

Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

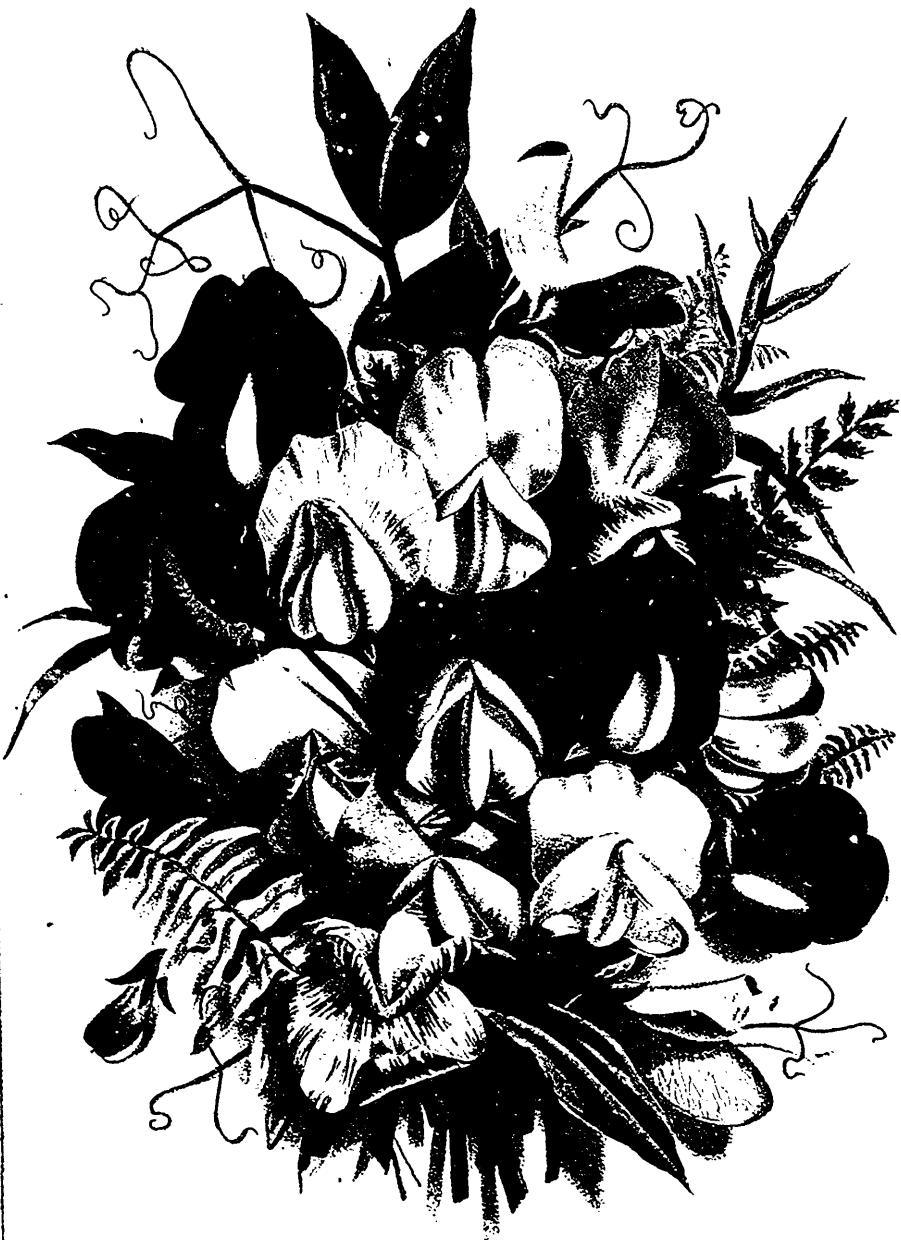
Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured covers /
Couverture de couleur
- Covers damaged /
Couverture endommagée
- Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée
- Cover title missing /
Le titre de couverture manque
- Coloured maps /
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur
- Bound with other material /
Relié avec d'autres documents
- Only edition available /
Seule édition disponible
- Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /
Qualité inégale de l'impression
- Includes supplementary materials /
Comprend du matériel supplémentaire
- Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées.

Additional comments /
Commentaires supplémentaires:

Continuous pagination.



SWEET PEAS

THE
Canadian Horticulturist.

VOL. V.]

OCTOBER, 1882.

[No. 10.

FLOWERING PEAS.

It is surprising that one does not oftener see these beautiful, sweet-scented climbers growing about the dwellings of our flower-loving people. They are much more beautiful than the scarlet runner which is so generally grown, and besides are deliciously sweet-scented, so that they are known as Sweet Peas. Our plate shows their beautifully-varied coloring, but can convey no idea to those unacquainted with the flowers of the delightful perfume they exhale.

They should be sown early in the spring, just as soon as the frost is out and the ground has become settled,

without any reference to the weather. It is desirable that the soil should be in good heart, and the seed be sown four or five inches deep, and about an inch apart. As soon as the plants are up they should be provided with supports upon which to climb, which they will do like any pea by means of their tendrils clasping the support.

In some of the larger cities of America the flowers have been in great demand of late for decorative purposes, especially where it is desired to fill the air with perfume, as well as to please the eye with variety and brilliancy of color.

FRUIT AT THE TORONTO EXHIBITION.

Notwithstanding this unfavourable season the display of fruit this autumn was very fine. The varieties of Apples that were exhibited consisted chiefly of the well-known and long-tried sorts. The Baldwin, Northern Spy, Golden Russet, Roxbury Russet, King of Tompkins, Talman Sweet, &c., were present in full force, being known now the world over as among our most desirable commercial Apples.

In Pears, the old favorites, such as Bartlett, Flemish Beauty, Clapp's Fa-

vorite, Seckel, and Sheldon, were well represented; and in some collections we noticed that new variety that challenges attention by its peculiar form and great size, the Souvenir du Congres.

The display of Plums was unusually good and varied. For some reason the crop of this fruit in the old Niagara District was much more abundant than it has been for several years before; while at Goderich, Guelph, Owen Sound, and in Northumberland and Prince Edward Counties, where Plums are

usually abundant, there is scarcely any.

There was also a goodly number of varieties of Peaches exhibited. This fruit has been receiving much more attention of late than has been heretofore given, and it is taking its place as one of our important commercial products. It is a fruit that deserves more attention from those who are interested in the production of new varieties than Canadians have given it; and if proper care were bestowed upon this labor, the range of profitable Peach-culture could be greatly extended.

The lateness of the advent of warm weather and the coolness of the summer have not been favorable to the display of ripe Grapes grown in the open air. The samples shown were many of them very fine in form and size of bunch, giving promise of luscious fruit if the frosts come not too soon. The Niagara Grape was shown, very handsome in appearance, but not quite ripe. A new white Grape of exquisite flavor was exhibited, fully ripe, called Jessica. This delicious Grape was pronounced by many to be the best out-door Grape that has yet been seen.

MOSS FOR PLANTS.—We have been remarkably successful in restoring sickly plants that have been pining away in pots by shaking them out and planting them in a shallow box, filled with common moss, kept constantly moist. Almost anything seems to grow luxuriantly in this, and our own experience encourages us to advise others to try it. A little soil mixed with the moss could not possibly do any harm. Seeds also germinate freely in it. Coleus and Geraniums root quicker in it with us than in sand. We wonder how we did so long without it.—*Farm and Garden.*

CORRESPONDENCE.

NEW SEEDLING GOOSEBERRIES.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

DEAR SIR,—In compliance with your request I sent you last week specimens of my new seedling gooseberries, which I hope reached you safely. The descriptions, habit of growth, &c., were on the bags containing each variety to enable you to compare them without delay.

The hybrid seedlings were raised some years ago, their origin was from a seed of an English gooseberry, fertilized evidently by the pollen from the wild prickly fruited gooseberry, which grew quite plentifully in a ravine near my garden.

It grew amongst seeds of the English planted to try and raise varieties free from mildew, and its growth was so very strong, reaching six feet high the second year from the seed, that I planted it out amongst my English gooseberries. When it fruited, instead of being prickly, it had strong hairs, almost spines, similar to specimens of No. 8 now sent you, and was evidently a hybrid between the two.

From its seeds sowed again were raised Nos. 1, 2, 7 and 8, specimens of which I send you. All have very strong upright growth, with the exception of No. 9 hybrid, the best of them all, but its blossoms were destroyed by frost, so that I could not send you specimens, there being only one berry left on two bushes. No. 1 hybrid is also different from the others. When its strong young shoots are topped at four to five feet high it sends out slender side shoots from the top which weep down to the ground, covered with fruit, making a very graceful pendulous tree. All the others send out erect side shoots when topped.

I am raising other seedlings from seeds of these, and think they will pro-

bably be better suited to this climate than any other variety as they never mildew.

The crosses between English and Houghton, of which I sent you two specimens, are Nos. 3 and 10. No. 3 is from a seed of the English crossed by the Houghton. It takes rather more after the former in its habit of growth, and in the texture and flavor of the fruit, but it has a strong strain of the native as it never mildews.

No. 10 is a cross between the Houghton and the English, raised from a seed of the former, and will prove, I think, the best market berry yet raised, owing to the solidity of its flesh, large size and good flavor. It never mildews.

I got some preserves (jam) made from it, as also from each of the others. Owing to its meatiness it makes the best I ever tasted, better than either of the others, though all are good.

The bushes are planted close together, about fifteen inches apart, in my garden, near my residence, so as to save them from the birds which destroy all in my nursery grounds, and have not been pruned, as I wanted all the wood for propagating. They are also partially under the shade of fruit trees, whose roots occupy the whole ground, so that their fruit is not so large as they would otherwise be under proper culture, as you will see from the specimens of Houghton grown close beside a bush of No. 10, which bore the largest fruit of any.

