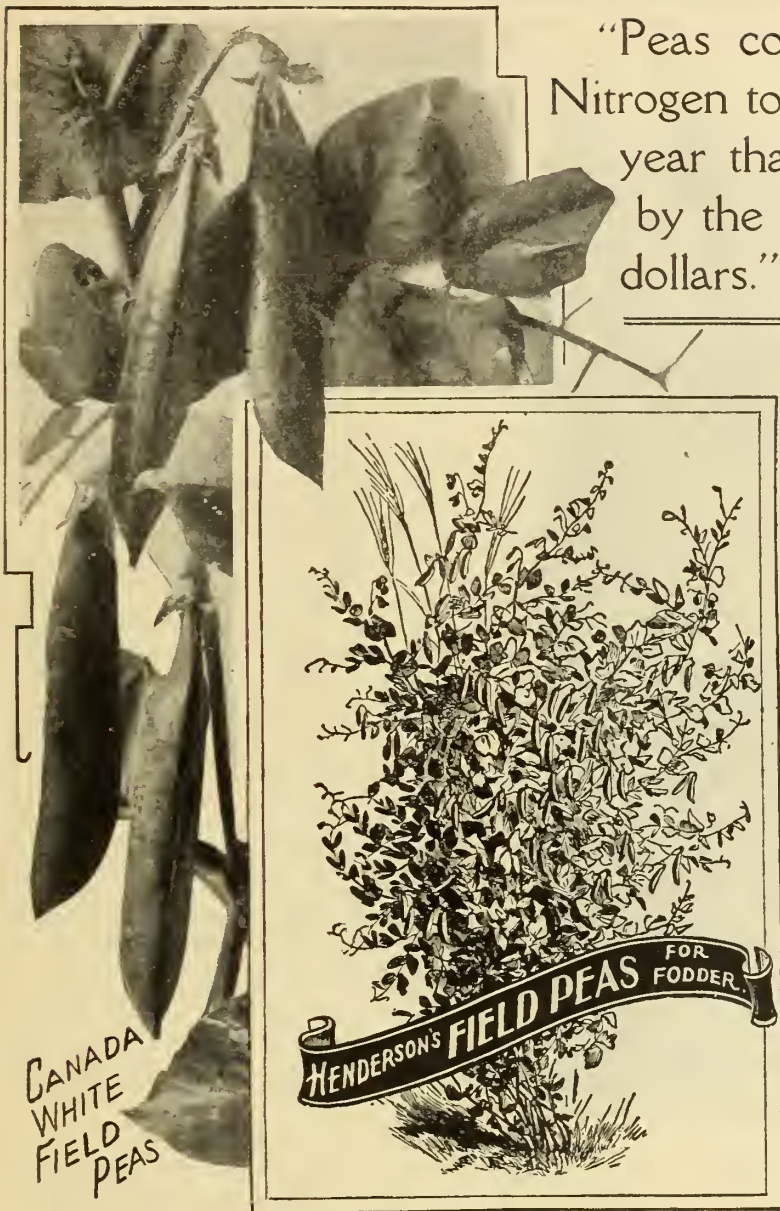
Planted in rows 2½ feet apart, 6 to 8 plants to the foot of row, requiring three pecks per acre, they yield 15 to 20 tons per acre of fodder very rich in flesh formers. For green feed, use from time of blossoming till pods are well filled; for the silo, cut as soon as most of the pods are well filled, and cut into ½-inch to 2½-inch lengths. They are soil enrichers, gathering nitrogen from the air same as clover, the roots being crowded with tubercles which give them this power. (See cut.)

Price, 15c. per lb.; \$1.75 per peck; \$5.00 per bushel, 60 lbs.; 10-bushel lots, \$4.80 per bushel.

HENDERSON'S SUPERIOR SEEDS are procurable only from us direct—we do not supply through Dealers

Peas for Fodder and Green Manuring

“Peas could be made to bring more Nitrogen to the soils of this country every year than is now purchased annually by the farmers at a cost of a million dollars.” Year Book of the U. S. Department of Agriculture.



EQUALLY VALUABLE FOR FORAGE, HAY and PASTURE FIELD PEAS

The great value of Field Peas in farm economy is not sufficiently appreciated. They will flourish in districts too cool and uncertain for corn, particularly in our northern states from New England to Oregon. Peas may be grown for grain, green forage, cured hay or pasture and their feeding value, whichever way used, ranks high for all farm animals, being rich in muscle, blood and bone forming constituents, therefore of special value for feeding growing and working animals. Peas are also great soil improvers, putting the land in better mechanical condition and enriching it with nitrogen—the expensive element in fertilizers—which the pea crop gathers from the air and fixes in the soil. For these reasons Field Peas should have a place in the system of crop rotation, particularly on farms where stock is raised, and if the peas can precede some crop that requires an abundance of nitrogen, such as oats, wheat or other grain crop, the most subsequent good will be realized. For soiling, plowing under as green manure, no crop is of more importance.

Ground peas, mixed half and half with shorts, bran or ground oats, makes an excellent ration for brood animals in milk, milch cows, horses and colts. It is also excellent for fattening, particularly in the early stages. For hogs, sheep and poultry the peas need not be ground.

Pea hay cut a little green and well cured approaches clover in feeding value, and is more relished by horses, cattle and sheep than the straw of any other of the small grains. Some farmers prefer to sow Field Peas with oats or barley when grown for forage, hay or

pasture. This combination is excellent and at its best when other grasses are liable to be failing on account of dry weather. Field Peas do best on well prepared loam; though being vigorous, hardy growers will do the best they can on light land. In the cool northern belt they may be sown at any time during spring or early summer, but in warmer climates they should be gotten in as early as possible in the spring. They may then be harvested in time to sow the land to crimson clover, millet or dwarf Essex rape. In southern states (south of Virginia) sow in the winter, from December to February. They may then be followed by Cow Peas, Soja Beans or other crop.

Quantity Per Acre: Sow if alone 3 bushels per acre; if with oats or barley 2 bushels of Peas and 1 bushel of the other chosen grain.

CANADA FIELD PEAS. These are exceptionally hardy and valuable for early spring sowing; the crop is not easily injured by late frosts.

CANADA WHITE FIELD. A very prolific variety, yielding on the average in Canada 30 bushels of cured peas per acre and equally valuable for luxuriant growth of vine for forage, etc. (See cut.)

Price, 80c. per peck.; \$2.75 bushel of 60 lbs.; 10-bushel lots, \$2.65 bushel.

CANADA BLUE. A hardy, prolific variety of luxuriant growth. Price, \$1.25 peck, \$4.50 bushel of 60 lbs., 10-bushel lots, \$4.40 bushel.

LARGE MARROWFAT. Of immense growth, yield heavily both grain and fodder. We consider the Marrowfat one of the best Field Peas, whether for growing alone or in mixture with oats or barley.

Price, \$1.75 per peck; \$6.50 per bushel of 60 lbs.; 10-bushel lots, \$6.25 per bushel.

COW PEAS (VIGNA CATJANG)

Improve Worn-out Soils. Make Good Land More Productive. Valuable for Pasture, Green Forage or Ensilage

Cow Peas are the great leguminous crop of our Southern states, where they play the same important role in rotation farming that Clovers and Canada Peas do in the North



The early varieties of Cow Peas are also quite extensively and successfully grown for forage and soiling as far north as Massachusetts, but so far north the crop may not ripen seeds. Cow Peas are nitrogen-gathering legumes, growing more like Beans than Peas, producing enormous crops of bushy vines and yielding in warm climates a bountiful crop of edible Peas. As a soil renovator and enricher, Cow Peas are very valuable. The large root development ramifies over large areas, going down deeply in search of moisture and food thus improving the soil's porosity and adding humus when the roots decay. A crop of Cow Peas collects nitrogen from the air in large quantities and fixes it in the soil, thus adding this expensive element of fertilizers to the land without cost, and leaving it richer and in splendid condition for the future crop. It has been fully demonstrated at a number of experiment stations that a crop of Cow Peas plowed under, will add 110 lbs. of nitrogen per acre to the soil, having an actual cash value of \$14.00 per acre. In addition to that the Cow Pea crop renders available as food for succeeding crops, 24 lbs. of phosphoric acid and 100 lbs. of potash per acre. All crops grown after Cow Peas do well. Moreover, the plants shade the soil, keeping it in best condition for rapid nitrification. The shading of the soil crowds out all weeds; thus Cow Peas serve as a cleansing crop on weedy land. Cow Peas grow on all soils from the stiffest clays to porous sands, barren uplands and alluvial bottoms. It stands the heat and sunshine of southern summers and its rapid growth there enables two crops to be grown in the same land in one year. The feeding value of Cow Peas is high, whether as green forage, cured hay or silage, being especially rich in blood, bone and muscle-forming material. **Hogs do well pastured on Cow Peas; an acre of ripening Peas will feed and fatten 15 to 20 young hogs;** sheep and cattle may also be fed on the green fodder cut and wilted a little, otherwise they eat it so ravenously, they are liable to bloat. For green manuring clay land, the crop should be turned under green. On sandy soil, already too light, the vines should decay on the surface and then be turned under. Sow 2 bushels per acre. (See cut.)

BLACK-EYED COW PEAS. A popular and productive early sort. \$4.25 per bushel of 60 lbs.; 10-bushel lots, \$4.00 per bushel.

NEW ERA COW PEAS. A new, extra early variety, earlier than

the Black Eye, the quickest growing of any of the Cow Peas, maturing in about 60 days, specially adapted for planting North. Yields well.

\$3.75 per bushel of 60 lbs.; 10-bushel lots, \$3.55 per bushel.

VELVET BEAN (MUCUNA UTILIS)

VELVET BEAN (*Mucuna utilis*). A rank growing leguminous vine, attaining a length of 10 to 40 feet and densely covering the ground. As a green manuring and forage crop it is of great value in the South and in tropical countries. No other forage crop makes such enormous growth in such a short time. On the sandy lands of Florida it averages 5,000 pounds of cured forage per acre, while on richer soils in Alabama the weight is often over 8,000 pounds per acre. The crop may be used as green forage, pastured or cured into hay, for which purpose it should be cut when in full flower or before the pods get large. The feeding value is high, as nutritious as Cow Peas, or Clover. Cattle and hogs thrive especially well on it.

As a soil enricher the Velvet Bean crop is not surpassed. It gathers nitrogen from the atmosphere, and when the crop—or at least the roots and stubble—is turned under, this expensive element in fertilizers is added to the soil, which with the humus added from the decayed crop, increases the fertility of the land, putting it in fine condition for the succeeding crop. No fertilizer containing nitrogen need be used to grow Velvet Beans, but if the soil is poor an application of about 250 pounds of acid phosphate and 100 pounds of muriate of potash per acre would be beneficial. Plant the seed a few inches apart in rows 4 feet apart, requiring about 1 bushel of seed per acre. **\$2.00 per peck, \$6.00 bushel of 60 lbs.**

SAND or WINTER VETCH (Vicia villosa)

SUCCEEDS ON SOILS OF THE LOWEST FERTILITY

THE BEST LEGUME FOR SANDY SOILS

REMAINS GREEN ALL WINTER, FURNISHING ABUNDANT PASTURAGE

Although Sand Vetch succeeds, and even produces good crops on poor sandy soils, it is, naturally, more vigorous on better land. Under such conditions the plant produces numerous branches 3 to 6 feet long. Both leaves and branches are covered with fine hairs, hence it is sometimes called "Hairy Vetch." The seeds are black, small in size, and when the crop is not pastured too closely, the ripened pods burst open and re-seed the field. Sand Vetch is hardy all over the United States, and in most places remains green all winter. The crop may be seeded, either from the middle of August to the middle of September, or in the spring from the middle of April to the middle of May.

Sown in the fall it should be mixed with Mammoth Red Clover or Rye to serve as a support for the vines, thus keeping the forage off the ground.

If sown in the spring it may be mixed with Oats or Barley. Fall sown crops furnish some forage before winter comes, and as growth starts very early in the spring it can be pastured, cut for hay, or turned under to renovate the soil.

FOR PASTURE

Sand Vetch is also of great value for the pasture it furnishes, as well as for hay. It is as rich and nutritious a fodder as Alfalfa, Clover or Cow Peas, forms an excellent food for growing animals, and encourages milk production.

All stock relish it, whether fed as green forage or cured hay, and it may be fed to them with perfect safety. Sand Vetch is decidedly the best forage crop to grow in the Northern states, instead of Scarlet Clover, which winter kills in those latitudes. Every dairyman and stock-breeder in the United States should grow this valuable crop, for there is no doubt that once they try it, they will never be another season without it.

AS A HAY CROP

Sand Vetch is the earliest crop for cutting, being at least a month earlier than Scarlet Clover, so that it is possible to harvest a full crop of Vetches, and yet have the land ready in time for spring crops. It is especially valuable in the South and in dry western regions, as it may be sown in the fall, making a luxuriant growth during the fall and spring months, yielding a heavy crop, which can be cut and stored before drought sets in. Sand Vetch sown at the Colorado Experiment Station, June 10th in rows 40 inches apart, using 30 pounds of seed per acre yielded $3\frac{1}{4}$ tons of cured hay per acre. The field was afterwards turned into pasture, which was greatly relished by both horses and cattle.

AS A SOIL ENRICHER.

As its name would imply, there is no plant that succeeds better on poor, sandy, or other soils low in fertility, and it is undoubtedly the best legume for enriching such lands, having the power of accumulating large quantities of nitrogen in the soil. Although



succeeding on such soils without fertilizer, the Alabama Experiment Station found it profitable to add 240 pounds of acid phosphate and 40 pounds of muriate of potash per acre when grown on such lands.

AS A COVER CROP

The foremost orchardists highly recommend Sand Vetch as a cover crop. Soluble plant food in porous soils leaches away in considerable amounts during the late fall and early spring, when the roots of trees are not actively foraging for it. Especially is this the case on loose sloping lands which often suffer severely from erosion. Fertilizing elements which would otherwise be wasted are caught by the cover crop, and when it is plowed under and rotted become available food for the trees in the spring.

Owing to the fact that it grows late in the fall, and to its ability to live over winter, Sand Vetch is certainly the best cover crop for orchards. (See cut.)

Sow one bushel per acre, with one-half bushel of Rye or Wheat. Price, 15c. per lb.; \$8.25 per bushel of 60 lbs.; 100 lbs., \$13.00. If by mail, add 8c. per lb.

HENDERSON'S . . . SUPERIOR ROOT CROPS FOR . . . FARM STOCK.



MANGEL WURZEL

Mangels are the most important of all root crops for feeding, and may be grown in any part of the American continent on fairly good farm land; all that is necessary is good cultivation.

The best soil for Mangels is loose, friable loam and deep plowing. If expedient, follow the plow with a subsoil plow, and the crop will more than repay the extra trouble. The ground should be well enriched, and the seed sown in May in drills 24 inches apart in light soils, and 30 inches apart in strong, rich land; thin out the plants with a hoe to 9 inches apart in the former and 12 inches apart in the latter. 6 to 8 lbs. of seed are used per acre if sown with a drill, or double that quantity by hand. Cultivate with a horse hoe.

If by mail, add for postage at the rate of 8 cents per lb.

HENDERSON'S COLOSSAL LONG RED. The roots are smooth and regular, of the largest size and blood-red color. The quality is exceedingly nutritious, and in all respects this variety is most distinct and valuable. 55c. lb.; in lots of 10 lbs. and upward, 50c. per lb.

"I raised over 100 tons of your Colossal Long Red Mangel on 2 acres. In many cases three weighed over 100 lbs., the best crop I ever saw on an average, either in this country or in England."

JOHN HODGSON, Crystal Lake Farm, Paterson, N. J.

HENDERSON'S GIANT INTERMEDIATE. This is a variety between the Golden Tankard and Yellow Globe. It is larger than the Tankard, not such a rich golden color, but a heavier cropper. 50c. per lb.; in lots of 10 lbs. and upward, 45c. per lb.

GOLDEN TANKARD. The flesh is bright golden yellow, and in this respect differs from most other varieties, which cut white. Sheep have a preference for this sort over other Mangels; it is said that they will pick out every piece of Golden Tankard before touching others. It yields under the best cultivation 75 tons per acre. 55c. per lb.; in lots of 10 lbs. and upward, 50c. per lb.

LONG RED. This variety is more generally grown for agricultural purposes than any other, producing roots of large size and excellent quality. 50c. per lb.; in lots of 10 lbs. and upward, 45c. per lb.

LONG YELLOW. Differs from the Long Red only in color. 50c. per lb.; in lots of 10 lbs. and upward, 45c. per lb.

HENDERSON'S CHAMPION YELLOW GLOBE. Smooth globe-shaped roots, of large size and excellent quality, are the distinctive features of this variety. 55c. per lb.; in lots of 10 lbs. and upward, 50c. per lb.

BRIEF BUT COMPLIMENTARY

"28 tons, 320 lbs. grown from 5 lbs. of Henderson's Colossal Long Red Mangel Wurzel. Compliments."

J. J. KEATOR, Deseronto, Ont.

YELLOW GLOBE. Roots of large size and globular form; very productive, keeps better than the Long Red, and is better adapted for growing in shallow soils. 50c. per lb.; in lots of 10 lbs. and upward, 45c. per lb.

Sow 6 to 8 lbs.
per Acre

SUGAR BEET

Yield, 20 to 25
Tons per Acre

VILMORIN'S IMPROVED WHITE. A greatly improved variety of Sugar Beet, obtained by over 20 years' continued and systematic selection. The proportion of sugar in the roots, under ordinary circumstances, amounts to 18 to 20 per cent., while in other varieties the usual average is 12 to 15 per cent. Has yielded 30 tons and over per acre, and is unequalled for feeding cows and young stock. 45c. per lb.; in lots of 10 lbs., 40c. per lb.

KLEIN WANZLEBEN. Heavy yielder and easy to dig. Extensively grown both for sugar and stock feeding. 45c. per lb.; in lots of 10 lbs., 40c. per lb.

LANE'S IMPERIAL. An improved variety of the French Sugar Beet, obtained by careful selection in this country, and recommended as being hardier and more productive. 45c. per lb.; in lots of 10 lbs., 40c. per lb.

WHITE. Attains a large size, and is extensively grown for feeding; largely cultivated in France for the manufacture of sugar. 40c. per lb.; in lots of 10 lbs., 35c. per lb.

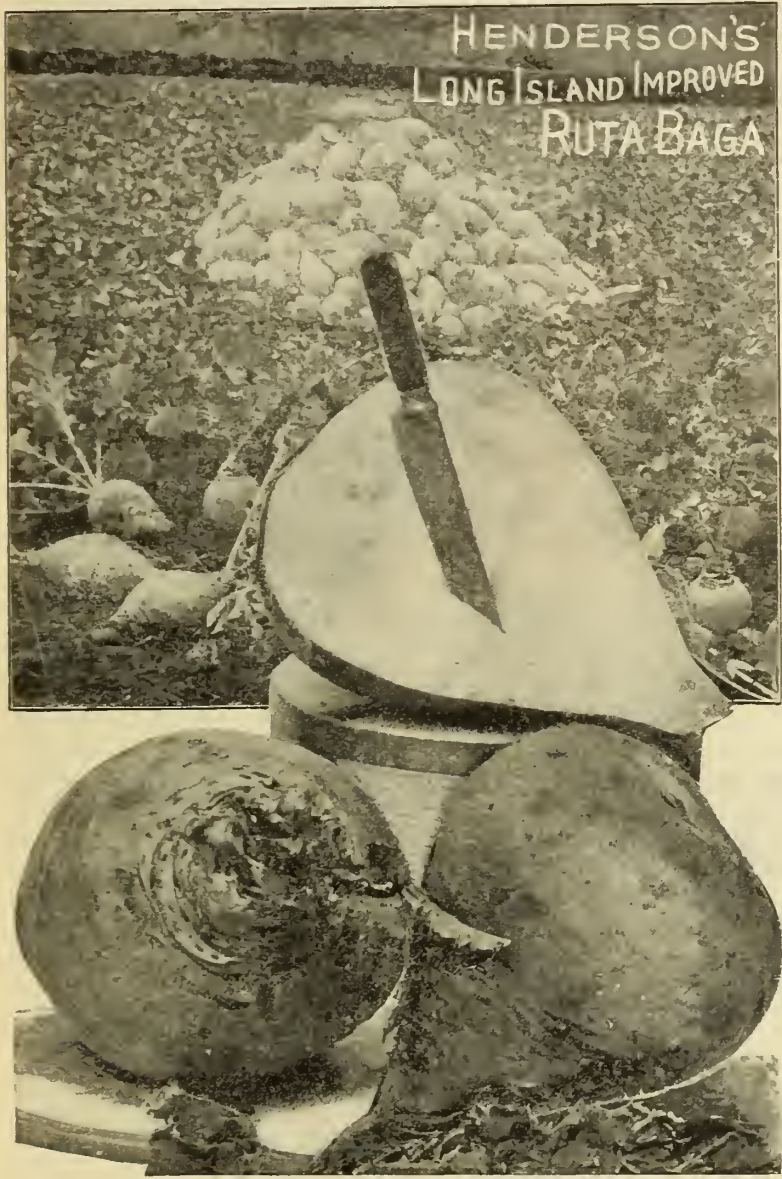
SATISFIED CUSTOMERS

"We wish to inform you that the seeds ordered from you last season gave very good satisfaction. Mangel Wurzel and Sugar Beets were as heavy as fifteen pounds apiece."

CAPUCHIN FATHERS, Detroit, Mich.

RUTA BAGA RUSSIAN OR SWEDISH TURNIP

MAKES GRAND WINTER FEED FOR ALL KINDS OF LIVE STOCK



HENDERSON'S
LONG ISLAND IMPROVED
RUTA BAGA

These grow very rapidly, and yield from twenty-five to thirty-five tons per acre, in good, rich, deep soil, with proper cultivation. The Ruta Bagas proper should be sown in this latitude from May 25th to June 25th; while the smaller-growing Turnips can be sown from July 1st to the middle of August. Sow 2 to 3 lbs. per acre.

LONG ISLAND IMPROVED PURPLE-TOP This is undoubtedly the finest variety of purple-top Ruta Baga, and originated with one of our Long Island growers. It is twice the size of ordinary American stocks, and although size is usually got at the expense of quality, the quality is superior to any that we have tested. It is perfectly hardy. In a fair test on several Long Island farms, alongside some of the best European and American varieties, it produced almost twice the weight per acre of any other variety. As a winter food for live stock the Ruta Baga has a wide range of adaptation, and is found at its best where the weather is moist and cool. (See cut.) 20c. per 1/4 lb.; 65c. per lb.

IMPROVED AMERICAN (PURPLE-TOP). An old leading variety; very hardy and productive; flesh yellow, solid, sweet and fine-flavored; equally good for stock or table use. 20c. per 1/4 lb.; 55c. per lb.

LAING'S IMPROVED. One of the earliest of the Ruta Bagas; keeps well; good for stock or table use. 20c. per 1/4 lb.; 65c. per lb.

LARGE WHITE FRENCH. Flesh firm, white and solid; attains a large size, and has a very rich and sweet flavor; a very popular variety. 20c. per 1/4 lb.; 65c. per lb.

DRY SEASON; BUT RAISED RUTA BAGAS WEIGHING 12 LBS.

"You will have received by express today two Ruta Baga Turnips weighing over 12 lbs. each, which I raised by ordinary field culture on my farm, during the past dry season. They are from seed of your Long Island Improved variety and the quality is the very best for table use as well as for farm stock."
A. C. WORTH, Greenwich St., New York.

TURNIP

SPECIALLY ADAPTED FOR STOCK FEEDING

WHITE FLESHED

PURPLE-TOP WHITE GLOBE. One of the best varieties grown; thick globe-shape, of large size, rapid growth, fine quality and a heavy cropper. It keeps well, and is unequalled for stock-feeding. 25c. per 1/4 lb.; 70c. per lb.

LONG WHITE OR COW HORN. Matures very quickly; root shaped like a Carrot, about half of which is formed above ground; flesh white, fine-grained and sweet, and of excellent quality. 25c. per 1/4 lb.; 70c. per lb.

YELLOW FLESHED

WOOD'S GREEN TOP YELLOW (New). The best variety for winter use; the flesh is extremely hard, solid and brittle and is highly esteemed by cattle; the shape which is free from neck enables it to be trimmed without waste. 30c. per 1/4 lb.; 90c. per lb.

YELLOW GLOBE. One of the best varieties for general crop; flesh very firm and sweet, and keeps well until late in the spring; grows to a large size, and is excellent both for stock or table use. 20c. per 1/4 lb.; 60c. per lb.

YELLOW ABERDEEN. Very hardy and productive, good keeper; globe-shaped; pale yellow, with purple top. Very firm in texture, closely resembling the Ruta Bagas in keeping qualities; good for stock. 20c. per 1/4 lb.; 65c. per lb.

FIELD CARROT

LONG ORANGE IMPROVED.—Of large size, fair specimens averaging 12 inches in length, with a diameter of 3 inches at the top. Color, orange-red. Fed to milch cows it imparts to the butter a delicious flavor and rich golden color. 25c. per oz.; 80c. per 1/4 lb.; \$2.65 per lb.

DANVERS.—A handsome cylindrical-shaped Carrot of good size and stump-rooted. Under the best cultivation it has yielded from 25 to 30 tons per acre. 25c. per oz.; 85c. per 1/4 lb.; \$2.90 per lb.