Downing and Smith's seedlings grown beside these for comparison did not bear a single fruit this year, their buds being destroyed by a severe frost when in full blossom, while the others being later in blooming, escaped.

Yours truly,

JAMES DOUGALL.

Windsor Nurseries, 14th Aug., 1832.

The specimens referred to in the foregoing letter were duly received.

No. 1.—Is a cross between the wild prickly gooseberry and the English, two removes from the wild. Bush grows with strong upright shoots five to six feet high. When topped at four feet it makes a handsome pendulous tree with slender branches weeping down to the ground. We found the fruit round, larger than Houghton, but smaller than Downing, color reddish-yellow, skin hairy, quality good.

No. 2.—A cross between wild prickly gooseberry and English, and also two removes from the wild. Is also a strong upright grower, with shoots four to five feet high, but the side branches are upright in growth. The berries are red and hairy, much like number one in size and quality.

No. 3.—Is a cross between the English and Houghton from seed of the English. The habit of growth is more like that of the native than of the English. The fruit is of a green color, round, about the size of Downing; of excellent quality. Mr. Dougall says that it never mildews. Plant very productive.

No. 7.—A cross between the wild prickly gooseberry and the English, being two removes from the wild. The plant is a strong upright grower, with shoots about four feet high, the side branches are upright in growth. It is a great and constant bearer. The fruit is round, hairy, of a reddish color, very much like number one.

No. 8.—Also a cross between the wild prickly and English, second remove from the wild. The plant shews more of the traits of the wild than any of the others. It is the strongest grower of them all; the shoots being fully six feet high and the side shoots upright. The berries are red, somewhat prickly,

also bearing close resemblance to number one.

No. 10.—This is another cross between the Houghton and English, but from seed of the Houghton. The style of growth is more like the English than like the Houghton. It is a great and constant bearer, and never has mildew. The berries are pale-green in color, roundish-oval in form, considerably larger than those of the Downing, more meaty than any of the others, of very good flavor, and apparently the most promising of all these seedlings.

We trust that Mr. Dougall will continue his experiments in this direction until he has obtained a race of gooseberries that never mildew, and which rival in size and excel in quality the English varieties. These seedlings are very interesting as illustrative of what may be expected by persistent effort in the raising of new sorts. There is a growing demand for larger gooseberries. Downing, the best we have that has been widely disseminated, is too small to meet the demands of buyers of fruit, and will be dropped as soon as larger fruit can be abundantly supplied.

THE BURNET GRAPE.

Grave fears were entertained by the growers of this magnificent grape respecting its inclination during the season of 1881 to produce a number of small seedless berries in the bunch, thereby marring its very fine appearance. It is the cause of much satisfaction to its growers and admirers that no trace of this blemish is visible this year. It is hoped that a report will be sent to the *Horticulturist* as to how the Burnet is prospering from various localities. In this section it is fruiting heavily and producing some of the finest bunches that have been witnessed on any vine, having set its fruit remarkably well, in spite of the cold weather at the time it

was in bloom. It is, of course, too early at this time of writing—22nd August—to say whether it will ripen thoroughly this backward season, but the promise is exceedingly fine. The vine is very vigorous, without the slightest sign of mildew. It is doubtful if any grape, with the exception of Arnold's Othello, Hartford or Concord, will give as heavy a crop as that shown by the Burnet, and everyone knows that has ripened it, that for flavor and quality of fruit, it is the Queen of outdoor Black Grapes.

P. E. BUCKE.

Ottawa.

MARKETING APPLES.

DEAR SIR,—I see nothing in my June number of the *Horticulturist* (July not received), concerning a matter I have often wished to see, viz., the best mode of handling, and best and surest way of marketing fruit, so as to realize the most for it.

We have great care and concern to get the very best of stock, with the object of supplying home demands, and balance to place on the market. Now, concerning the whole operation of picking, packing, and handling apples so as to realize the most, is a matter I wish to be informed upon.

Formerly, I have, with my neighbors, gathered and piled them in heaps at the foot of the trees, and then waited the time and pleasure of the man who gets his commission on the job, and has no concern whether our fruit lies there until the frost ruins it or not. I think this is a very poor way for us to make the best out of our crop, which should be next to wheat.

Don't you think our Association (for I am only a new member), could afford to employ a competent man to see to the packing, and then have some firm, say in Montreal, to see after the selling.

We have a number of bearing apple trees, about fifteen hundred, consisting of N. Spy, Baldwin, R. I. Greening, G. A. Russet, and Seek-no-Further, and I set out about one hundred Fallo-water a year ago last spring, besides other sorts, nearly all of which are fruiting.

By giving me full particulars concerning mode of operation, you will much oblige
Yours very truly,

D. E. HOPKINS.

REPLY.

BY L. WOOLVERTON.

A correspondent asks for some information concerning the best mode of handling and marketing apples.

1st. *Handling*.—There is probably no better way than the old method of placing apples in piles on the grass, or on bunches of straw, in the orchard. Our own practice has been to bring the apples into the packing house and empty them there in bins, the floor of which is first covered with straw. We find it a good mode, but it is not practicable without plenty of house room, and it is rather more expensive. In a rainy season, however, it is very advantageous, giving an opportunity for packing on days when the workmen cannot go on with the picking. Apples need to be handled with great care, and as few times as possible. Careless pickers must be dismissed, or taught to handle fruit properly. Thumb marks may prove the beginning of decay. The picking basket may be lined with cloth; it should be round, and have a swing handle, and also be provided with a wire hook, by which it may hang from the ladder.

2nd. *Packing*.—In packing, all wormy and defective fruit must be thrown out and sold as second-class. Fair specimens should be used to face the head end of the barrel, and the quality should correspond throughout.

The fruit should be closely packed, and the barrel should be filled to the height of about an inch above the chine, or even more if for a foreign market, and the tail end pressed into place by means of an iron lever press. The barrels must be carefully headlined, and the hoops safely nailed in place, or they may come to grief on the road to market. The name of both shipper and buyer, or consignee, should be plainly stamped on the head end of the barrel with a stencil; also the name of the contents.

3rd. *Marketing*.—I fear I can give no rule for this that will suit every case. In many instances, where lots are small, it is best to ship on consignment to a good reliable house, in such an apple mart as the city of Montreal. Some seasons, also, good success may be obtained by shipping large lots on consignment to some established Commission House in Liverpool or Glasgow. But in most instances it is best to accept a good offer, and sell one's crop for cash, rather than wait for the slower, and not always better, returns from a Commission merchant. But whether one sells outright, or ships his fruit on consignment, it is best to make connection with some well-established Commission House, with whom one can correspond to get quotations of prices current, and through whom one can make sales, without waiting the pleasure of travelling buyers, many of whom speculate out of the seller for the benefit of their own pockets; and some of whom are quite irresponsible.

ONTARIO APPLE.

Mr. J. W. Cumming, writing from St. Hilaire, Province of Quebec, says the Ontario apple tree was winter killed, and I cut it down to two feet of the ground, and five new shoots grew this summer. It seems too tender for this locality.

KIEFFER'S HYBRID PEAR.

Since staying here I have been to visit the orchards in New Jersey and Pennsylvania planted to Kieffer Pear, and can only say, they must be seen to be appreciated. No one can tell the story. The oldest, largest and most experienced pear growers that have been growing pears for Philadelphia market during all their lives, are the men who are going into it strongest, and grafting their orchards all over to it. One man will have 200 bushels of fruit this year. Now understand this is no wild notion, but after testing and selling the fruit several seasons in the market. It is said further to be just what the canning factories want, they claiming there is nothing equal to it.

Such wonderful productions I have never seen in a pear. It is surely a splendid thing, and I am glad that I have worked over 100 trees in my orchard to it.

S. D. WILLARD.

SORGHUM SUGAR.

COST OF ITS MANUFACTURE BY GOVERNMENT.

The Hon. Geo. B. Loring, Commissioner of Agriculture for the United States, reports as follows :

On assuming the duties of my office in 1881, I found 135 acres of sorghum containing 52 varieties which had been planted in Washington for the use of the Department. On being informed that the time had arrived for manufacturing syrup and sugar, I engaged the services of an expert in sugar-making who had been highly recommended for the position of superintendent, and operations were commenced on September 26 at the mill, erected by my predecessor, on the grounds. These operations were continued with slight interruptions until the latter part of October, at which time the supply of cane became exhausted. Forty-two acres of the crop were

overtaken by frost before being sufficiently ripe for use, and this portion of the crop was so badly damaged as to be unfit for manufacture. The yield of cane per acre, on the 93 acres gathered, was two and a half tons; the number of gallons of syrup obtained was 2,977; and the number of pounds of sugar was 165. The expense of raising the cane was \$6,589 45; and the expense of converting the cane into syrup and sugar was \$1,667 59—an aggregate of \$8,557 04.