WHITE VOSGES.—The heaviest-cropping field Carrot, producing thick, shapely Carrots, which are easily harvested. They are used for stock feeding. They grow clean and free from side roots. 15c. per oz.; 50c. per 1/4 lb.; \$1.50 per lb.

LARGE WHITE BELGIAN.—Exclusively grown for stock. 15c. per oz.; 50c. per 1/4 lb.; \$1.50 per lb.

LARGE YELLOW BELGIAN.—Similar to above except in color. 15c. per oz.; 50c. per 1/4 lb.; \$1.50 per lb.

IF DESIRED BY MAIL ADD 8 CENTS PER POUND

.....HENDERSON'S.....

BOVEE POTATO.

A Universally Popular Extra Early.
A RELIABLE AND HEAVY CROPPER.

QUALITY FINE. WHITE, DRY AND MEALY.

HENDERSON'S Bovee Potato is not only extra early, but in all competitive trials has outyielded all the early Potatoes, and in many tests conducted by Experiment Stations and private growers it has outyielded even the late varieties. The vine is dwarf and stocky, enabling it to be planted six inches closer than nearly all other varieties, which results in a much larger return per acre, and is a feature of the utmost value where land is valuable. The tubers grow bunched together in the hill close up to the vine. They grow to a marketable size more evenly than any Potato we have ever seen; none too large or too small; practically the whole crop being merchantable and the quality is perfect. We have only one warning—it is apt to prove disappointing on poor soil or with poor cultivation, as it sets so freely the tubers are apt to be small. But on good Potato ground, well fertilized and cultivated, no other early Potato surpasses it. (See cut.) PRICE, \$1.00 pk., \$3.25 bush., \$6.50 bbl. of 165 lbs. net weight; by express or freight, at purchaser's expense.

What Customers Say of Henderson's Bovee Potato:

"Father Stanley says the Bovee potatoes beat all he ever raised and he has raised a good many for he has farmed all his life."
MRS. H. C. STANLEY, Pickrelton, Ohio.

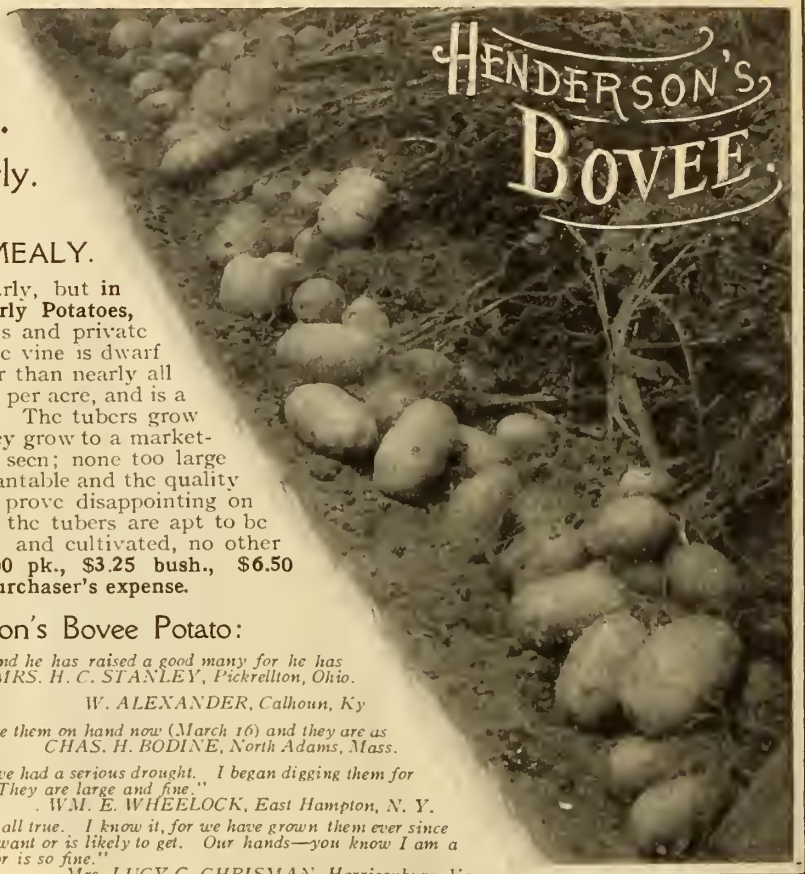
"Your Bovee potatoes are the finest in the world!"

W. ALEXANDER, Calhoun, Ky.

"In regard to the Bovee Potato, it is one of the very best. We have them on hand now (March 16) and they are as firm as when first dug. They cook quick and look as white as snow."
CHAS. H. BODINE, North Adams, Mass.

"The Bovee Potato has been a great success with me, although we have had a serious drought. I began digging them for table use the first week in July and we have used them ever since. They are large and fine."
WM. E. WHELOCK, East Hampton, N. Y.

"Your statements regarding the Bovee Potato in your catalogue are all true. I know it, for we have grown them ever since you introduced them. They are as good a potato as one need ever want or is likely to get. Our hands—you know I am a farmer's wife—beg for Bovees, preferring them to all others. the flavor is so fine."
Mrs. LUCY G. CHRISMAN, Harrisonburg, Va.



Irish Cobbler POTATO.

A COMPARATIVELY new and very fine early variety extensively grown for market in some localities. The tubers are very handsome, almost round, averaging uniform in shape and size. Flesh white and of excellent quality, skin cream and buff with whitish netting. This is a very reliable variety and heavy cropper. (See cut.) Price, 90c. pk., \$3.00 bush., \$6.00 bbl. of 165 lbs. net weight. By express or freight at purchaser's expense.

HENDERSON'S EARLY PURITAN POTATO.

A DISTINCT and valuable early variety. Exceedingly productive. The tubers average large, are of roundish oval form with a smooth white skin. The flesh is pure white and of extra fine quality, cooking dry and floury. The plant grows strong and healthy, is not subject to blight nor rust, and the potatoes are splendid keepers. Price, 90c. pk., \$3.00 bush., \$6.00 bbl., of 165 lbs. net weight. By express or freight at purchaser's expense.

"I am well pleased with your Early Puritan potatoes; they have yielded a splendid crop while other potatoes in this neighborhood were a failure from the drought. Mr. Van Duzer took the other part of the barrel and his also did well."
Dr. B. M. BISHOP, Elberton, Ga.

SEED POTATOES

Superior Northern-Grown, Especially for Seed.

(1 peck will plant about 125 hills; 10 to 12 bushels per acre, in drills 3 feet apart.)

Purchaser pays freight or express charges and assumes risk from freezing or heating. The barrel is 165 lbs. net weight. Prices subject to change without notice.

EARLY VARIETIES

Bovee, Henderson's. (See special description, page 40.) \$1.00 peck, \$3.25 bushel, \$6.50 barrel.

Early Russet, Henderson's. Crop failed. Being an extra early variety it suffered from the extreme drought during its growing season.

Beauty of Hebron. A popular early sort and one of the best; red and white skin and pure white flesh; quality excellent; productive and a good keeper. 80c. peck, \$2.75 bushel, \$5.50 barrel.

Clark's No. 1. Earlier than Early Rose and very productive; cooks mealy. 80c. peck, \$2.75 bush., \$5.50 bbl.

Early Ohio. Very early, almost round; flesh solid; cooks dry and mealy. 90c. peck, \$3.00 bushel, \$6.00 barrel.

Early Norther. A splendid, extra early; earlier than Early Rose, which it resembles, and exceedingly prolific; eyes few and shallow; unexcelled cooking qualities, dry and floury. 80c. peck, \$2.75 bushel, \$5.50 barrel.



Early Puritan, Henderson's. A distinct and valuable early variety; both skin and flesh white; quality superb, dry and floury. (See special description, page 40.) 90c. peck, \$3.00 bushel, \$6.00 barrel.

Early Rose. The popular standard early; noted for earliness, productiveness and fine quality. 80c. peck, \$2.75 bushel, \$5.50 barrel.

Irish Cobbler. A fine early variety extensively grown for market. Tubers almost round, uniform in shape and size. Skin, cream with buff netting, flesh white and fine; heavy cropper. (See special description, page 40.) 90c. peck, \$3.00 bushel, \$6.00 barrel.

Queen. A grand, early Potato, resembling Beauty of Hebron in color, shape and size, but is much earlier, and a heavy cropper. 80c. peck, \$2.75 bushel, \$5.50 barrel.

MAIN CROP VARIETIES

Carman No. 3. Enormously prolific, averaging nearly a pound apiece; very uniform in shape, white skinned, few and shallow eyes; flesh snow-white and of exceptionally fine cooking qualities. 80c. peck, \$2.75 bushel, \$5.50 barrel.

Improved Green Mountain. A heavy cropping mid-season variety of fine quality; free from blight and rot; good keeper; skin smooth and white; shape, roundish-flat; eyes few and shallow. 80c. peck, \$2.75 bushel, \$5.50 barrel.

Late Puritan, Henderson's. A handsome, large, white-skinned Potato, and one of the best lates grown, heavy yielder, good keeper; cooking qualities superior. 90c. peck, \$3.00 bushel, \$6.00 barrel.

Sir Walter Raleigh, Henderson's. A grand, main crop Potato; shape very uniform, large and oval; flesh fine grained, snow-white, cooking dry and floury; splendid keeper. (See cut.) 90c. peck, \$3.00 bushel, \$6.00 barrel.

Uncle Sam, Henderson's. One of the hand-somest Potatoes grown; luxuriant, healthy grower, outyielding all other varieties; shape and size wonderfully uniform; a superior keeper, quality extra. (See cut.) 90c. peck, \$3.00 bushel, \$6.00 barrel.

WE WILL BE PLEASED TO MAKE SPECIAL PRICES TO LARGE BUYERS.



True Dwarf Essex Rape

Indispensable for Sheep and Hogs

Sow in the North from April to end of August, in the South
During September and October

Provides Perfect Pasture and is
Greatly Relished by All Stock

In the United States we have millions of acres of good land that annually lie idle or run to weeds the latter part of the season, after the grain, potato and hay crops have been harvested, a large portion of which might be made to produce one of the finest feeds imaginable, and in the greatest abundance, at a time when cattle, sheep and hogs are roaming through bare pastures in search of a scanty living. Under favorable conditions it is ready for pasturing sheep or cattle within six weeks from time of sowing, and on an average one acre will carry twelve to fifteen sheep six weeks to two months. When on the Rape they should at all times have access to salt; but water is not necessary. There are several varieties of Rape, but care should be taken to procure the DWARF ESSEX, or English, as it is sometimes called, which does not need the same season as sown, unless in some exceptional cases, as when sown too early and the young plant is touched by frost. In Northern states it should be sown from April to end of August for fall pasturing, but as it thrives best in cool weather, it should not be sown in the Southern states until September or October for winter pasture. In the latitude of New York it should be sown in April, or in July or August. Its fattening properties are probably twice as good as those of Clover, and for sheep the feeding value of Rape excels all other plants we know of. At the Michigan Experiment Station 128 lambs were pastured for eight weeks on 15 acres of Rape sown in July, and showed a gain of 2,890 lbs., or at the rate of 3 lbs. per lamb each week. Even so far south as Alabama it has proved a boon to the farmer. In a recent bulletin published by the Alabama Experiment Station they state: "Quality of product good for both hogs and cattle. The growth was enormous. By repeated sowings it will and did carry more hogs through our dry, hot summers than four times the amount of land planted in anything else ever grown here. I would recommend it to all southern farmers."



To secure the best results, the Rape should be sown in drills. Sow 4 lbs. per acre broadcast, 2 to 3 lbs. per acre in drills. (See cut.)

Price, 10c. per lb.; \$3.75 per bushel of 50 lbs.; 100 lbs., \$7.00. If by mail, add 8c. per lb.

Henderson's Superior Cotton Seed

ESPECIALLY RIPENED, Harvested
and Selected FOR SEED PURPOSES

UPLAND VARIETIES

ALLEN'S SILK LONG STAPLE. A long staple variety of great merit, and headed the list until the introduction of Cook's famous new variety. 14c. per lb.; 100 lbs., 10c. per lb.; 1,000 lbs., 8c. per lb.

BOHEMIAN. This is a big boll storm-proof variety with a very fine staple. The bolls are easily gathered on account of their immense size. 14c. per lb.; 100 lbs., 10c. per lb.; 1,000 lbs., 8c. per lb.

COOK'S SILK LONG STAPLE. A selection of Upland Cotton, surpassing all others for fineness and length of staple. The Cook Cotton has invariably brought double the market price, and we would here call particular attention to the fact that the higher the grade of long staple Cotton, the greater is the premium it will bring over and above the ordinary run. 14c. per lb.; 100 lbs., 10c. per lb.; 1,000 lbs., 8c. per lb.

DOUGHTY'S LONG STAPLE. An excellent long stapled variety, the staple often attaining a length of one and three-quarter inches. 14c. per lb.; 100 lbs., 10c. per lb.; 1,000 lbs., 8c. per lb.

EXCELSIOR PROLIFIC. An immensely prolific variety, large bolls, small seed with a superior lint and staple. Withstands drought better than any other variety. 14c. per lb.; 100 lbs., 10c. per lb.; 1,000 lbs., 8c. per lb.

GRIFFIN'S IMPROVED. A long and fine staple, the latter often one and a half to two inches long. For an Upland long staple

it is extremely early, and can be planted from 10 to 15 days earlier than most varieties. 12c. per lb.; 100 lbs., 8c. per lb.; 1,000 lbs., 7c. per lb.

HAWKIN'S PROLIFIC. Yields a large crop of good quality and is well adapted for growing on hilly lands. 12c. per lb.; 100 lbs., 8c. per lb.; 1,000 lbs., 7c. per lb.

KING'S IMPROVED. A strong-growing variety which yields wonderful crops. Being of a rugged and strong constitution, it is of the easiest culture and should be included in all experimental collections. 12c. per lb.; 100 lbs., 8c. per lb.; 1,000 lbs., 7c. per lb.

PETERKIN IMPROVED. A favorite variety, fruiting continually throughout the season. 12c. per lb.; 100 lbs., 8c. per lb.; 1,000 lbs., 7c. per lb.

RUSSELL'S BIG BOLL. A most reliable variety, medium early and very heavy. A fine type of big boll, highly recommended for the excellent quality of its lint. 12c. per lb.; 100 lbs., 8c. per lb.; 1,000 lbs., 7c. per lb.

SHINE'S EARLY PROLIFIC. One of the earliest Cottons, and can be grown farther north than any other. Its great merit, however, is its extreme earliness. 15c. per lb.; 100 lbs., 12c. per lb.; 1,000 lbs., 10c. per lb.

TRUITT'S BIG BOLL. This is a distinct variety, with big seeds and big bolls, making gathering easy. 12c. per lb.; 100 lbs., 8c. per lb.; 1,000 lbs., 7c. per lb.

SEA ISLAND COTTON

The Sea Island is quite distinct from all the Upland varieties. When the conditions are right it produces the finest quality of Cotton known. It reaches its greatest perfection when grown on the small islands on the Atlantic Coast, from Florida to Virginia, though it can be successfully grown on the low-lying seacoast of

the mainland. Grown further inland, it rapidly deteriorates in quality and yield, and soon becomes unprofitable.

Sea Island Cotton: Price, extra selected, 10c. per lb.; 100 lbs., 6c. per lb.; 1,000 lbs., 5c. per lb.

We can also supply and on application quote cheaper grades of the above or any other variety

Miscellaneous Agricultural Seeds

If by mail in quantities of half pound and upward, postage must be added at the rate of 8 cents per pound

ARTICHOKES, JERUSALEM. Strong tubers. A hardy perennial, forming roots like a Potato, making excellent feed for stock, especially for hogs. 25c. quart, \$1.25 peck, \$4.00 bushel.

AUSTRALIAN SALT BUSH. (*Atriplex semibaccatum*). A valuable forage plant recently introduced and highly recommended for growing on alkali soils and in sections subject to protracted droughts. Experiments have proven that it will grow on soils where nothing else will grow. It is nutritious and readily eaten by all kinds of live stock. One pound of seed is sufficient for an acre. The best plan is to sow the seed in well-prepared garden soil and the seedlings when two or three inches high, planted six or eight feet apart. 15c. oz., \$1.25 lb., 10-lb. lots, \$1.15 lb.

BURLINGAME MEDIUM BEAN. A little smaller in the grain than the ordinary medium Beans, but is whiter and far handsomer in appearance. \$1.25 peck, \$4.50 bushel.

IMPROVED RED KIDNEY BEAN. Much more prolific than the ordinary Red Kidney. \$1.25 peck, \$4.50 bushel.

WHITE MARROW or NAVY BEAN. The variety so extensively grown for sale in the dry state. \$1.25 peck, \$4.50 bushel.

BOSTON SMALL PEA BEAN. A desirable variety to grow, being early, hardy and prolific. \$1.25 peck, \$4.50 bushel.

VELVET BEAN (*Mucuna utilis*). Fully described on page 36.

BEGGAR WEED (*Desmodium tomentosum*). A leguminous annual plant growing, according to soils and conditions, 3 to 7 feet high. It is highly esteemed where known in our Southern states as a forage and soil renovating crop, particularly on light, sandy land. Where sown early it yields two crops of hay in a season, and often in land too poor to grow almost any other crop it has produced 3 to 5 tons of cured hay per acre. As a forage and pasture crop, the feed is relished by stock, and it is highly nutritious, comparing favorably with that of Red Clover and Cow Peas. If cut when about 2 feet high, the plants again stool out from the bottom, thus producing successive crops. It is an excellent crop to turn under as green manure. Sow broadcast 10 to 12 lbs. per acre. Price on application.

FIELD LUPINS. May be sown from April to July, and succeed well on the poorest soil; are particularly valuable for plowing under on poor, sandy soils. 18c. lb., \$14.00 per 100 lbs.

SUNFLOWER, MAMMOTH RUSSIAN. Highly valued as an excellent and cheap food for fowl. It is the best Egg-Producing Food known. It can be raised cheaper than Corn. Four quarts of seed will plant one acre. 10c. lb., \$7.00 per 100 lbs.

FLAX SEED. Price variable.

SPRING VETCHES, or TARES. (*Vicia sativa*). A species of the Pea, grown for stock, and often mixed with Oats for soiling. Sown broadcast at the rate of two to three bushels per acre. 12c. lb., \$3.50 bush. of 60 lbs., 10-bush. lots, \$3.40 bush.



SAINFOIN

SAINFOIN (*Onobrychis sativa*). An excellent fodder plant, particularly for light, dry, sandy, gravelly, limestone or chalky soils. 15c. lb., \$12.00 per 100 lbs

SAND OR WINTER VETCH (*Vicia villosa*). See page 37.



TOBACCO

SEEDS OF HIGH GRADE TOBACCO

ONE OUNCE WILL SOW 50 SQUARE YARDS

Tobacco is an annual in the United States although perennial in the tropics. Botanically it is related to the Tomato and Egg-plant, and therefore sensitive to frost. Still it is successfully cultivated as far north as Canada, as it requires but a short season to grow to maturity. The quality of the product depends almost entirely upon the nature of the soil and climate, and highly congenial soils may exist in any section. The suitability of soils in Connecticut, now a great centre of Tobacco production, was only discovered by experimentation.

Below we offer some of the new and improved varieties as well as standard sorts.

NORTH CAROLINA BRIGHT YELLOW Having stood the test of six years' trial, this variety is now recognized as the best of the bright Tobaccos. The leaves are of good size, good shape and cure easily. 10c. pkt., 50c. oz., \$1.25 1/4 lb.

GOLD FINDER. Is the result of crossing Yellow Oronoko on White Burley, and combines the best qualities of both. Considered by many planters to be the most beautiful yet produced. Succeeds both East and West. 10c. pkt., 50c. oz., \$1.25 1/4 lb.

STERLING. One of the earliest to ripen, makes the silkiest of wrappers, and the toughest and sweetest of fillers. 10c. pkt., 50c. oz., \$1.25 1/4 lb.

GRANVILLE COUNTY YELLOW. A favorite with many planters, selling from thirty to fifty dollars per hundred pounds. It is among the earliest to ripen and mature. 10c. pkt., 50c. oz., \$1.25 1/4 lb.

HESTER. Has no superior as a yellow type and makes fine cigar stock. Its greatest recommendation is that it will adapt itself to a wider range of soil and climate than any other yellow variety. 10c. pkt., 50c. oz., \$1.25 1/4 lb.

CHOICE HAVANA. A very superior Americanized Havana variety. The best of cigar stock. 10c. pkt., 60c. oz., \$2.00 1/4 lb.

IMPROVED CONNECTICUT SEED LEAF. A new Connecticut Havana sort of good width and length. The leaves not being so close together as on the old variety, it ripens more uniformly. Excellent for cigars. 10c. pkt., 60c. oz., \$2.00 1/4 lb.

EVANS or CINNAMON SCENTED. This is a Canadian Tobacco very much used in that country. Makes fine pipe Tobacco, as it has a fine cinnamon flavor. 10c. pkt., 50c. oz., \$1.25 1/4 lb.

WILD RICE (*Zizania aquatica*). As an attraction for wild fowl it cannot be equalled, and as seed is not successful we recommend plants, which should be set out in spring in shallow water having a mud bottom. Seeding plants mailed in May @ \$1.00 per doz.; \$7.00 per 100.

"Tobacco Leaf"—Tobacco Culture made plain — by Killibrew and Myrick. Postpaid, \$2.00.



HENDERSON'S SPECIAL FERTILIZERS.

Better than Animal Manures.

We herewith offer thoroughly reliable, and properly balanced chemical fertilizers, compounded for the best growth of various crops. Having made a careful study for many years of plant fertilization we have had exceptional opportunities for determining the proper materials for producing the greatest yield as well as early maturity. Only the choicest, most soluble and easily assimilated ingredients are employed, and while quickly taken up by the plant will not waste in the soil. Our fertilizers contain no weed seeds, have no disagreeable odor, are fine, dry and easily applied.

It is well understood among intelligent farmers, that commercial fertilizers have become a necessity and that it is not possible to produce maximum crops without their assistance even where good animal manures are used.

We are confident that no better commercial manures can be made than Henderson's Special Fertilizers.

No horn, leather, hair, marl or other insoluble materials enter into the composition of our fertilizers.

HENDERSON'S CORN FERTILIZER.

A perfectly balanced complete fertilizer containing a large percentage of phosphoric acid, the most essential element in the production of maximum corn crops. Nitrogen and potash are also supplied in sufficient quantities to form a perfect maize plant ration.

Price, per ton, \$37.00; 200 lbs., \$4.50; 100 lbs., \$3.00; 50 lbs., \$1.75; 25 lbs., \$1.00. **Guaranteed Analysis.** Nitrogen 2.47%; Available Phosphoric Acid 10.00%; Potash Actual 5.00%.

Quantity Required. Use 400 to 600 lbs. per acre. Half broadcast and balance in hills or drill mixing thoroughly with the soil before planting.

HENDERSON'S

CABBAGE AND CAULIFLOWER FERTILIZER.

Contains generous quantities ammonia and potash so necessary for the production of large solid heads. The ammonia being in the form of nitrate of soda, the potash as sulphate, make the highest grade manure it is possible to compound for the best growth of cabbage, cauliflower and other Brassica crops. The liberal use of this special manure will produce large, compact white and perfectly formed cauliflower and big, hard, crisp cabbage.

Price, \$42.00 per ton; 200 lbs., \$5.00; 100 lbs., \$3.00; 50 lbs., \$1.75; 25 lbs., \$1.00. **Guaranteed Analysis.**—Nitrogen 4.12%; Available Phosphoric Acid 7.00%; Potash 7.00%.

Quantity Required. For early cabbage and cauliflower use 1,400 to 1,600 lbs. per acre broadcast and 400 lbs. in hill, scattering well and mixing thoroughly with the soil. For late cabbage and cauliflower, 1,000 to 1,500 lbs. broadcast and 300 lbs. in hill, mixing thoroughly with the soil.

HENDERSON'S POTATO FERTILIZER.

The highest grade complete potato manure it is possible to compound. The potash, derived from sulphate potash, produces tubers rich in starch, and of the finest quality, and does not need the addition of animal manure or other fertilizing agents to grow maximum crops of clean, well formed, marketable tubers.

Price, \$42.00 per ton; 200 lbs., \$5.00; 100 lbs., \$3.00; 50 lbs., \$1.75; 25 lbs., \$1.00. **Guaranteed Analysis.** Nitrogen 3.75%; Available Phosphoric Acid 7.00%; Potash Actual 8.00%.

Quantity Required. Use 1,200 to 1,500 lbs. broadcast and 500 to 800 lbs. in hill or drill, mixing thoroughly with the soil before planting. It is essential in order to produce maximum crops that the ground be deeply and thoroughly stirred before planting and the fertilizer well harrowed in. Potatoes require a loose, friable soil to attain perfection.

HENDERSON'S UNIVERSAL SUPERPHOSPHATE.

Good for all crops and unexcelled as a top dressing for grass lands and grain. An economical well balanced general fertilizer for all crops and soils.

Price, per ton, \$35.00; 200 lbs., \$4.25; 100 lbs., \$2.50; 50 lbs., \$1.50; 25 lbs., \$1.00. **Guaranteed Analysis.** Nitrogen 2.47%; Available Phosphoric Acid 8.00%; Potash Actual 4.00%.

Quantity Required. Use 300 to 1,000 lbs. per acre according to crop and fertility of soil. For top dressing grain or grass apply 300 to 400 lbs. per acre as soon as the frost leaves the ground. For oats, barley, wheat and rye apply 700 to 900 lbs. per acre using 500 to 700 lbs. broadcast and 200 lbs. in drill. For fodder corn use 700 lbs. per acre, 500 lbs. broadcast and 200 lbs. in drill. For mangels and turnips use 800 to 1,200 lbs. per acre using 500 to 800 lbs. broadcast and balance in drill.