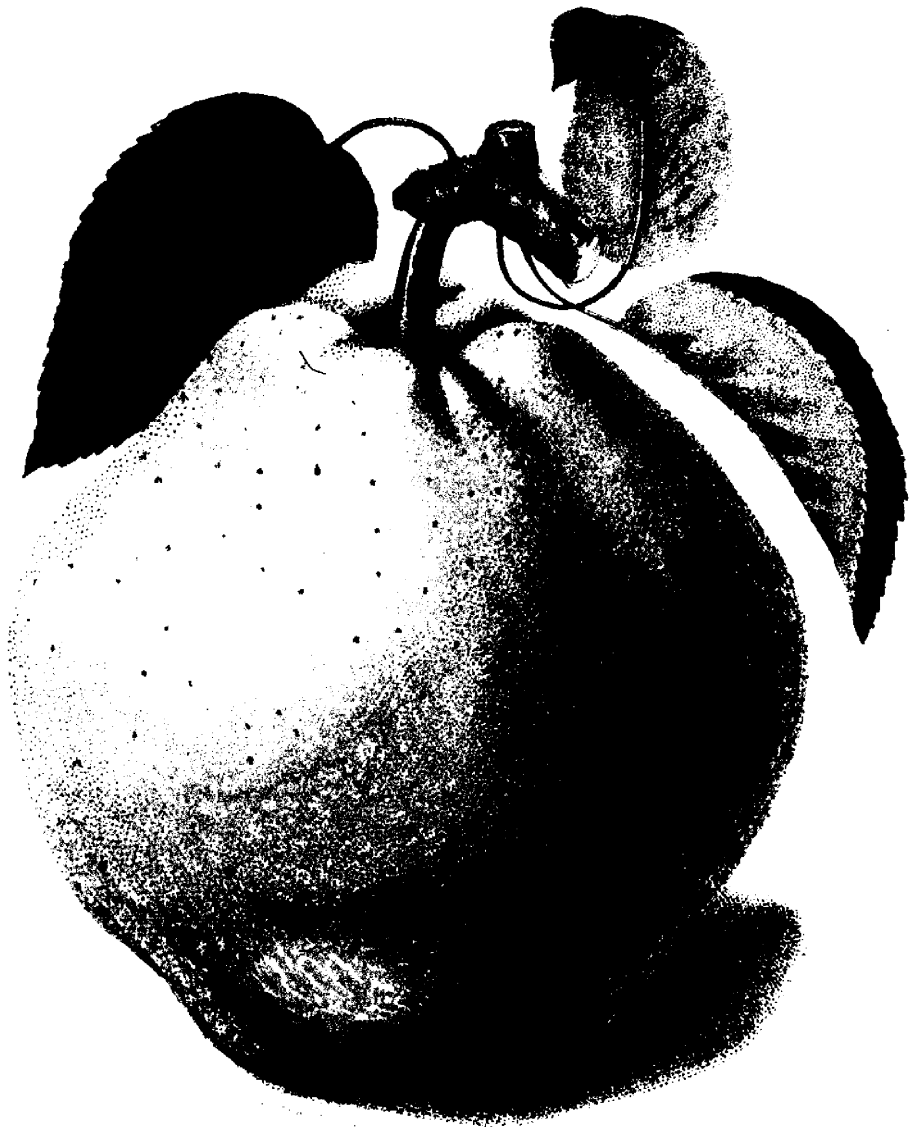
STRAWBERRIES.

The *Country Gentleman* addressed an inquiry to several fruit-growers, for the best market sort, the best three market sorts, and the best six for general use.

The following opinions are the result :—

S. D. Willard of Geneva, N. Y., says: The best market sort with me is the *New Dominion*; best three, as the matter stands to-day, *New Dominion*, *Cumberland* and *Sharpless*. The best six for home use, *Crescent*, *Bidwell*, *New Dominion*, *Cumberland*, *Sharpless* and *Prolific*. The *New Dominion* is a Canada berry, a fine producer, attractive in appearance, splendid foliage, fruit very uniform in size, ships well, and, above all, *sells well*."

Charles A. Green (editor of *Green's Fruit-Grower*) says: "The best market sort, as it appears to me and others about Rochester, is the *James Vick*, not yet disseminated. Next I think is *Manchester*. Best three for general purposes of those well known: *Sharpless*, *Downing*, *Cumberland*. Best three for quality, *Jersey Queen*, *Black Defiance*, *Lenig's White*. Best six well known, for all purposes: *Sharpless*, *Downing*, *Cumberland*, *Bidwell*, *Duchess*, *Wilson*. *Manchester* is vigorous, productive, medium to large, roundish, light crimson, good to very good, moderately firm.



KIEFFER HYBRID SEEDLING PEAR.

The Pear from which the above representation was produced, was grown on a three-year-old dwarf tree. The pear measured twelve inches around, and weighed eighteen ounces.

JOHN S. COLLINS.

I have not tested far enough to compare it with the older varieties but consider it very promising."

T. T. Lyon (president of Michigan Horticultural Society) writes: "For all soils and under all kinds of culture, good, bad and indifferent, including ability to bear transportation, I must say *Wilson* still: and omitting transportation, *Crescent*. Under good culture and intelligent management, *Bidwell*, or for near market, *Longfellow*. Best three sorts for market, with thorough culture: Miner's Prolific, Bidwell, Longfellow. Best six, with thorough culture: Miner's Prolific, Bidwell, Longfellow, Champion (or Oliver Goldsmith), Cumberland, Seneca Queen, (or Marion,) where it will bear the sun as it does with me). About an even thing between the Seneca Queen and Sharpless, the former more productive. From a single season's trial, I think *Arnold's Pride*, a new seedling of Charles Arnold of Ontario, likely to exceed all others except in firmness."

Wm. C. Barry (late president of American Nurserymen's Association), says. "I would name Sharpless as the best market berry. During the season it sold here at retail for 15 to 20 cents per quart, while other varieties were selling at 8 to 10 cents. Best three sorts in the order of ripening: Duchess, Cumberland, Sharpless. Best six for all purposes, in the order of ripening: Duchess, Bidwell, Cumberland, Wilson, Sharpless, Golden Defiance. Charles Downing merits a place among the six, and by some persons would be preferred to Cumberland. The best flavored sorts for the table are Duncan, Black Defiance, Seth Boyden, President Lincoln, Sharpless, and the Alpine varieties, Montreuil and Royal Hautbois. Manchester I have not tested yet. Jersey Queen is large and high flavored, and the plant is vigorous."

E. B. Underhill of Poughkeepsie makes the following remarks: "I regard the *Crescent* as the best strawberry for local market. No well-tried sort displaces the *Wilson* yet as the best *shipping* berry. While Sharpless, during its season (late only) is unrivalled for profit, as it is certainly the largest berry of value we have, *Crescent* or *Cumberland* will pick nearly as late and a week or more earlier, and as single varieties are invaluable and preferable to any I think of. It is very difficult to say which are the *three* best sorts; however, I will venture to say *Crescent*, *Miner*, and *Sharpless*,—not without a misgiving at leaving out *Mt Vernon*, *Champion* and *Cumberland*, and even our old friends, *Kentucky* and *Charles Downing*. As a promising variety, *Bidwell* stands high, but the trouble with my beds of that variety is that promise and performance are not equal. Its foliage is rather slender, except with highest culture; the berry is of medium size and value. At Mr. Roe's it appeared to lead the van. With me I cannot place it above *Soth Boyden*. For very early, *Crystal City* will pay here, and *Mt. Vernon* I picked for market when *Kentucky*, *Miner* and *Sharpless* were gone. In company with *Charles Downing* I looked over Mr. Roe's beds, and we were then all enthusiastic with *Bidwell*. Since then my beds have not accomplished half they seemed ready for."

G. H. & J. H. Hale of South Glendonbury, Ct., sent the following notes.

Another year's experience with the strawberry, testing one hundred or more sorts, and marketing hundreds of bushels from our own grounds, as well as visiting fruit-growers in fifteen States and the Canadas during fruiting season, have not materially changed our opinion of last year, except in regard to one or two of the newer varieties.

Manchester, for market, is by far the

best of all; the plant vigorous; very prolific; fruit medium to large, the last picking almost as large as the first; no irregular or coxcomb berries; bright scarlet colour; good but not high quality; shipping and keeping qualities only equalled by the Wilson and Finch's Prolific. Its only fault is that of having a pistillate or imperfect blossom, requiring it to be planted with or near some perfect flowering sort.

Crescent Seedling, the most profitable early market berry; its one great fault is that of the fruit running very small at the latter end of the season.

Wilson and *Charles Downing*, our most profitable sorts six years ago, are now of very little value, as they are more easily affected by the strawberry rust or leaf blight than any of our other varieties.

Miner's Prolific is very valuable either for market or home use; with us, it fully takes the place of the *Charles Downing*.

Sharpless produces only a moderate crop on one-year beds, while those two years old give an abundant crop of berries of the largest average size of any variety we have ever grown. Its first and largest berries are very irregular in shape, and have the fault of not ripening all over at once—therefore requiring to be picked with unusual care. Owing to its large size, it sells for the highest price in market, and is very profitable on strong, rich soil.

Windsor Chief is a most valuable late market variety, producing enormous crops of rich, dark-colored berries, very acid, yet of good flavor.

Mt. Vernon, very late and prolific; better in quality than the *Windsor* but not as firm.

Finch's Prolific, vigorous and productive, fruit medium to large, perfect in form, bright color, fair quality, and very firm. This and the *Manchester* we

think destined to take the place of the *Wilson* for shipping purposes.

Bidwell, which did so well with us last season, has greatly disappointed us this, not only on our own grounds but everywhere that we have seen it. The trouble is that it "sets" more fruit than the plant can carry out, and the result is almost a total failure—one or two fair pickings, and that is all; and we doubt if it will ever prove profitable for market, unless possibly on very strong, rich soil where irrigation can be practised; we say this with much regret as we have several acres planted for next year's fruiting, and had hoped for great things from the *Bidwell*.

We might mention many others, but the ones named are the best among more than one hundred sorts; and if we were to plant one variety for market it would be the *Manchester*, first, last, and every time. If three sorts, *Manchester*, *Windsor* and *Miner's Prolific*; if six sorts, *Manchester*, *Windsor*, *Miner's*, *Finch*, *Crescent* and *Mt. Vernon*.