BONE FERTILIZERS.

Decompose slowly in the soil, and therefore form excellent permanent improvement, less likely than any other fertilizer to waste. With bone there is no danger of burning the plants. Excellent for top-dressing lawns and grass lands, for garden and field crops.

Quantity Required. For permanent pasture and mowing lands, $\frac{1}{2}$ to 1 ton per acre. For trees and vines, 2 to 4 quarts each. For top-dressings, 1,000 to 1,500 lbs. per acre. For field and garden crops, $\frac{1}{2}$ to 1 ton broadcast and harrowed in. For rose beds, pot plants, etc., one part to about fifty of soil.

RAW BONE MEAL. This is ground very fine, decomposes more rapidly in the soil than the coarser grades, and is therefore more quickly beneficial.

Price, 1 lb. package, 10c. (or by mail, 25c. lb.); 5 lb. package, 30c.; 10 lb. package, 50c.; 25 lb. bag, \$1.00; 50 lb. bag, \$1.75; 100 lb. bag, \$3.00; 200 lb. bag, \$5.00; per ton of 2,000 lbs., \$42.00.

RAW GROUND BONE. This is moderately fine and particularly adapted for general fertilizing; the finer particles are immediately assimilated, the coarse keeping up the supply of plant food for a long period.

Price per 100 lb. bag, \$3.00; 200 lb. bag, \$5.00; per ton of 2,000 lbs., \$45.00.

RAW CRUSHED BONE. Invaluable in the preparation of land for the laying down of new lawns, grass lands, etc., being slow but permanent in action, indispensable in the preparation of grapevine borders—for fruit trees, small fruits, etc.—where a lasting fertilizer is required.

Price per 100 lb. bag, \$3.25; 200 lb. bag, \$5.50; per ton of 2,000 lbs., \$47.00.

CLAY'S FERTILIZER.

A celebrated English Fertilizer for both garden and greenhouse use. Highly concentrated, therefore economical notwithstanding its apparently high price.

Price per bag of 14 lbs., \$1.25; 28 lbs., \$2.25; 56 lbs., \$4.00; 112 lbs., \$7.00.

BLOOD AND BONE.

Is of exceptional value for garden crops, root crops corn, grain, grasses, fruit trees, small fruits, grape vines, and, in fact, all kinds of vegetation.

Guaranteed Analysis. Nitrogen 2.47%; Available Phosphoric Acid 8.00%; Potash Actual 2.50%.

Quantity Required. When broadcast and harrowed in use from $\frac{1}{2}$ to 1 ton per acre. For garden crops drill in 300 to 500 lbs. per acre.

Price per 100 lb. bag, \$2.50; 200 lb. bag, \$4.50; per ton of 2,000 lbs., \$38.00.

PURE PULVERIZED SHEEP MANURE.

A pure, natural and nutritious manure. Immediate and lasting in effect. Excellent for mixing with the soil for greenhouse plants. In the vegetable garden it promotes a rapid, steady growth until maturity. It makes a rich Liquid Manure.

Quantity Required. For garden and field crops, 1 to 2 tons per acre— $\frac{1}{2}$ before plowing, the balance before harrowing. For top-dressing grass, use 1 ton per acre, applied in fall or early spring.

Price, 50 lb. bag, \$1.25; 100 lb. bag, \$2.00; per ton of 2,000 lbs., \$30.00; in packages of 2 lbs., 15c.; 10 lbs., 50c.; by mail, 15c. lb. extra.

ASHES—Canada Hard Wood.

Drives away insects and improves the texture of the soil; indispensable for all crops requiring potash; very beneficial for garden and field crops, grass lands and lawns. **Guaranteed Analysis.**—Total Potash 3 to 5%; Total Phosphoric Acid 1 to 3%. Apply 1 to 2 tons per acre, as one heavy application is better than the same quantity put on in fraction.

Price per bbl. of about 200 lbs., \$2.75; per ton of 2,000 lbs., in bbls., \$25.00. Special prices in bulk.

NITRATE OF SODA.

Valuable solely for the nitrogen it contains. It is chiefly a stimulant, used in addition to other fertilizers. It is quick in action and hastens crops to maturity, being extremely soluble it is easily applied after the plants are above ground at the rate of 100 to 500 lbs. per acre.

Price per 5 lb. package, 35c.; 10 lb. package, 60c.; 25 lb. bag, \$1.25; 50 lb. bag, \$2.25; 100 lb. bag, \$4.00 per ton, \$62.00.

LAND PLASTER OR GYPSUM.

Valuable for soils requiring lime and sulphate; often good on grass-lands and sour soils. Price, \$2.00 per bbl. of 250 lbs., \$16.00 per ton.

FERTILIZING CONSTITUENTS.

KAINIT OR GERMAN POTASH SALT. 12 $\frac{1}{2}$ % actual potash and 33% common salt. Used chiefly for its potash value. The combination of these two ingredients renders it useful, when intelligently applied, for destroying insects in the soil. Price, \$1.60 per 100 lbs., 200 lbs., \$2.35; per ton of 2,000 lbs., \$19.00.

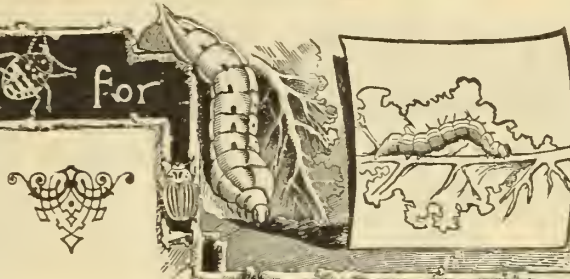
ACID PHOSPHATE OR DISSOLVED S. C. ROCK. 14% available phosphoric acid. 100 lbs., \$1.50; 200 lbs., \$2.75; per ton, \$20.00.

ABOUT MAILING.

Powders and Soaps (those offered by the pound)—non-poisonous—can be sent by mail, if 15c. per lb. is added to the prices to pay postage. Fluids (those offered by the quart, etc.), and poisonous powders are not mailable.

REMEDIES

for



INSECTS & FUNGUS

ANT DESTROYER. A non-poisonous powder which sprinkled around their haunts, will destroy or drive away black ants from lawns, trees, plants, houses or other affected locality. Price, $\frac{1}{2}$ lb. can, 40c.; 1 lb. can, 75c.

APHINE. Apbine while a powerful insecticide, does not affect the most tender vegetables, fruits or ornamental plants. It is a combination of essential and ethereal oils combined with nicotine in a readily soluble form which can be easily diluted with water and applied as a spray, wash or dipping solution. It kills all insects. Green and black fly, thrips, red spider, slugs, ants, mealy bug, scale, etc. Price, 1 gill, 25c.; $\frac{1}{2}$ pint, 40c.; pint, 65c.; quart, \$1.00; gallon, \$2.50.

ARSENATE OF LEAD. A poison rapidly taking the place of Paris green. Its great advantages are that it adheres well to the foliage and spraying does not have to be repeated as it does not readily wash off by rain. It also remains well suspended in solution so that an even distribution can be obtained. It is white in color and shows just where it has been applied. Its principle advantage lies in the fact that it does not injure tender foliage. Price, 1 lb. tin, 20c.; 5 lb. tin, 90c.; 12 $\frac{1}{2}$ lb. pail, \$2.00; 25 lb. bucket, \$3.75; 50 lb. bucket, \$7.00; 100 lb. keg, \$12.00; 300 lb. bbl., \$30.00.

BEECHCREOT. A wood preserving tree paint prepared from beechwood creosote and other substances. It kills fungus and is shunned by borers and other insects. It prevents decay in the portions of trees injured by storm torn limbs and applied after pruning it prevents bleeding. One gallon applied with a brush covers about 300 square feet. Price, 40c. per quart, \$1.25 per gal.

BORDEAUX MIXTURE. (Standard Formula, 1 gallon makes 50 gallons of spray.) Ready for use by simply adding water. An indispensable Fungicide, curing and preventing black rot, mildew, blight, rust, scab and all fungoid diseases on fruits and plants. Price, 1 pint, 25c.; 1 quart, 35c.; 1 gallon, 85c.; 5 gallons, \$4.00.

BUG DEATH. Is a non-poisonous, insect-killing powder, that is in high favor, especially among many Southern market gardeners, who use it extensively for cabbage and tomato worms, potato and cucumber bugs, etc. It is applied with a duster, bellows or powder-gun, at the rate of about 12 lbs. per acre. Price, 15c. lb.; 3 lbs., 35c.; 5 lbs., 50c.; 12 $\frac{1}{2}$ lbs., \$1.00; 100 lbs., \$7.50.

BUG DEATH SHAKER for applying above, 25c.

CLUBICIDE. An insecticide, germicide and disinfecting fluid particularly valuable in addition to its other uses—as a soil sterilizer. It destroys all soil insects, ants, worms, slugs, maggots and fungus diseases and in consequence plants attain maximum root development and produce larger and better crops. It is a certain preventative of club root, maggots and root lice that infest carrots, onions, cabbage, asters, etc. Water the plants thoroughly with it once a week in proportion of 1 gallon of Clubicide to 1000 gallons of water gradually increasing the strength to one gallon of Clubicide to 500 gallons of water as the plants approach maturity. Price, 1 qt. 60c.; gal., \$2.00; 5 gal., \$8.00.

COPPER SOLUTION, AMMONIATED. A Fungicide the same as Bordeaux Mixture, the essential ingredient, "Carbonate of Copper," being dissolved in ammonia in this, while in Bordeaux it is counteracted by lime. Bordeaux is the cheaper and most popular for all ordinary purposes, but for late sprays, when fruits are nearing maturity, or plants in bloom, Copper Solution is usually used, as there is no limy sediment left to be washed off by rain or band before marketing. One quart is sufficient for 25 gallons of spray. Price, 1 quart, 50c.; 1 gallon, \$1.50.

CUT WORM FOOD. A sweetened poisoned compound alluring and palatable to cut worms, cabbage worms, etc., in consequence when sprinkled around such newly set plants as are usually "cut off" by these depredators, they feast on cut worm food and are destroyed. One pound is sufficient for about 100 plants. Price, 1 lb., 25c.; 5 lb., \$1.00; 10 lb., \$1.50; 25 lb., \$3.50; 50 lb., \$5.00; 100 lb., \$9.00.

FIR TREE OIL SOAP. A popular Insecticide; it frees plants of nearly all insects to which they are subject, and for the following it has no superior: Mealy bug, scale, red spider, aphid, thrip, blight, worms and slugs. An ounce makes 1 gallon. Price, $\frac{1}{2}$ lb., tin, 25c.; 2 lbs., 75c.; 5 lbs., \$1.75; 10 lbs., \$3.25.

FISH OIL SOAP. (Whale Oil Soap). Makes an excellent wash for trees and plants where insects and eggs affect the bark, and for smearing on the trunks of trees to prevent worms from crawling up. Price, 15c. per lb.; 2 lbs., 30c.; 5 lbs., 60c.; 25 lbs., and over at 10c. per lb.

FORMALDEHYDE is a comparatively non-poisonous microbicide and antiseptic, of a gaseous nature absorbed by water, and may be readily diluted in any proportion. It is of pronounced efficiency in destroying disease germs affecting both animal and plant life, and is successfully employed as a preventive of such fungoid diseases as potato scab, onion and grain smuts, musty corn and other affected seeds, damping off of seedlings, club root of roses, etc., for the restraining of decay in vegetables, fruits, etc., and as an antiseptic wash and spray for bark diseases, canker and wounds in trees, and as a disinfectant for stables, kennels, poultry houses, etc. The dilution for most purposes is 1 lb. (1 pint) Formaldehyde to 15 or 20 gallons of water and 1 to 2 gallons of this dilution is required for treatment of every bushel of seed. Price of Formaldehyde (40 volume %), 1 lb. bottle, 40c.; 5 lb. bottle, at 35c. lb.; 10 lb. bottle, at 30c. lb.; 50 lb. demijohn, at 25c. lb. 132 lb. carboy, at 23c. lb.

FUMIGATING TOBACCO POWDER. Extra strong Havana Tobacco Dust for fumigating. Price, 25 lb. bag, \$1.25; 50 lb. bag, \$2.00; \$3.50 per 100 lb. bag; \$40.00 per ton of 2000 lbs.

HELEBORE, Powdered White. For the destruction of slugs, worms, caterpillars, etc. Less poisonous than Paris Green and London Purple, and safer to use when fruits or vegetables are nearly ripe. Can be used as a powder or dissolved, 1 oz. in 3 gallons of water. Price, 25c. per lb.; 5 lbs., \$1.10; 10 lbs., \$2.00.

HENDERSON'S X. L. POWDER for DOGS and POULTRY. Non-poisonous insect powder for insects on dogs, cats, chickens, etc. Price, 1 lb. box, 25c.; \$2.50 per doz.; postage extra, 15c. each.

IMPORTED SCOTCH SOFT COAL SOOT. This prevents insect ravages and also acts as a stimulating fertilizer. Used in onion drills, radish beds cabbage grounds, etc., it checks the attacks of grubs cut-worms, etc. When scattered lightly, as a top-dressing around plants, it drives away insects that hide in the ground by day and lay their eggs near the roots. Price, only in 100 lb. bags, \$4.00.

KEROSENE EMULSION. Prepared according to the most improved formula; ready for use by simply adding water (25 to 50 parts water to one of Emulsion.) For cabbage worm, scale on trees, caterpillars, melon louse, rose bugs, green fly and lice of all kinds, all sucking insects, either on plants or animals. Price, 1 pint, 20c.; 1 quart, 30c.; 1 gallon, 85c.; 5 gallons, \$3.50.

LEMON OIL. An efficient insecticide for destroying all insects and soft scales. It is applied as a spray or wash and has an agreeable odor. $\frac{1}{2}$ pint, 25c.; 1 pint, 40c.; quart, 75c.; $\frac{1}{2}$ gal., \$1.25; 1 gal., \$2.00.

LIME, SULPHUR SOLUTION. A liquid compound of the ingredients mentioned, now extensively used for all scale insects on trees and shrubs and it is also of benefit for fungous diseases of the bark, etc., as can be treated in winter. It must be diluted and applied with a spray pump while the trees are dormant, after the leaves have fallen in fall and before the buds swell in spring. It can be used quite strong—say 1 gallon to 20 gallons of water—during December, January and February, but earlier or later than these months it will be safer to dilute it 1 gallon to 40 of water. Price, quart can, 30c.; gallon, 85c.; 5 gallons, \$4.00; barrel of 50 gallons at 65c. gallon.

NICOTIEN. An extract of tobacco, containing about 40 per cent. nicotine. A most effectual economical and safe remedy for fumigating greenhouses. Use a scant tablespoonful to 1 $\frac{1}{2}$ pints of water for each pan, which is sufficient when vaporized, by placing a hot iron, in it for 600 square feet of floor space. Price, pint bottle, \$1.50.

NICOTICIDE. An extract of tobacco used in fumigation. The required quantity is placed in a tin dish and evaporated by a spirit lamp, placed underneath. An effectual remedy for insects in the greenhouse, window garden or frames. Price, 4 oz. can, 70c.; $\frac{1}{2}$ pint, \$1.25; pint, \$2.50; gallon, \$18.00.

NICO-FUME. A tobacco paper strongly saturated with pure nicotine. It comes in strips, which, suspended and lighted, is one of the best, easiest simplest and least injurious methods of fumigating conservatories and greenhouses for the destruction of aphid and all insects that succumb to tobacco insecticides. One sheet is sufficient for two thousand cubic feet or more. Price, air tight cans of two dozen sheets, 75c. or by mail, 90c.; 1 gross sheets, \$3.50; 2 gross sheets, \$6.50.

PARIS GREEN. A poisonous, insoluble powder indispensable on the farm or garden for preventing the ravages of potato bugs, codling moth, worms, caterpillars, slugs and bugs. Applied as a powder it should be mixed with plaster or flour, 100 parts to 1 part of Paris Green, in solution mix 1 lb. in 200 to 300 gallons water. Price, $\frac{1}{2}$ lb. package, 20c.; 1 lb. package, 35c.; 5 lb. package, \$1.75; 28 lb. bucket, \$8.00; 100 lb. keg, \$28.00.

PERSIAN POWDER OR BUHACH. Henderson's Superior Grade. (Cheap adulterated grades are worthless.) A most effective, non-poisonous, impalpable powder, so fine that it penetrates the innermost crevices. For worms, flies, aphid and almost all kinds of insects it is very effectual, suffocating them by filling up the breathing pores. Price, 30c. $\frac{1}{2}$ lb.; 1 lb., 50c.; 5 lbs., \$2.25.

SCALECIDE. The latest and best spray for San Jose scale, cottony maple scale and Pear Psylla. It is not poisonous, being simply a mechanical preparation of petroleum oil that instantly mixes with cold water and is immediately ready to apply; 1 gallon of "Scalecide" to 20 gallons of water sprayed on your trees and bushes will kill every scale that it reaches without injury to tree or fruit but if applied in late fall, winter or early spring while the foliage is off. Safe and easy to apply. Price, 1 gallon can, \$1.00; 5 gallon can, \$3.25; 10 gallon can, \$6.00; 50 gallon barrel, \$25.00.

SLUG SHOT. A non-poisonous powder and a very popular insecticide; it requires no further mixing or preparation, easily applied and not injurious or dangerous to animals, the person applying it, or fruits and vegetables treated. Very effectual in destroying potato bugs, and beetles, green and black fly, slugs, worms, caterpillars, etc. Price, per keg of 125 lbs. net, \$7.00; per barrel of 250 lbs., net \$13.00; 10 lb. package, 60c.; 5 lb. package, 35c.; in tin canister, with perforated top for applying, 25c. each, by mail, 40c.

SULPHUR, FLOWERS OF. Price, 10c. per lb.; 10 lbs., 60c.; 25 lbs. and over, at 5c. per lb.

SULPHO-TOBACCO SOAP. A positive exterminator of all insect life on plants in the greenhouse. Price, 3 oz. box, 10c.; 8 oz. box, 20c.; 10 lb. box, \$3.00.

TOBACCO DUST, Fine. For green and black aphid, fleas, beetles, etc. Splendid fertilizer and preventive for insects in the ground and around roots. Price 10c. per lb.; 5 lbs., 30c.; 10 lbs., 50c.; 25 lb. bag, 75c.; 50 lb. bag, \$1.25; \$2.00 per 100 lb. bag.

TOBACCO STEMS. For fumigating greenhouses and conservatories for the destruction of green and black aphid and other insects. Price, 50 lb. bale, 85c.; 100 lbs., \$1.50; per ton, \$20.00.

TREE TANGLEFOOT. No crawling insect can pass a band of tree tanglefoot. Apply early in the spring—before the caterpillars commence to crawl—and again in the fall if troubled with the fall Canker worm. One pound for a six-foot band 4 inches wide, $\frac{1}{4}$ inch thick. Prices, 1 lb. can, 30c.; 3 lb. can, 85c. (If by mail postage on above will be 16c. per lb. extra.) The following cannot be mailed; 10 lb. can, \$2.65; 20 lb. can, \$4.80.

IMPLEMENTS for APPLYING

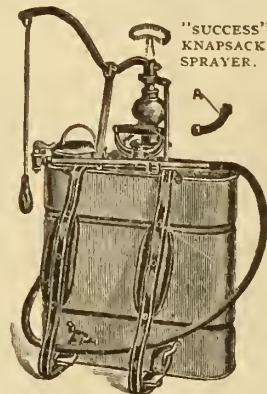


AUTO COMPRESSED AIR SPRAYER.

One of the best spraying contrivances on the market and the standard of all compressed air sprayers. Can be used in every variety of spraying. Suitable for all garden work, five acres of field crops, a limited number of trees any size, also will handle whitewash and disinfectants in the Poultry house. Capacity about 4 gallons. Easily carried either by handle or shoulder strap. The pump is of heavy brass, large diameter. Two or three pumpings will empty the tank under high pressure. There are no screw connections in the construction of this machine and there are no parts likely to require renewing except in the ordinary course of long service. Made with tank of either brass or galvanized iron, furnished with Auto-pop Nozzle No. 1.

NET PRICES.

- Auto-spray No. 1B, Brass tank with Auto-pop Nozzle No. 1. \$7.65
- Auto-spray No. 1D, Galvanized tank with Auto-pop Nozzle No. 1. \$5.40
- Two row attachment for spraying 2 rows at one passing. 1.35
- 2 ft. Brass Extension. .45
- Brass Elbow for spraying under vines. .30
- Torch. .90
- Brass Strainer for straining solution. .90



"SUCCESS" KNAPSACK SPRAYER.

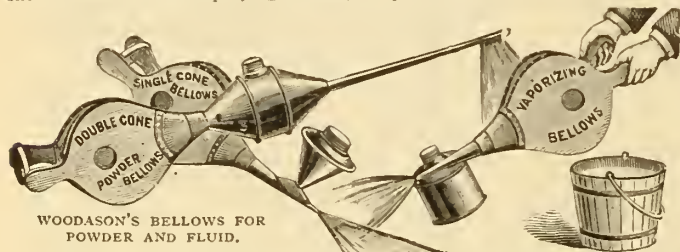
"SUCCESS" KNAPSACK SPRAYER.

A Knapsack Sprayer and Bucket Sprayer Combined.

For applying fungicides and insecticides in a mist-like spray, for the treatment of mildew, black rot on grapes, as well as for potato blight, etc. With it a man can spray five to six acres of vines in a day. The machines are made entirely of copper and brass, and the chemicals will not corrode or rust them. The air chamber keeps up a steady pressure, so a continuous discharge is given. This sprayer may be used either as a knapsack or bucket sprayer. They are provided with a mechanical agitator. Any leakage around the plunger is returned into the tank, and does not run down the operator's back. The attachment shown at A is for underspraying. Price, complete, as shown in cut, \$13.00



AUTO-SPRAYER



WOODASON'S BELLOWS FOR POWDER AND FLUID.

Woodason's Double Cone Powder Bellows.

For Dusting Plants with Dry Powders for Insects and Fungus. This double cone bellows can be held in any direction without wasting powder, as it regulates its own supply, and it does not clog up, dusting under the leaves as well as on top. The best article ever invented for destroying insects in the conservatory, garden orchard, or field. (See cut.) Price, \$3.00.

Woodason's Single Cone Powder Bellows.

Price, large size, \$2.00; small size (for conservatory and house use), \$1.25.

Woodason's Fluid Vaporizing Bellows.

For Spraying Plants with Fluid Decoctions for Insects and Fungus. This throws a spray as fine as mist, rendering the use of strong solutions perfectly safe on tender foliated plants; it forces the fluids into every crevice, without using half the quantity required by syringe or sprinkler. (See cut.) Price, large size, \$2.00. Small size (for house use), \$1.50.

The Asbestos Torch.

Attach the torch to the end of a pole of suitable length; saturate with kerosene oil, light and hold under the caterpillars nests and pass quickly along the branches and around the trunk of the tree where the insects lodge. The heat instantly destroys the insects and will in no way injure the tree. Price, 25c. each; or by mail, 30c.

Norton's Plant Duster.

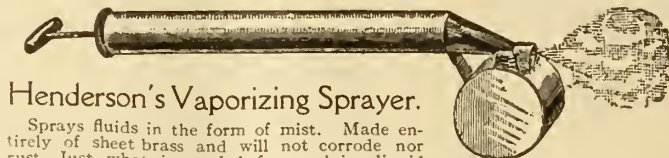
For dusting potatoes, vines, etc. An air-chamber prevents clogging. The dust guard prevents the powder from escaping beyond the plant being treated. Price, 85c. each.



NORTON'S PLANT DUSTER.



ASBESTOS TORCH



Henderson's Vaporizing Sprayer.

Sprays fluids in the form of mist. Made entirely of sheet brass and will not corrode nor rust. Just what is needed for applying liquid insecticides and fungicides. The tapering point to the air-chamber gives great force to the spray. Holds one quart. (See cut.) Price, \$1.00.



Compressed Air Atomizer.

The most perfect small hand compressed air sprayer made. Delivers a continuous fog-like spray. Is fitted with straight and adjustable nozzles making a perfect under leaf sprayer. In fact, spray can be delivered at any angle or position desired. Made in solid brass highly polished; holds 1 quart. Price, \$2.00.

Champion Dry Powder Gun.

For applying any dry powder, such as Paris green, hellebore, insect powder, plaster, etc., on plants or trees, the powder being evenly distributed over a wide space and with the least possible waste, the work being more rapidly done than by any other known implement. It is 27 inches long, with extra tubes for dusting trees, and holds one quart of powder. By turning the crank a fan is rapidly revolved, which forces a current of air through the tubes, that carries with it a small portion of powder. The quantity may be increased or diminished, as desired. (See cut.) Price, complete, \$8.00.



LEGGETT'S CHAMPION DRY POWDER GUN.

Little Giant Powder Gun.