Best one for family use, *Miner's Prolific*; best three, *Miner's*, *Manchester* and *Mt. Vernon*; best six, *Miner's*, *Manchester*, *Mt. Vernon*, *Crystal City*, *Sharpless* and *Cumberland Triumph*.

GRAPE LEAVES FOR PICKLES.

I wonder if housewives generally use fresh, green grape leaves to put on top of their pickles to keep them sharp and free from mold. I used to cover them with a flannel cloth, and rinse it out every other day. Two years ago a friend told me that grape leaves were much nicer, so I tried them, and I shall never try cloth again. Grape leaves keep pickles the best of anything I have ever found. I change them once a week, and the vinegar keeps sharp and clear, and it imparts a nice flavor to the pickles. I rinse the leaves in pure water, and let them drain quite

dry, then lay them over every place in the jar. They exclude the air perfectly, and are better, and cause less work than anything else.—*Country Gentleman*.

ASPARAGUS.

The most essential requisite for successful Asparagus culture is sufficient space, and yet not one bed in ten is planted with a view to supply this need. The old system of paving the bottom and crowding the roots into narrow beds, so that they could not extend in either direction, must have been borrowed from the Chinese, with whom the dwarfing and distorting of forest trees and women's feet has reached the highest perfection, and ranks among the fine arts. But, as even the Celestials are commencing to shake off old



ASPARAGUS CROWN.

superstitious notions, we shall, perhaps, also participate in the march of progress, and plant Asparagus according to the natural laws governing the plant.

The best and easiest way to raise Asparagus in the garden is to plant it two feet apart in a single row, and let the roots reach out, for their nourishment, as far as they may. If it is not feasible to lengthen the row sufficiently to produce all the Asparagus desired, a second row may be planted not nearer than four feet to the first, and when more space can be given a distance of six feet is preferable.—*American Garden*.

PROLONGING THE SEASON OF PEAS.

How to prolong the bearing season of Peas, as much as possible, has always been a problem, the solution of which is of great importance to every one who cultivates a garden, and the experience of Mr. H. J. Seymour, Madison Co., New-York, in this regard, deserves consideration.

Mr. Seymour writes: "While hoeing, last summer, my Little Gem Peas, growing on rich, mucky land, between strawberry rows four feet apart, I noticed that some of the plants had more than one bearing stalk. The question occurred to me why all could not have several stalks, and, of course, more pods, provided the land was rich enough and there was room enough between them for air and sunshine. Then came the thought of what I had heard and read about shortening-in-plants to make them more stocky and fruitful, and of the practicability of a similar treatment for peas. It was already late in the season, the first blossoms just showing themselves in most cases, yet the experiment was worth trying, and as I had an acre of these peas it could not amount to much if I did injure a few plants. So I counted off just six hundred plants on one row, stuck a stake firmly in the ground and pinched remorselessly an inch or more, blossoms and all, from the top of every one of these plants. Then I counted six hundred plants on the row next to this, and drove a stake, without disturbing the plants.

"I watched the decapitated vines with much interest, and sure enough new branches came out abundantly near the ground and from the axils of the leaves. They finally budded, blossomed, and fruited more abundantly than their neighbors, although about a week later. None of the peas were picked, the entire crop being saved for seed. They were threshed, winnowed, and carefully mea-

sured separately on the 22nd of August, with the following result: The six hundred headed-off plants yielded *five plump quarts*, while the six hundred unpruned ones in the adjoining row, yielded *four scant quarts*."

The practical value of this shortening-in of pea-vines, as appears from this single experiment, consists, therefore, not only in an increased productiveness of twenty-five per cent., but also in the prolonging of the period of picking from a single planting. By pruning a part of the vines, the harvest of these becomes delayed a week, and thus all the advantages may be secured that would otherwise require two plantings.—*The American Garden*.

EGG-PLANTS—HOW TO KEEP THEM.

Those who have a good stock of egg plants on hand, most certainly have an excellent and very convenient article. They can easily be kept till Christmas by storing away in a cool cellar, not too dry, on shelves. Though they may wilt and shrivel away, this does not injure them in the least. They form a most agreeable and excellent dish at dinner.

The usual way of cooking by cutting in slices, sprinkling on salt an hour before frying, and allowing the vegetable juice to drain out, when they are rolled in batter, or dry bread or cracker crumbs and fried, is of course well known. But a much better way is to cut the egg plant in half, longitudinally, like a water melon, scrape out the interior contents as close to the rind as possible, mixing the pulped mass with stale bread or cracker crumbs, a beaten egg, and seasoned with salt and pepper, then returning the whole into the shell and baking, makes a most savory dish that would be very popular if it were better known.—*Prairie Farmer*.

FRUIT ON THE TABLE.

"Quite a large number of farmers have come to feel that they were not doing their family justice without placing upon their table, a bountiful dish of fruits, such as the various seasons of the year afford, beginning with Strawberries, and following with Cherries, Currants, Raspberries, Blackberries, Grapes, Apples, Peaches, Plums, and Pears. Farmers of this class are not so numerous as they should be, nor as they will be in our opinion, ten or twenty years hence."—*American Rural Home*.

"While there has been a marked improvement at the tables of many of our farmers within the last few years there is yet much to learn. One of the greatest faults in this direction, and one of which is the cause of very much illness, is the comparatively small quantity of fruit they use. It is a mistake to consider that fruit, like confectionery, is to be taken only between meals, and not to be connected in the work of sustaining life."—*Farmers' Advocate*.

Such are some of the profound utterances of the late Agricultural Press upon the subject of fruit, as food upon the tables of our farmers. It is unquestionably a subject of great importance and influence in the economy and hygiene of our people. Fruit on the table is not merely a question of fruit for show, not merely to beautify or decorate, or to please our fancy, but more substantially for food, for the sustenance and support of our exhausted physical forces, for medication and health, for pure animal enjoyments, as well as to defend us against the many dangerous and hurtful influences to which "flesh is heir." Fruit in this connection is one of those many merciful provisions of nature, designed for the highest and purest enjoyments of the needy creature man, one of those safeguards that the Creator of all has thrown around frail human life. In

its very nature it is health-giving and pleasurable. It is mainly composed of diluted sugars and acids in delightful admixture held together by fine vegetable tissues, and in this diluted form is found not only pleasurable, but essentially necessary for the well being of the animal economy. It will be well for us to understand here that whenever fruit is mentioned in this connection, matured and well ripened fruit must be understood. Fruit in that beautiful tempting condition, when the internal acids are largely changed to sugars, and the whole mass is of that inviting toothsome color that engages at once the sense of sight, and is in that yielding, state of softness to the touch, that gives assurance to the eater.

The influences of such food upon the human constitution is doubtless very great and definitely marked. This to us is the embrosia and nectar that were formerly thought becoming for the Dieties only to use as food and never for ordinary mortals. The keen observer of human nature can almost readily discern at a glance the difference between the man who is in the habitual use of fruits and vegetables largely in his diet and the man who has a large dose only of animal ingredients in his constitution. In the first case the food being select, congenial and mild, the nature manifests the benign influence of such congeniality. How different is this beautiful influence to that of the mere animal or flesh eater. By this we would not be understood to discard in toto, animal diet, on the contrary we practice and most devotedly believe in a mixed diet as best and most suitable to the urgent necessities of our present economy. What we do mean is simply this, that we most firmly believe that we, as a people use too much animal diet, and if fruit more and more entered into our daily diet, it would, in our humble opinion be better for us intel-

lectually, physically and morally. Further, we believe and would teach the use of fruit at all seasons, and at all times. We believe in fresh fruit, in canned fruit, in evaporated fruit, and in preserved fruit, in jellies, in marmalades, in beverages, in cider and in wine. We believe in its use further, in the autumn and in the spring, in the summer and in the winter and on all days and occasions in company and out of company. In short, we firmly believe in the wisdom of its use thoroughly, wholly and completely. We believe furthermore in all fruits that are by our experience known to be good for food, and pleasant to the eye, and to be desired to make us better. In this connection we believe in strawberries of all sorts although connoisseurs would fain have us believe that some varieties are better than others. But to us they are all good and equally to be taken with equal amounts of rich and well prepared fixings. We believe also in raspberries and blackberries and can take them in equal doses. With our present facilities for preserving and canning these fine summer fruits we believe it is our duty to have them at all seasons of the year, and in greatest abundance. We believe also in currants and gooseberries and in all varieties but not so firmly as we do those of strawberries. Our reasons for this are private, but nevertheless we believe in them. However, we most firmly believe in the free and untrammelled use of the whole of the following list of superb native fruits, viz: Apples and grapes, and these in all their endless variety of sorts and kinds. In these fine fruits is an almost endless diversity of quality, as hard and soft, as sour and sweet, as woody and melting, as strong flavored and insipid, as buttery and as sugary, but still we believe in them. We believe they all have an appointed place to fill, a work to do and a use to exert and a character to sustain.