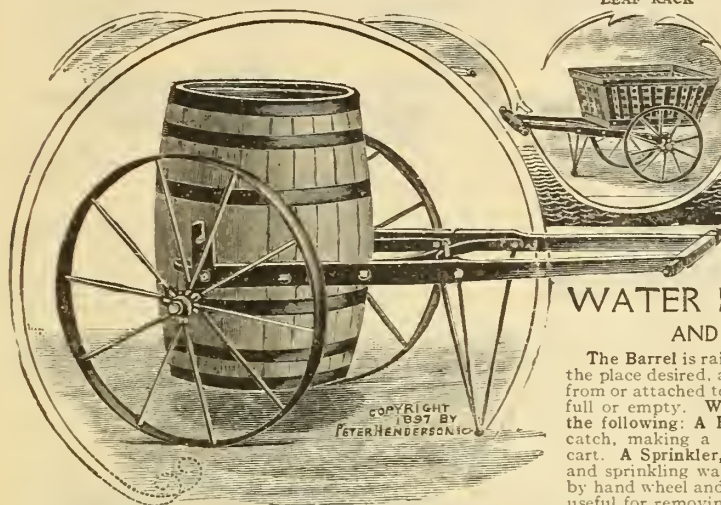
Is made on the same general principles as the "Champion" described above, to fill the want for a lower-priced machine, and is not supplied with so many nozzles, but for single row dusting and orchards it is all right. Price, \$6.00.

LEAF RACK

HAND-CART BOX

SPRINKLER

"GEM" FORCE PUMP



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HENDERSON'S WATER BARREL TRUCKS AND ACCESSORIES.

The Barrel is raised from the ground, carried to the place desired, and can be readily disconnected from or attached to the truck while barrel is either full or empty. We supply as extra attachments the following: A Box with trunnions and spring catch, making a very superior dumping Hand-cart. A Sprinkler, invaluable for watering lawns and sprinkling walks (water is turned on and off by hand wheel and ball valve); A Leaf Rack, very useful for removing leaves and litter; A "Gem" Force Pump for spraying, etc.



Prices of Water Barrel Trucks, Etc.

| | |
|---------------------------------|---------|
| Truck and barrel 1 1/2 in. tire | \$11.00 |
| " " " 2 1/2 " | 12.00 |
| " " " 3 1/2 " | 13.00 |
| Extra barrel, with trunnions on | 3.00 |
| Extra trunnions, per pair | 0.50 |
| Hand-cart Box Extra | 3.00 |
| Leaf Rack | 5.00 |
| Sprinkler attachment | 3.25 |

(If truck and trunnions without barrel are wanted, deduct \$2.50 from prices of trucks with barrel.)

GEM SPRAYING OUTFIT.

Clamps to the barrel; fills the want for a low-priced pump for spraying a few trees, bushes, vines, etc., and for watering flower-beds, washing windows, carriages, etc. Prices (without barrel or truck): Gem Outfit "A." Pump fitted with two feet of suction pipe and brass strainer, 5 1/2 feet, 1/2-inch hose and nozzle, \$6.00. Gem Outfit "B." Same as "A." excepting hose is 12 1/2 ft. long, fitted with connection for pole to spray, \$7.00.

The "Henderson" Hand Bucket Pump.

This is the best and most durable portable hand pump in the market. Working parts are made of solid brass with large air-chamber, and is double acting throwing an absolutely continuous stream, either solid or in a fine spray as desired. Very light and easily carried, and works from any bucket or tub. Just the thing for throwing liquid insecticides and fungicides on low trees, shrubs, plants, etc., and by altering the nozzle it can be used for washing carriages, windows, etc. (See cut.) Price, with 4 feet of hose and combination spray and stream nozzle, \$4.00; or with extra 7 feet section of hose and pole connection for tree spraying, \$5.00.



"ACME" SPRAYING OUTFIT.



"ACME" SPRAYING OUTFIT.

A convenient outfit for spraying garden crops, flowers, shrubs, vineyards, etc. The tank holds about 25 gallons, is firmly fastened to a cart narrow enough for most garden paths. The force-pump has brass cylinder, to prevent corrosion when fungicides are used. (See cut.) Price, complete, cart, pump, 4 ft. discharge hose and combination spray and stream nozzle, \$13.00. Iron extension pipe, 8 feet (for tree spraying) fitted to attach to nozzle and holes. \$1.50 extra.

HENDERSON'S "FRUITALL" SPRAYING OUTFIT.



HENDERSON'S "FRUITALL" SPRAYING OUTFIT.

A simple, high-grade, up-to-date pump embodying several important improvements. All working parts of brass. It can be mounted on or removed from barrel by two thumb-screws. Air-chamber of unusually large capacity. A long adjustable handle. It is low down and within the barrel offering no obstruction to limbs, and is not top-heavy. The pump is large, but easily operated by a single person. The agitator is mechanical in action. A most efficient and satisfactory spray pump. (See cut.)

"Henderson" Outfit "A." Pump with one lead 10 feet 1/2-inch discharge hose with "Vermorel" Spray Nozzle and Agitator, \$10.00; with barrel, \$13.00.

"POMONA" SPRAY PUMP.

We offer this as the best Orchard Spray Pump for mounting on barrel. It is of large capacity and powerful, with long adjustable leverage, so that it is easily operated by one person, when necessary, but is especially built for spraying from two leads of hose. The unusually large steel air chamber gives sufficient pressure for a continuous and regular spray. All working parts are of brass, including plunger and valves, which are easily accessible; it has a paddle agitator. It is adjustable for barrels of different sizes, and as the bulk of the Pump goes within the barrel, it is not top-heavy, and does not catch low branches. We furnish the Pomona for either end or side of barrel, but send for end if not otherwise ordered.

PRICES.

- Pomona Pump (with Agitator), \$15.00; or fitted to barrel, \$18.00.
- Pomona Outfit "A." Pump, agitator, 1 lead, discharge hose (15 feet) and spray nozzle, \$18.00; or fitted to barrel, \$21.00.
- Pomona Outfit "B." Pump, agitator, 2 leads, discharge hose (15 feet each) and 2 spray nozzles, \$20.00; or fitted to barrel, \$23.00.
- Brass shut-off for 1 lead, 75c. extra; for 2 leads, \$1.00 extra.
- Buyer has choice of nozzles, but we send "Vermorel," unless otherwise ordered.

EXTRAS FOR TALL TREE SPRAYING.

- Iron Extension Rods, 8 feet long, with shut-off cock at base fitted to attach hose at bottom and nozzle at top, \$1.50 each.
- Extra Spray Nozzles (see page 181).
- Brass Shut Off, 1 lead, \$1.00; 2 lead, \$1.35.
- Spray Hose, 1/2 inch, 10c. per foot. Couplings, extra, 25c. per set.

THE HENDERSON CHILLED PLOW.

A Grand Plow, Lightest Draft, Runs Steady, Correct Shape, Harder than Steel.



THE HENDERSON CHILLED PLOWS are honestly made of best materials, correctly shaped and balanced to do grand work. Easy on both team and plowman, and we are certain they are not surpassed by any other make. The mold is harder than steel, scours like glass in any soil and turns a beautiful furrow. All improvements, including inclining landside, adjustable beam and wheel. Shin piece removable for sharpening.

| No. | "Henderson" chilled Plows. | Price. | With wheel | and skid |
|-----|-----------------------------|--------|------------|----------|
| | Sizes. Furrow. | | | |
| A | Light, 1 horse... 4x9 in. | \$5.00 | .. | .. |
| B | Medium, 1 horse... 5x10 in. | 5.50 | \$6.50 | .. |
| 13 | Full, 1 horse... 5x11 in. | 7.50 | 8.00 | .. |
| 23 | Medium, 2 horse... 7x13 in. | 8.50 | 9.50 | 11.50 |
| E | Full, 2 horse... 8x14 in. | 9.00 | 10.00 | 12.00 |

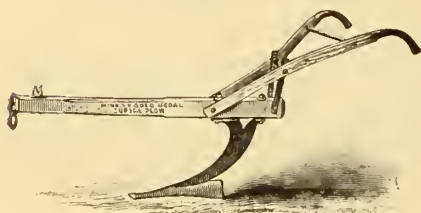
THE "HENDERSON" PERFECT STEEL PLOW.



Mouldboard, shinpiece and landside are of tempered steel; the beam is also of steel and will not bend nor break. The entire design is perfection in shape, turning the furrow clear over, and grass, weeds and manure entirely under; it scours like glass in all soils, and works beautifully in either loam without body, or muck.

Price of the "Henderson Perfect" Steel Plow, with a chilled carbonate share, regular two-horse size, cuts 5 to 8 inches deep by 10 to 15 inches wide, plain, \$13.00; with wheel, \$14.00; with wheel and jointer, \$15.00.

HENDERSON'S GOLD MEDAL SUB-SOIL PLOW.



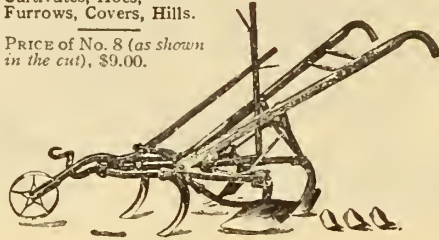
By following the plow with a sub-soil plow the earth can be broken to a depth of from 15 to 20 inches, giving roots a wider range for food, so plants are hardly affected by excessive drought or a wet season. The Gold Medal penetrates the sub-soil easily breaks the hard pan and pulverizes it without bringing any to the surface. The one-horse plow will reach to a depth equal to the height of its standard—15 to 16 inches—and the two-horse plow to the depth of 20 inches.

Prices for one-horse, with wheel and draft rod, \$6.50; for two-horse, with wheel and draft rod, \$8.50. Extra shares, one-horse, 50c.; two-horse, 80c.

"PLANET, JR." ALL-STEEL HORSE HOE & CULTIVATOR.

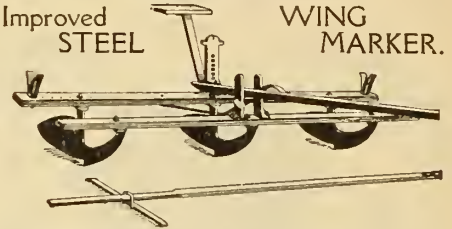
Cultivates, Hoes, Furrows, Covers, Hills.

PRICE OF No. 8 (as shown in the cut), \$9.00.



This grand implement is without a peer as a labor saver. It is no ordinary, heavy, clumsy, cultivator but made scientifically correct and entirely of steel. The patent frame is extra long and high, the hollow standards are remarkably strong and light. The teeth, hoes, etc., are of the finest quality of case-hardened, polished steel, and correctly shaped and curved. The cultivator, teeth can be set to any pitch; the hoe standards can be swivelled to any angle, or entirely around, to throw much or little soil either to or from the plants. The wheel which instantly regulates the depth and locks. The lever expander widens or narrows the implement to work in uneven rows. The handles can be quickly set to either side, and the height can be changed to suit the operator. Weight, 82 lbs. Price, Planet, Jr. No. 8 (as shown in cut), \$9.00.

Improved STEEL WING MARKER.



The long runners make a very true and even mark, which cannot be thrown out by stiff sod or stones, a difficulty with markers having short teeth. It can be adjusted to width and depth, as desired. The wings are steel bolted on and easily replaced when worn. The frame is oak. Price, for two horses, three runners, gauge, pole, and seat, \$10.00.

THE HENDERSON LEVER-SET ALL-STEEL HARROW.



A Spike-Tooth, Harrow with Lever Up. A Smoothing Harrow with Lever Down.

The teeth can be instantly set at any angle from a forward pitch to straight up and down or slanting backward, the lever-catch holding them securely in the desired position. Prices, No. B, 1 horse, 1 section, 30 teeth, 5 ft. cut, \$3.00. No. D, 2 horse, 2 sections, 60 teeth, 10 ft. cut, \$14.00.

CAHOON'S IMPROVED BROADCAST SEED SOWER.



Will sow all kinds of grass and grain seeds from 4 to 8 acres per hour at a common walking gait. Heavy seeds, such as wheat, it will throw 40 ft. (20 ft. each side of the operator); lighter seeds, of course, will not be thrown so far. Price, \$3.50.

SEND FOR IT.

MAILED FREE.

HENDERSON'S NEW TOOL

... AND ...

IMPLEMENT ...

...CATALOGUE

IT DESCRIBES AND SHOWS LARGE ILLUSTRATIONS OF THESE AND MANY OTHER

Implements, Tools and Requisites

... FOR THE ...

FARM, GARDEN, LAWN, GREENHOUSE, DAIRY, STABLE, POULTRY YARD, ETC.

THE "KEYSTONE" CORN PLANTER AND FERTILIZER DISTRIBUTOR.

The Best Corn Planter and Fertilizer Distributor in the World.



It cracks no grains and will plant from 10 to 12 acres of corn per day, dropping kernels in drills or in hills at any desired distance apart and sowing at the same time, if needed, any kind of commercial fertilizer; it is simple enough for the most ordinary laborer to use without getting it out of order. Each machine is furnished with four dropping rings and pinions to regulate the number of kernels and distance apart of planting. In addition, we furnish at 25 cents apiece extra, rings to plant peas, beans and other seeds. The phosphate attachment is perfect. Price, complete, with phosphate attachment, \$16.00.