We believe also in tropical as well as temperate fruits, and those of all sorts, whether they may be called oranges or lemons from the torrid and tropical regions of California or Florida, or whether dates or figs from the more tropical clime of the East India Islands, or whether they may be limes or bannanas, we could still use them and relish them and be thankful for them. But in our endless and varied wealth of rich and tempting fruits suitable to our condition and clime, we are most happy to say, we need never covet the tropical fruit of the southern zone. Our basket of fruit is so rich, so varied, so tempting, so seasonable, so luscious and delightful. Our earnest and best advice then to the people of this whole country from whatever part of the Globe you may have come, to the high, and to the low, to the rich and to the poor, to the male and to the female, to the young and to the old, whatsoever you may be or whatsoever may be your name, use fruit. Give it constantly and plentifully to yourself, to your wife, to your son and to your daughter. Give it without stint to your manservant and to your maidservant, to your ox and to your horse and to the stranger within your gates. We have thus attempted to show the value of our native staple-fruits as well as all fruits and some of the reasons why they should be more generally placed upon our tables, upon our dining tables and upon our tea tables and upon our festive boards, for our use and comfort. While we are very anxious to produce good fruits for export, fruits well fitted for the English market, we see at the same time very little good fruit placed upon the tables of our peasantry, as though it was perfectly fit and proper for the Englishman to use, but not good for us. We emphatically teach the contrary. Place it upon your tables in a natural state, in a prepared state, for the meal, for dessert for use and our humble word for it, the public

health and the public purse would be the gainer.—B. GOTT.

MARKETING CURRANTS.

The consumption of Currants, both as a table fruit and for preserving increases every year. Thousands of gallons of juice are pressed out annually by the large preserving houses in New York city. This juice is so prepared that it keeps for many months, and large quantities are sold to persons who cannot procure the fruit in season, or do not find it convenient to press it out themselves. In addition to this, tons upon tons are manufactured into jelly, which finds ready sale for fancy-cake bakers and confectioners.

For preserving purposes the old Red Dutch Currant is preferred, and many preservers will buy no other kinds, while other manufacturers are less particular, and buy whatever is cheapest. There is but little demand from grocers and fruit-dealers for this small variety, as for table use only the large "Cherry" and "Versailles" find sale. Dealers in fancy fruits take much pains to procure extra large, selected Currants, and good prices are realized by those marketing a first-class grade.

The best packages for shipping are baskets containing from eight to ten pounds, packed in berry crates. Persons shipping from a considerable distance find it more advantageous to make cheap temporary crates for these baskets than to send berry crates which have to be returned. The ordinary quart berry-basket answers the purpose very well, and, in fact, is preferable to the peach-basket or any other of that size.

For White Currants there is but a very limited demand in the New York market. Black Currants, although not in great demand, sell fairly. These, being more solid than the red and white,

may be shipped in any ordinary box or basket without injury.

In packing Currants for shipping, the baskets should be well filled, that the fruit cannot shake and become damaged during transportation. All Currants are sold by the pound; the net weight of the baskets or boxes they are shipped in should therefore be plainly marked on the outside of every package.—*American Garden.*

NOTES ON HYBRID TEA ROSES.

This family of roses is of recent origin. Nearly all the varieties in this family were raised and introduced by Mr. Henry Bennett, of England, from seed of Tea Roses fertilized with Hybrid Perpetuals. The result is we have a race of roses, giving us the free blooming qualities of the former, with some of the hardiness of the latter class. This new race of roses will probably take an important position in American rose-culture, as they give us early bloom, beginning in early summer, and give a succession until frost. I will give a description of some of the best for general culture.

Beauty of Stapleford.—Flowers large, sometimes very large, color, bright pink; centre rosy carmine; buds very fine; free bloomer and nice grower.

Pierre Guillot.—Flowers very large and double; color, clear red veined with white, and highly fragrant; a good bloomer, and one of the finest roses in cultivation.

La France.—Flowers very large and full; color, a lovely peach; very fragrant; a good bloomer, and the finest rose of its color grown.

Antoine Verdier.—Flowers large and double; color, bright pink; blooms in clusters; a very free bloomer.

Viscountess Falmouth.—Flowers very large, very double; color, delicate pink;

delightfully fragrant; a choice rose in a collection.

Nancy Lee.—Flowers medium; color, bright pink; fragrant; a good, free bloomer.

Michael Saunders.—Flowers large and very double; color, a rich crimson; the plant is a good grower and free bloomer; a very good rose.

Jean Sisley.—Flowers very large and double; color, rosy lilac, edges of petals silvery; opens finely, and is a good bloomer.

Fearl.—Flowers medium size, quite double; color, pale flesh; a finely formed rose and very good bloomer.

Duke of Connaught.—Flowers large, buds very fine; a very free bloomer; color, deep, velvety crimson; growth moderate; requires rich soil to do well.

Madame Alexander Bernaix.—Flowers large and full; color, clear rose; flowers finely formed; a good bloomer, and fragrant.

Madame Julie Weidman.—Flowers large and well formed; color, clear salmon pink; a good bloomer.—ANTOINE WINTZER, in *Farm and Garden.*

CUCUMBER PICKLES.

I never plant cucumbers for pickles before June 15th, as the striped bug seldom troubles them after this date, and I have grown excellent crops planted the first of July. I prefer the Early Cluster for pickles, as this sort does not run to vine so much as the Long Green. It will bear close planting, and the pickles are easier picked. There are certain strains of this variety which are earlier and more prolific than others, and I have found that sold under the name of Boston Pickling, and Perfection Pickling, far superior to the ordinary Cluster. With these varieties one may plant 5 by 5 feet, which will give over 1,700 hills to the acre. No

matter how rich the land is, I find it pays to manure in the hill; cover the manure about four inches with mellow earth, and drop the seed on the hill and step on it. This presses it down firmly into the soil, and prevents its drying out, while the loose earth, with which I cover, keeps it from baking. The seed will come up sooner and much more uniformly for this pressing into the soil. If the weather is favorable the vines will run in five weeks so that one cannot cultivate with a horse and up to that time the more they are cultivated the better.

As soon as fairly in the rough leaf, thin to four in a hill. With good weather you can begin picking in six weeks from planting, and to get a nice, uniform-sized pickle, they must be gone over every day. The vines should never be moved in picking them, for a vine that is disturbed never does so well afterwards. The best-sized pickles are those from three to four inches in length. If any are missed until they are too large for pickles, they must be taken off the next day, for the vine on which a cucumber is going to seed will not continue to bear pickles. A forty-gallon barrel will hold about 4,000 of the small-sized pickles, after they are salted, and I have kept them three or four years. I do not use brine for salting, but put in a layer of salt, and one of pickles, and let them make their own brine. It will take about a half bushel of salt for a barrel of pickles, and the barrel will need to be filled up two or three times as they settle. A board that will fit into the head of the barrel should be placed on them, and a weight sufficient to keep them under the brine. I would rather sell the pickles as gathered for \$1.50 per 1,000 than to salt them, although I have never sold at less than \$2.50. It is difficult to state with accuracy the yield of an acre of pickles, but under favorable circumstances they will yield a large

profit at the lowest price named. I have often grown my best turnip crops among the pickles, and I have adopted the rule of always sowing turnips at the last hoeing of the pickles. The shade of the vines seems to be favorable, and there is plenty of time after the pickles are done bearing for the turnip crop to mature.—W. F. BROWN. *in the Country Gentleman.*

THE CULTIVATION OF THE SUMAC.

There are thousands of people who wander through the woods in Autumn, picking the beautiful scarlet and yellow leaves of the sumac bush to decorate their rooms, without knowing that there is any other use for the plant. Yet the importation of the sumac into the United States this year, will amount to about 11,000 tons, costing about \$1,000,000. The leaves of the sumac, dried and ground, are largely used in tanning and dyeing, and in Sicily and other parts of Italy the plant is carefully cultivated and treated. In view of the fact that the American sumac contains from six to eight per cent. more tannic acid than the Italian, and remembering that the plant grows in wild profusion throughout the country, it seems reasonable to believe that it might be a very profitable crop. At the present time the amount of native sumac brought into market does not exceed 8,000 tons yearly, and its market price is only \$50 per ton, just half the price of the Italian product. This large difference in the market value of the foreign and domestic article is due to the fact that the American sumac, as at present prepared, is not suitable for making the finer white leather so much used for gloves and fancy shoes, owing to its giving a disagreeable yellow or dirty color.

The many attempts that have been

made to avoid this difficulty by care in collecting and grinding the leaves have not resulted in success, and it has long been supposed that this objectionable quality was inherent in the American plant; but Mr. William McMurtrie, in a report to the United States Commissioner of Agriculture, shows that this difficulty can be surmounted and the American product made even superior to the foreign. Mr. McMurtrie made a number of tests to learn the relative amounts of tannic acid found in the leaves at different periods of their development, and while the amount was found to be greatest in the leaves gathered in July, he found that those gathered in full development in June were even then more than equal to the best foreign leaves in this respect. But, further, he found that the deleterious coloring matter (due to the presence of quercitrin) was not yet developed, and that therefore the American leaves gathered in June were superior to the Italian for all purposes.

The importance of this discovery may be seen by the fact that the cultivation of the plant may be carried on most profitably in this country as soon as manufacturers and dealers recognize the improvement thus obtained in the domestic article, and by classifying it according to its percentage of tannic acid, and its relative freedom from coloring matter, advance the price of that which is early picked and carefully treated. In Italy the sumac is planted in shoots in the Spring, in rows, and is cultivated in the same way and about to the same extent as corn. It gives a crop the second year after setting out and regularly thereafter. The sumac gathered in this country is taken mostly from wild plants growing on waste land, but there is no reason why it should not be utilized and cultivated on land not valuable for other purposes.—*Scientific American.*

THE SOUHEGAN RASPBERRY.

This very valuable, early, and prolific blackcap is a chance seedling, originating in the garden of a Mr. Carleton, of Hillsboro' county, New Hampshire, about 1870, and for the past five or six years he has had two or three acres of it growing for market. I visited the original plantation several years ago, and was so very favorably impressed with its great value as an early market berry, that I at once made arrangements with the originator for his stock of plants. For three years now we have had it in fruiting at Elm Fruit Farm, and have received far better returns from it than from any other Raspberry we have ever grown.

It surpasses all other sorts in three very important points, viz: hardiness, earliness, and great productiveness.

The canes are very vigorous, branching quite freely, with many strong, sharp spines. In hardiness and vigor of plant it has no equal among blackcaps, and I doubt if even the hardy Turner, which is called the "iron-clad" among red sorts, is any more hardy. From last year's experience I am led to think that Souhegan is the more hardy of the two, as Turner was badly damaged in one of our fields, while Souhegan was uninjured; and among the hills of New Hampshire, and along the banks of the Souhegan River, near where it originated, it has always passed through the winters sound to the tip. In my travels the past month, in fifteen States and the Canadas, wherever I found the Souhegan growing, almost the first thing said of it was, "It is the most hardy plant we have."

The originator claims that it is four times as productive as any other blackcap, and while I cannot fully agree with him, must admit that it is far more prolific than anything I know. Quarts upon quarts of delicious berries,

jet black in color and approaching the Gregg in size, are piled upon the bushes. It is about one week earlier than the Doolittle (which in years past has been the early market black-cap), and herein lies its chief value, ripening as it does along with the late varieties of Strawberries, when fruit is scarce, it just fills in the gap before the red Raspberries, and sells for double the price of Mammoth Cluster or Gregg, which are ten days or two weeks later.—J. H. HALE, *in Farm and Garden.*

ZINC LABELS.

Sheet zinc, from its indestructibility, and the ease with which it may be cut and managed, is a favorite material for tree and shrub labels. If cut in the form of a very long tapering wedge, the smaller portion may be coiled around a twig, or small branch, and thus avoid the use of a wire, and where the small end of the label is coiled around a small branch, it will yield to the increase of that in size, and not cause strangulation. The old method with zinc labels was to write upon them with an ink made of some salt of copper, and several have asked for the formula for preparing it. The original ink was made of Verdigris and Sal-ammoniac, of each 2 drams, Lamp-black 1 dram, Water 4 oz. As these need to be well rubbed together, it will be as well to let the apothecary mix them in a mortar. This is to be used with a quill pen upon the surface of zinc that has been made clean and bright by the use of emery paper. We have been informed by our correspondent "Horticoia" that a strong solution of Sulphate of Copper—"Blue Vitriol," or "Blue-stone," will answer the same purpose, adding a little gum water to the solution, if need be, to prevent the ink from spreading. The use of the lamp-black in the ink first mentioned, is only to make the ink visible while writing with it. In both

these cases, the copper is, by chemical action, deposited upon the zinc, and, becoming oxidized, makes a permanent and conspicuous writing. Another and much simpler method is simply to write upon a clean zinc surface with a common lead pencil. By the action of the air the zinc becomes tarnished and grayish, while the black lead prevents any such change where the writing is, and though not so conspicuous as that written with the ink, is quite as permanent, and being much less trouble is preferable.—*American Agriculturist.*

PRUNING ROSES.

Roses are better for a little pruning, if it has been previously neglected. This must of course be done with a definite object in view. First, a well shaped bush on top, and also to promote growth to a desired end, as for instance, whether the plant is to be a standard trained on a pillar, or a trellis, a wall, etc. Again some varieties require more pruning than others, but in all pruning the cut should be made so that the terminal bud will be left in position for the most favorable growth, whether right, left or upwards. If a great quantity of bloom is wanted irrespective of size, prune only so as to have the plant in good shape and well furnished. If large bloom is required, after taking out all weak wood, cut the balance back to not more than three or four budseach. Some roses as a rule require less cutting in the West than in the East, and for the farm yard all that will be necessary will be to thin each season as may be indicated by the previous summer's growth. So-called Hybrid perpetuals (Remontants) that bloom in the spring and again in the late summer, may be cut back after the first bloom is over, when they will generally make growth for the autumn bloom.

The Remontants require little pruning in summer. They, however, must have

plenty of manure and water, especially in the drouth of summer, if autumn blooming is expected.

The ever blooming class comprises four principal sub-classes, Noisette, Tea, Bengal and Bourbon. The Noisette are strong in growth, usually bearing their bloom in clusters. The Bourbons come nearer to the Remontants and the Teas and Bengals are of more delicate growth and generally liked in the North for pot growth. None of this class require excessive pruning, only occasionally cutting back in out-door culture. For pot cultivation plants started the previous season are preferred.—*Prairie Farmer*.

MANCHESTER STRAWBERRY.

The Manchester, regarding which we have hitherto restrained any positive expression of opinion, is one of the most desirable strawberries we have ever raised, and we have tested not less than 250 different kinds. The only thing that can be said against it is that it is a pistillate, and must be grown near perfect-flowering sorts, which for many farmers is attended with trouble or perhaps inconvenience. Our plants are exceedingly vigorous and productive. We have just examined them and find that each plant, on an average bears 16 peduncles or flowering stems, and each flowering stem bears, on an average, 10 berries—giving 160 berries to a plant. We beg to emphasize that we are speaking of *average* plants. On one plant we counted 22 peduncles and 220 berries in the various stages from ripe to just set. This berry is firm, very uniform as to shape, which is roundish conical;—it ripens in every part and averages above medium as long as it remains in fruit. The quality when ripe is good, though, like the Wilson, it is sour when it first colors—a characteristic, it seems, of all excellent market berries. It

ripens with the Sharpless and after the Bidwell. On the grounds of the plain, hard-working farmer, Mr. Jesse Beatty, with whom it originated, it thrives in a light, dry, sandy soil. With us it thrives in a moist soil inclining to clay. Several years ago, from our own tests, we spoke highly of the Sharpless, and soon after its introduction, of the Cumberland Triumph. We have never had occasion to regret this, and we have now little fear that we shall regret commending the Manchester to our readers as the best market berry at present known. It is now in the hands of all nurserymen and will be offered at reasonable prices next Spring, if not this Fall.—*Rural New Yorker*.

AN EXPERIMENT WITH PEAR BLIGHT.

Arba Campbell, of Oswego, N. Y., reports to the Elmira Farmers' Club the following experiment which we take from the *Husbandman*:

"I have a beautiful Bartlett pear tree standing in the front yard by my residence that is a good bearer, beautiful in form, and affords a fine shade to my sitting-room window. It is growing in what we consider a rich, deep, alluvial soil, on the river bottom, within a few rods of the river. In the heat of the summer nearly four years ago when the weather was very dry I discovered that this tree was struck with what we call 'pear blight,' and as I had lost two fine trees at the side of the house the year before from the blight, I thought all that could be done was to put up with the loss. A week or two later as I stood in the street looking at the tree I saw that the top boughs were dead down at least four feet, and every limb on the tree seemed more or less affected, then the words of Scripture came to my mind: 'Dig about it and dung it one more year before you cut it down.' I went

into the house and examined Emil Wolf's tables of analysis to see what the mineral supply to the pear was composed of, for I thought the land rich with barn manure, and found it to be 54 per cent. of potash, 9 of soda, 5 of magnesia, 8 of lime, 15 of phosphoric acid, and 6 of sulphuric acid.

"I called my man and dug away the soil for six or eight feet around the tree and down until the top roots were all uncovered, and then took 100 pounds of German salts (containing 15 pounds of pure potash) mixed it with four or five times its weight of earth and spread it over the roots. I next took seventy-five pounds superphosphate and mixed it with earth and spread it on top of the mixture with potash salts. Then I took fifty pounds of lime mixed with earth and spread on top of the potash and phosphate (these contain all the above minerals.) We then drew from the well twenty or thirty pails of water and gave the whole a thorough wetting, and in one week's time I could see that the tree was reviving and the blight apparently never extended an inch beyond what it was at the time of making the experiment. The tree bore a small crop of good pears in the centre of the top that summer, but at the extremities of the limbs they fell off. The next year it bore a large and fine crop of pears. None fell off and no insects seemed to touch them. The third year was the same, the crop large, fine, and smooth; and this, the fourth year, the crop promises to be as good as the two previous years. Now this proves to my mind (so far as one experiment can prove anything,) that what we call 'pear blight' is simply starvation; that the mineral supplies in the soil had become exhausted and the tree was dying for want of food. I fed it, and it got well, and returned me many times four-fold. And it proves a little more, for what had been a semi-annual bearer became an annual bearer, and I doubt

much if most trees, if properly fed, would not produce yearly crops of good fruit."

PLANTS BY MAIL.

The following directions are for the guidance of those who receive plants by mail: Unfold the packages carefully, and put the moss-bound roots into a pan of water quite warm to the hand, and let the roots drink to their fill of it. It will not hurt them to soak an hour in the water, or until it becomes quite cold, and if the leaves still look a little crisp turn off the cold water and add warm water. Then take off the moss carefully and dip the roots into fine sand; if you only have white sea sand for scouring purposes, wash it through two or three waters, in a colander or sieve, and dry it in the oven partly, then roll the roots in it until they are coated with it. Plant in good, rich compost, of one-third decomposed manure, and two-thirds garden soil, good and rich, and well mixed together. Take small pots for small plants. Three-inch pots are large enough for all plants sent by mail. Put a small bit of charcoal or broken pottery at the bottom, and fill one-third with soil. Press in the roots and fill up tightly with the soil. Close planting—*i. e.*, settling the earth closely around the roots—is needful for success in planting in pots, as well as in the open border. Set the plants in the shade for two or three days, or into a well-prepared hot-bed, and cover them with newspapers. Water freely with a watering-pot—but if kept in the house do not give enough to sodden and decay them—and in a week they will have taken root in their new home and begun to grow, and when they have entirely recovered from a long journey they can be transplanted into the border. If they have only come a short distance, however, after a bath and a roll in the sand they can be planted directly into the border,

and should then be well watered and shaded from the hot sun for several days.
—*American Cultivator.*

THE RADISH AND CABBAGE FLY.