THE HENDERSON DOUBLE HOPPER WHEELBARROW SEEDER.

Sows Grass Seed Mixtures as Well as Heavy Seeds or Light Chaffy Seeds.

One side of the Seed Box is adapted for all such heavy seeds as clover, timothy, millet, alfalfa, Hungarian, etc. The opposite side handles the light chaffy seeds, as Red Top, Kentucky blue, Orchard grass, etc., as well as grass seed mixtures for golf, pasture, hay lawns, etc. Length of hopper 14 ft. easily regulated to sow any desired quantity per acre. Price, \$10.00.

Henderson's Farmers' Manual

FOR 1912

PRICES IN THIS CATALOGUE ARE SUBJECT TO MARKET FLUCTUATIONS

| INDEX | and Table of Quantities Required per Acre | Page | Sow (if alone) per Acre | INDEX | and Table of Quantities Required per Acre | Page | Sow (if alone) per Acre |
|--|---|---------|-------------------------|---|---|---------|-------------------------|
| Agrostis canina—See R. I. Bent | | 8 | 3 bushels. | Kaffir Corn | | 33 | 8 to 10 lbs. |
| " stolonifera—See Creeping Bent | | 8 | 2 bushels. | Kentucky Blue Grass | | 12 | 3 bushels. |
| " vulgaris—See Red Top | | 9 | 3 bushels. | Lespedeza striata—See Japan Clover | | 15 | 14 lbs. |
| " —Fancy | | 9 | 1 bushel. | Lolium italicum—See Italian Rye Grass | | 11 | 3 bushels. |
| Alfalfa | | 16 & 17 | 30 to 40 lbs. | " perenne—See English Rye Grass | | 11 | 2 1/2 to 3 bushels. |
| Alopecurus pratensis—See Meadow Foxtail | | 8 | 3 to 4 bushels. | Lucerne—See Alfalfa | | 16 & 17 | 30 to 40 lbs. |
| Alsike, Hybrid or Swedish Clover | | 15 | 8 lbs. | Lupins | | 43 | 2 to 3 bushels. |
| Andropogon sorghum var.—See Kaffir Corn | | 33 | 8 to 10 lbs. | Mammoth or Pea Vine Clover | | 15 | 12 lbs. |
| Anthoxanthum odoratum. See Sweet Vernal, peren | | 9 | 3 1/2 bushels. | " Mangels | | 38 | 6 to 8 lbs. |
| Arrhenatherum avenaceum—See Tall Meadow Oat | | 8 | 4 to 5 bushels. | Meadow Fescue | | 11 | 2 1/2 bushels. |
| " Grass | | 8 | 8 to 10 bushels. | " Foxtail | | 8 | 3 to 4 bushels. |
| Artichokes | | 43 | 1 lb. | Medicago sativa—See Alfalfa | | 16 & 17 | 30 to 40 lbs. |
| Australian Salt Bush | | 43 | 4 to 5 bushels. | Melilotus alba—See Bokhara Clover | | 15 | 10 lbs. |
| Avena elatior—See Tall Meadow Oat Grass | | 8 | 20 to 25 lbs. | Millet, German and Hungarian | | 32 | 1 bushel. |
| Awless Brome Grass | | 8 & 13 | 1 1/2 to 2 bu. drilled. | " Japanese (in drills, 10 lbs. per acre) | | 31 | Broadcast, 15 lbs. |
| Barley (Sow broadcast, 2 to 2 1/2 bushels) | | 28 | 1 bushel drilled. | " Pearl, Egyptian, Cat-Tail or Horse Millet. | | 32 | Drills, 5 to 6 lbs. |
| Beans, Field | | 43 | 1 bushel. | Millo Maize—See Douras | | 33 | Broadcast, 8 lbs. |
| " Velvet | | 36 | 6 to 8 lbs. | Mucuna utilis | | 36 | 4 to 5 lbs. |
| Beet, Sugar | | 38 | 10 to 12 lbs. | Oats | | 19-21 | 3 bushels. |
| Beggar Weed | | 43 | 6 lbs. | Onobrychis sativa—See Sainfoin | | 43 | 3 to 4 bushels. |
| Bermuda Grass | | 13 | 10 lbs. | Orchard Grass | | 9 | 3 to 4 bushels. |
| Bokhara Clover | | 15 | 2 to 4 lbs. | Panicum crus-galli—See Japanese Millet | | 31 | 15 lbs. |
| Brassica Napus—See Rape | | 42 | 20 to 25 lbs. | Pea Vine Clover—See Mammoth Clover | | 15 | 12 lbs. |
| Bromus inermis—See Awless Brome Grass | | 13 | 8 to 10 lbs. | Peas, Cow | | 36 | 2 bushels. |
| Broom Corn | | 26 | 1 bushel. | " Field | | 35 | 3 bushels. |
| Buckwheat | | 27 | 3 bushels. | Pennisetum spicatum—See Pearl Millet | | 32 | 8 lbs. |
| Canada Blue Grass | | 12 | 4 lbs. | Perennial Red Clover—See Mammoth Clover | | 15 | 12 lbs. |
| Carrots | | 39 | 1 bushel. | Phleum pratense—See Timothy | | 12 | 1/2 to 1 bushel. |
| Chaetochloa italica—See Golden Millet | | 32 | 8 to 10 qts. | Poa compressa—See Canada Blue Grass | | 12 | 3 bushels. |
| Clovers | | 14-18 | 8 to 10 qts. | " nemoralis—See Wood Meadow Grass | | 11 | 2 bushels. |
| Corn, Dent | | 22-24 | Broadcast, 2 bu. | " pratensis—See Kentucky Blue | | 12 | 3 bushels. |
| " Flint | | 25 | Drilled, 1 bu. | " trivialis—See Rough Stalked Meadow Grass | | 9 | 1 1/2 bushels. |
| " Fodder | | 26 | 4 lbs. | Potatoes | | 40 & 41 | 12 to 14 bushels. |
| " Pop. | | 24 | 15 lbs. | Rape, English | | 42 | 2 to 4 lbs. |
| Cotton | | 42 | 12 lbs. | Reana luxurians—See Teosinte | | 33 | 6 to 8 lbs. |
| Cow Grass—See Mammoth Red Clover | | 15 | 2 bushels. | Red Clover (Common or June Clover) | | 14 | 12 lbs. |
| Creeping Bent or Fiorin | | 8 | 1 1/2 bushels. | Red or Creeping Fescue | | 10 | 2 1/2 bushels. |
| Crested Dog's Tail | | 12 | 15 lbs. | Red Top Fancy | | 9 | 1 bushel. |
| Crimson or Carnation Clover—See Scarlet Clover | | 18 | 6 lbs. | " (Herd's Grass of the South) | | 9 | 3 bushels. |
| Cynodon dactylon—See Bermuda Grass | | 13 | 1 1/2 bushels. | Rhode Island Bent | | 8 | 3 bushels. |
| Cynosurus cristatus—See Crested Dog's Tail | | 12 | 3 to 4 bushels. | Root Crops | | 38 & 39 | 1 1/2 bushels. |
| Dactylis glomerata—See Orchard Grass | | 9 | 10 to 12 lbs. | Rough Stalked Meadow Grass | | 9 | 2 to 3 lbs. |
| Desmodium tortuosum | | 43 | 4 to 5 lbs. | Ruta Baga | | 39 | 2 to 3 lbs. |
| Douras or Durra | | 33 | 2 1/2 bushels. | Rye | | 28 | 1 1/2 bushels. |
| English Blue Grass—See Meadow Fescue | | 11 | 2 1/2 to 3 bushels. | Sainfoin | | 43 | 3 to 4 bushels. |
| " or Perennial Rye Grass | | 11 | 2 1/2 bushels. | Scarlet Clover | | 18 | 15 lbs. |
| Fertilizers | | 44 | 2 1/2 bushels. | Sheep's Fescue | | 10 | 2 1/2 bushels. |
| Festuca duriuscula—See Hard Fescue | | 9 | 2 1/2 bushels. | Smooth Stalked Meadow Grass—See Kentucky Blue | | 12 | 3 bushels. |
| " elatior—See Tall Meadow Fescue | | 10 | 3 bushels. | Soja Bean or Soy Bean | | 34 | 3/4 bushel. |
| " heterophylla—See Various Leaved Fescue | | 10 | 2 1/2 bushels. | Sorghums | | 26 | 8 to 10 lbs. |
| " ovina—See Sheep's Fescue | | 10 | 3 bushels. | Sorghum Halapense—See Johnson Grass | | 13 | 1 bushel. |
| " tenuifolia—See Fine Leaved Sheep's | | 10 | 2 1/2 bushels. | Sugar Beet | | 38 | 6 to 8 lbs. |
| " Fescue | | 10 | 2 1/2 bushels. | Sugar Cane | | 26 | 8 to 10 lbs. |
| " pratensis—See Meadow Fescue | | 11 | 2 1/2 bushels. | Sunflower | | 43 | 4 qts. |
| " rubra—See Red Fescue | | 10 | 2 1/2 bushels. | Swedish Clover—See Alsike | | 15 | 8 lbs. |
| Fine Leaved Sheep's Fescue | | 10 | 3 bushels. | Sweet Clover—See Bokhara Clover | | 15 | 10 lbs. |
| Fiorin—See Creeping Bent | | 8 | 2 bushels. | Sweet Vernal—true perennial | | 9 | 3 1/2 bushels. |
| Flax Seed | | 43 | 1/2 to 3/4 bushel. | Tall Meadow Fescue | | 10 | 2 1/2 bushels. |
| Glycine hispida—See Soja Bean | | 34 | 1/4 bushel. | " Oat Grass | | 8 | 4 to 5 bushels. |
| Grasses, for the South | | 13 | 3 bushels. | Tares | | 43 | 2 bushels. |
| " Hay and Permanent Pasture | | 3 | 5 bushels. | Teosinte | | 33 | 6 to 8 lbs. |
| " Lawn | | 7 | 3 bushels. | Timothy or Herd's Grass of the North | | 12 | 1 1/2 to 1 bushel. |
| " Permanent Hay Mixtures | | 5 | 3 bushels. | Tobacco | | 43 | |
| " Permanent Pasture Mixtures | | 4 | 10 lbs. | Trifolium hybridum—See Alsike Clover | | 15 | 8 lbs. |
| " Renovating Mixture | | 6 | 1 bushel. | " incarnatum—See Scarlet Clover | | 18 | 15 lbs. |
| " various | | 8-13 | 3 bushels. | " pratense—See Red Clover | | 14 | 10 to 14 lbs. |
| " Woodland Pastures | | 6 | 2 1/2 bushels. | " perenne—See Mammoth Clover | | 15 | 12 lbs. |
| Hard Fescue | | 9 | 3 bushels. | " repens—See White Clover | | 15 | 2 to 3 lbs. |
| Herd's Grass (of the South)—See Red Top | | 9 | 1 1/2 to 1 bushel. | Turnips | | 39 | 2 to 3 lbs. |
| " (" North)—See Timothy | | 12 | 1 bushel. | " Ruta Baga, Russian or Swedish | | 39 | 8 lbs. |
| Hungarian Grass—See Hungarian Millet | | 32 | | Various Leaved Fescue | | 10 | 3 bushels. |
| Implements | | 46-48 | | Vetch, Sand, Winter or Hairy | | 37 | 1 bushel. |
| Insecticides | | 45 | | " Spring (Tares) | | 43 | 2 bushels. |
| Italian Rye Grass | | 11 | 3 bushels. | Vicia sativa | | 43 | 2 bushels. |
| Japan Clover | | 15 | 14 lbs. | Vicia villosa | | 37 | 1 bushel. |
| Jerusalem Corn | | 33 | 5 lbs. | Vigna catjang | | 36 | 2 bushels. |
| Johnson Grass | | 13 | 1 bushel. | Wheat | | 29 & 30 | 1 1/2 bushels. |
| June Clover—See Red Clover | | 14 | 12 to 14 lbs. | White or Dutch Clover | | 15 | 8 lbs. |
| " Grass—See Kentucky Blue | | 12 | 3 bushels. | Wild Rice | | 43 | |
| | | | | Wood Meadow Grass | | 11 | 2 bushels. |
| | | | | Zizania aquatica—See Wild Rice | | 43 | |



SECURE BOUNTIFUL CROPS

BY PLANTING

HENDERSON'S

TESTED

FARM SEEDS

Samples of all our stocks are planted in "Mother Earth" and the true germinative power exactly ascertained. None but seeds of the highest germination are sold by us, and then only after they have been thoroughly re-cleaned by the most up-to-date seed cleaning machinery in America, and all impurities and weed seeds removed.

What a Seed Expert says

Prof WILLIAM P BROOKS, of the Hatch Experiment Station, Amherst, Mass., writes us—

"AFTER CAREFUL EXAMINATION OF SAMPLES from various sources and comparison of purity, germination and price, I have decided on ordering of you the greater proportion of grass seed, etc., needed here."

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