Every gardener has been sufficiently annoyed by the larvæ of these flies, in the form of little white maggots, eating his radishes or burrowing in the stalks of his young cabbage plants, to hail with delight any remedy that will rid him of these pests. Prof. A. J. Cook, Michigan Agricultural College, writes to the *American Agriculturist* as follows:

“For the past two years I have been experimenting with Bisulphide of Carbon to destroy subterranean insects. This substance has proved effectual, but in case of the insects in question, especially the Radish Fly, its expense is an objection to its use. The past season I have tried a new remedy with gratifying success. This consists of a preparation of Carbolic Acid. The material which I used was prepared as follows: Two quarts of common soft soap were added to one gallon of water, and all heated until it commenced to boil, when it was removed from the stove, and while yet hot one pint of crude Carbolic Acid was added, and all thoroughly mixed. This was then set away in a close vessel, and was ready for use as occasion might require. To repel the insects in question, one part of this mixture was added to from 50 to 100 parts of water, and the new mixture was sprinkled on the plants as soon as they were up, and after that once every week. This same preparation will serve to repel the Cabbage Fly (*Anthomyia brassicæ*). But for the latter, my experiments go to show that Bisulphide of Carbon is cheap, efficient, and does not simply drive the fly away, but destroys the maggot. As “he that fights and runs away, may

live to fight another day,” the Bisulphide of Carbon remedy is, I think, to be preferred to the Carbolic Acid mixture for use against the cabbage maggot. We sprinkled the Carbolic Acid preparation directly upon the radish plants, without injury to the latter; but if it is found to injure the plants from too great strength, it will serve as well to turn it in a trench made close along beside the rows of plants. The peculiar odor of the acid which repels the flies as they come to deposit their eggs so far escapes that it is necessary to apply the liquid as often as once a week to insure perfect success. Caution is required also that the preparation be not so strong as to injure the plants when placed immediately upon them. From one season’s trial I can strongly recommend the above application.”

WHITE GRAPES FOR THE MILLION.

Josiah Slater, well and favorably known to pomologists, has a spicy article in the *Gardener’s Monthly* on the new white grapes, from which we glean the following points regarding the Pocklington, which is attracting general attention:

I have been familiar with the Pocklington for five years. The first two years of my acquaintance with it the original vine was so over-cropped as to retard its ripening and spoil its quality. It has, however, improved in quality every season since. This last year, 1880, the Pocklington was fit for market in Monroe Co., N.Y., about September 6th, but it is much better, with little or no pulp and with a honeyed sweetness by 15th or 20th of September, and fully ten days earlier than the Concord on the same grounds. It hangs well on the vines till destroyed by frost. The Pocklington is a seedling of the Concord, just as strong and vigorous a grower, fully as

hardy to withstand the winter's cold and summer's fluctuations in temperature, to resist mild-dew as its parent, the Concord. Last fall I kept a bunch each of Lady Washington, Niagara, and Pocklington till near the middle of December, on a plate in a close room. To my surprise, the Lady Washington, although the thinnest skin, was apparently the best keeper. I have no doubt, with a little care, either of these grapes may be kept to January 15th in good condition. To my taste the Lady Washington is the best as to quality. The Pocklington is the next best, and while we are in doubt as to whether we can grow the Lady Washington successfully, it being a hybrid, I think there is no doubt whatever that the Pocklington will thrive and do well over a wider extent of country than any other good grape, not excepting the Concord; for where the Concord will do well, I believe the Pocklington will do better because of its earliness.

While I cannot agree with my friends who think the Pocklington grape better in quality than the best hothouse grapes, I do think it will prove the best and most valuable purely American Grape we may have for years. And on purely American and of the *Labrusca* species, I think we shall have to rely for our crops of market and wine grapes in most localities of this latitude east of the Rocky Mountains.

I consider the Pocklington grape, the white "grape for the million." We have had scores of white grapes introduced, tested, proved wanting, and discarded within the last thirty years but the Pocklington has come to stay. It is of the largest size both in bunch and berry and the most successful white grape in taking premiums at fairs. It is seen above all others, it attracts more attention, and recommends itself—the grape men cannot let it alone.

THE CHERRY TREE APHIS.

This insect, a plant louse, infests the under side of the leaves and the tender twigs of the cherry and plum. And I have this season found it attacking the green fruit of the plum. It appears with the earliest leaves in the spring; in countless numbers, causing them to curl or wrinkle into fantastic shapes, lose their color and fall prematurely.

It appears in both the winged and wingless forms, the earlier broods containing fewer of the winged forms than the later. The winged females measuring about one-tenth of an inch to the tips of the closed wings; color black or brownish-black; abdomen broader than the thorax, having an ovoid or egg shape which is more marked in the wingless female.

The wingless female measured about five-hundredths to six-hundredths of an inch in length; antennæ whitish with the two basal joints and the apical half black; legs whitish except the feet, tips of tibiæ and femurs which are black. The abdomen has a prominent raised ridge along the lateral margins. General color black or brownish-black.

There are several broods in one season (from five to eight) and they are so prolific that were it not for their natural enemies they would soon over-run and kill the whole tree.

One of its most persistent enemies is the larva of a two-winged fly of the genus *Syrphus*. The larva is of a pale greenish color, translucent, spindle shaped, attenuated anteriorly, and about one-half an inch in length. And it is a refreshing sight to the fruit grower to see with what avidity this sluggish looking worm sucks the juice from these tiny pests and casts their empty skins aside.

The larva of a small beetle (*Coccinella*) and of a neuropterous fly (*Chrysopa*)

have also been found feeding on this aphid.

Some of the more common remedies for this pest are strong soap-suds or a mixture of kerosene and water with which the trees should be given a thorough drenching. The latter mixture, however, if too strong may slightly injure the foliage, but will do no permanent damage. Suffocation with tobacco smoke has also been highly recommended.—*Prairie Farmer*.

SMILAX.

Smilax makes a beautiful plant for the window, if a strong young plant is secured in the fall, placed in an eight to ten inch pot, set in such a position that a string on which to train it can be run up one side of the window and across the top. As soon as the young shoot is long enough, twine it around the string to give it a start, as it were, after which it will rapidly grow and reach the top, when it will have to be directed in its course across the top of the window. Be sure to get a young plant, as they do much better than old ones, and when growing vigorously, give plenty of water; keep the leaves free from dust, and it will soon form one of the most beautiful window ornaments which can be imagined. After it has reached as far as wanted, pinch off the end of the shoot, which will induce fresh shoots to start from the different joints, and at the same time induce it into flower sooner than when allowed to grow at random. During the time it is in flower the room is filled with the sweetest odor, after which comes the beautiful fruit, hanging in clusters and remaining for weeks in perfection.

Many fail with smilax in windows, but if they would attend to getting a one-year old plant, then, good, porous soil, and a string—not a wire, to run on,

there is not much danger but it will grow if attended with water sufficient to keep the soil moist all the time, but not in such quantities to produce saturation of the soil.—*The Prairie Farmer*.

THE CAROLINE RASPBERRY.

In regard to the Caroline Raspberry, I have tried it so thoroughly that I do not hesitate to recommend it as one of the best of raspberries. When the berry begins to color it is a pale yellow which turns to a pretty salmon color when ripe. Among berries of its colour it is equalled by none except the Brinckle, and it is but little inferior to that old standard when ripe. It is thoroughly hardy, a very strong grower, and immensely productive. Its ability to bear long carriage has yet to be proved, but for a near market its value is already established. The amateur, at least, should accept the Caroline as a boon—"Horticultora" in *Rural New Yorker*.

[We have not found it to be high flavored.—Ed.]

A NATIVE AMERICAN PLUM.

Golden Beauty.—Here we have a most remarkable and valuable acquisition. It is one of Onderdonk's seedlings, and seems to be, from leaf and bloom, a hybrid, between some large late Chickasaw of Wild Goose type and some fine variety of *Prunus Americana*, as the leaf, bloom, method, and time of fruiting remind one of the Weaver Plum, but Chickasaw blood is visible just as well. Young twigs are yellow when mature, green before; the leaves are very large, of a rich, light green, with the glossy surface of the Wild Goose, and hang on very late. The growth is as free and smooth as the Peach, with twigs as large; the fruitage is astonishingly great; Plums are deep golden yellow, of size of best Wild Goose, but orange-shaped, very

solid, rich, small seed, nearly free; ripens with Heath Cling Peach, blooms with the Weaver Plum, about a week later than Wild Goose. Free from all diseases and insect depredations as any known variety.—*Farm and Garden.*

THE TUBEROSE.

Because many farmers' wives cherish the belief that some wonderful skill attends the cultivation of this plant, they deny themselves the pleasure of its possession. The bulbs must be lifted before there is any danger from frost and spread in a warm sunny place to thoroughly dry. If they become chilled in any way, either before being lifted or during the winter, their value is destroyed. But if kept in a warm closet they will repay for all the trouble by their spikes of beautifully pure and fragrant blossoms.

Tuberose are reproduced very rapidly. Therefore after a start has once been made with a collection of bulbs of one, two and three years' growth, the owner can continue to set the same and there will be no trouble in having all that are desired.

There is no difficulty about the planting and cultivation. They will do well on any soil that will produce a good crop of corn. The soil should be made mellow, so as to be easily worked, and the bulbs set at such distance apart as the extent of surface will allow, and covered with the soil. All the cultivation that is necessary is to keep the soil mellow and free from weeds.

If desired for early blooming the bulbs may be set in boxes the latter part of the winter and kept watered and in a warm room. They will then come to flowering earlier than if not set in the ground until all danger from frost is past.—*Farm and Garden.*

PIONEER BEET-SUGAR COMPANY.

Through most worthy efforts of the directors, etc., of the beet-sugar company at Coaticook, P. Q., Canada, the Canadian Government has granted to it a subsidy of \$35,000. This amount added to the money elsewhere obtained will permit, it is thought, the manufacture of beet-sugar under more favoring circumstances than last year. The planting season has been considerably retarded, owing to late frosts, etc. In the early part of June there remained yet considerable sowing to be done. The greater number of contracts for beets have been made on the Island of Montreal. The seeds appeared above ground with a satisfactory regularity; and the weather is said to have been favorable, as regards amount of rain, heat, etc.

The seeds sown were of the Imperial and Electoral varieties. The fertilizer used was mainly superphosphate manufactured from the bone waste, and residues from defecation; this, it is considered, makes a most excellent plant food.

About 10 tons of seed were used to the acre, distributed with an ordinary seed-drill.—*The Sugar Beet.*

APPLE JELLY.—Pare, core and quarter two dozen large, tart, juicy apples. (If the apples are red and you desire the jelly to be colored, leave the skins on, only being careful to remove imperfect spots.) Boil them until thoroughly soft, in enough water to cover them, being careful not to mix to a pulp by stirring. Strain the juice by letting it drip slowly through a flannel jelly-bag made into a cone. Do not press it, or the juice will not be clear. To each pint of juice allow three-fourths of a pound of sugar. Boil the juice until "clear," add the sugar and boil fifteen or twenty minutes longer. To one pint of the jelly add the juice of one lemon—not the grated rind, unless you wish your jelly to have the lemon instead of the apple flavor.

HONEY PUDDING.—Ingredients: Honey, one-half pound; butter, six ounces; bread crumbs, one-fourth ounce; eggs, eight. Beat the honey and butter to a cream, and add the bread crumbs; beat all together for ten minutes with the yolks of the eggs. Put into mould and boil for an hour and a half. Serve with any nice pudding sauce.

STRAWBERRIES.—The Crescent strawberry proves to be the earliest here, marvelously productive, and meets with ready sale at good prices when sold at home markets. It is not firm enough for shipment. It will thrive on ordinary soil with ordinary culture. It is more profitable for near market than Wilson. Sharpless is the largest strawberry of all; vigorous, and of good quality when at its best. When over-ripe it loses character. It ripens slowly and unevenly; these are its defects. It is not firm enough for shipment. While it does not yield as many quarts as Wilson or Crescent, it will be profitable to have a portion of the market plantation of this variety, as it brings a fancy price anywhere. It is well to have some firm berries like Wilson or Manchester, as when a hurry comes these can be neglected a few days without loss, while the soft berries must be gathered and sold without delay.—CHARLES A. GREEN, *in Country Gentleman*.

ARSENIC FOR CANCKER WORMS.—We gave an account a few years since of the successful use of Paris green by the late Mr. Chapin, in his great apple orchard in East Bloomfield, N. Y., for the destruction of the canker worm. A wagon tank, such as threshers employ, was filled with the usual mixture of Paris green and water, and from it the infested trees were showered by means of a forcing pump. We observe by some late journals that the same method is employed by A. R. Whitney, of Illinois, who has an orchard as large as Mr. Chapin's. A visitor stated that he found the foliage of the trees clean, entire and healthy, while the apple orchards around were desolated with the canker worm. Mr. Chapin destroyed the codlin moth by the grazing of sheep, and we had occasion to observe the contrast between the smooth fruit of this orchard and the badly infested apples of a neigh-

bor who took no care.—*Country Gentleman*.

GLUCOSE HONEY.—The *Boston Journal of Chemistry* makes these queer revelations about glucose honey and other confections:—"Millions of pounds of glucose are made every month. It is used mostly as an adulterant in the manufacture of table syrups, and in adulterating the dark, moist sugars used largely by the poor. Its next largest use is in the manufacture of candies. All soft candies, waxes, taffies, caramels, chocolates, etc., are made of glucose. Children are, therefore, large consumers of this substance; the honey bees also are fond of it, and will carry it away by the ton if it is placed within their reach. The honey made from it is no better than the pure glucose, as it is stowed away in the cells without change. Human ingenuity, it is stated, has reached the point of making honey and storing it in the comb without the intervention of the bee. By appropriate machinery a nice-looking comb is made out of paraffine, and after the cells are filled with glucose syrup, this fictitious 'honey' is warranted true white clover honey from Vermont.

BACTERIA AND THE YELLOWS.—Prof. Burrill says that very recent examinations of specimens of diseased peach trees sent him from Michigan, where this malady has prevailed, confirm his opinion that the disease known as the yellows is caused by bacteria. He finds the same disappearance of stored starch in the peach shoots as occurs in blighted apple and pear trees, and at the same time numerous bacteria. These minute organisms in the pear are rounded oblong, and commonly double-jointed; but sometimes they are single, and occasionally several joints are found. Those found in the diseased peach are long and slender, and consist of several joints. Both may, however, be mere modifications of the same organisms. The pear bacteria are about one-thirty-thousandth of an inch cross diameter, and one-half more in length. Those in the peach are about twice as long. To examine their shape, a microscope magnifying the diameter one thousand times is requisite, and so small are they that a thousand millions would be required to form a solid mass as large as a pin's head.

SAVING MOTHER.

The farmer sat in his easy chair,
Between the fire and the lamp-light's glare;
His face was ruddy and full and fair,
His three small boys in the chimney nook
Gowned the lines of a picture book;
His wife the pride of his home and heart,
Baked the biscuits and made the tart;
Laid the table and steeped the tea,
Deftly, swiftly, silently,
Tired and weary, and worn and faint,
She bore her trials without complaint,
Like many another household saint—
Content, all selfish bliss above
In the patient ministry of love.
At last, between the clouds of smoke
That wreathed his lips the husband spoke.
"There's taxes to raise, an' interest to pay,
And of there should come a rainy day,
"Twould be mighty handy, I'm bound to say
"T have sumthin' put by. For folks must die,
An' there's funeral bills, an' gravestones to buy—
Enough to swamp a man, purty nigh;
Besides, there's Edward and Dick and Joe
To be provided for when we go.
So 'I was you, I'll tell you what I'd do,
I'd be savin' of wood as erer I could—
Extra fire don't do any good—
I'd be savin' of soap, an' savin' of fle,
And run up some candles once in a while;
I'd be rather sparvin' of coffee an' tea,
For sugar is high,
And all to buy,

And cider is good enough for me.
I'd be kind o' careful about my clo'es,
And look out sharp how the money goes—
Gegaws is careless; natur' knows;

Extra trimmin'
'S the bane of women.

"I'd sell the best of the cheese and honey,
And eggs is as good, nigh about's the money;
And as to the carpet you wanted new—
I guess we can make the old one do;
And as for the washer and sewing machine
Them smooth-tongued agents so pecky mean,
You'd better get rid of 'em slick and clean.
What do they know about woman's work?
Do they calkilate women were made to shirk?"
Dick and Edward and little Joe
Sat in a corner in a row.
They saw the patient mother go
On ceaseless errands to and fro;
They saw that her form was bent and thin,
Her temples gray, her cheeks sunk in,
They saw the quiver of her lip and chin—
And then with a warmth he could not smother,
Outspoke the youngest, frailest brother:
"You talk of savin' wood and ile,
An' tea and sugar all the while,
But you never talk of savin' mother!"

DELICATE APPLE SAUCE—Pare, halve and quarter a sufficient quantity of nice stewing apples; put them into a baking dish, and cover thickly with sugar—bits of lemon peel may be added if liked. Put a plate over the dish, and set it into a pan having a little hot water in the bottom, and place in a hot oven. Bake until the pieces are clear and tender.

COAL ASHES.—Common coal ashes, if well distributed about the roots of currant bushes, is one of their best promoters. This should be done by loosening the soil about their roots, and placing the ashes near them; cover firmly with earth above, and the bushes will bear such clusters as will speak the beneficial effects of this application of material too commonly thrown aside as of no use. Cherry trees also gratefully accept this renovator, and if carefully bedded about the roots with coal ashes in the fall, the yield of fruit the following year will surprise the cultivator. Especially is this effect produced in the black loam of Illinois. We have in our mind one fruit garden there where all the small fruit was treated in this way, and have never seen, their yield excelled. — *National Farmer.*

THE FRUIT GARDEN.—There should be a Fruit Garden on every farm for the profit, health, and enjoyment that it brings, where well cared for—yielding a succession of fruits from early strawberry time until the latest grapes are gone. It is our desire that all who have no garden for small fruits may resolve to prepare the ground and plant one the coming spring. The soil for a Fruit Garden should be rich, deep, and mellow, and above all thoroughly drained should it be naturally wet. There is nothing better than well rotted stable manure for enriching a garden soil. The list of Strawberries that may be planted is a long one and has been added to from year to year. Charles Downing, Seth Boyden, Monarch of the West, and Sharpless are all reliable. The Bidwell has proved excellent, and the Manchester is a promising new sort. On heavy soils the Jucunda and Triomphe de Gand do well. Among Raspberries are the Cuthbert, Patrician, and Herstine. The Mammoth Cluster and Gregg are among the best Black-caps for general use. For Blackberries the Kittatunny and Snyder are the best. The Versailles, Red Dutch, and White Grape lead in the Currants. It is difficult to select from the long list of excellent grapes, Concord, Wilder, Brighton, Kumelan, Delaware, and Pocklington give a good variety. — *American Agriculturist.*