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HALIFAX, Nov. 22, 1871.

We have to remind the Secretaries of Agricultural Societies that in order to participate in the Legislative grant for the present year, they are required to transmit to the Secretary of the Board of Agriculture, not later than 25th November, an attested certificate of the amount of subscriptions paid by members for the year. Allowances from the grant are given rateably, in proportion to the subscriptions.

We have already received the certified subscription lists of several societies, and considerable progress is manifest in some of the counties. The New Gairloch Society of Pictou has this season raised, among its members, two hundred and three dollars, Dominion currency; the Union Society of East Cornwallis, one hundred and three dollars; Parrsboro' Society, one hundred and six dollars; Ouslow Society, one hundred and sixty-seven dollars, two Yarmouth town Societies \$440, and so on with others.—Our only regret is that the allowances

from the Legislative grant will necessarily be so small in proportion to the money subscribed by the members of the Societies themselves. The old rule was to give two dollars of grant for every dollar subscribed, but in consequence of the increase in numbers and in liberality of our Agricultural Societies, we fear the grant will not suffice to give more than 25 or 30 cents on the dollar in some counties this year.

In the present number, we republish from the *Gardener's Monthly*, seasonable hints for management in the Flower Garden and Pleasure Ground, Fruit and Vegetable Gardens, Hot and Greenhouse. Under each of these heads valuable information will be found. The opening remarks in reference to shelter of young shrubs and trees we specially commend to the attention of planters. The mode of growth of herbaceous plants is also so lucidly explained that there can be no difficulty, on the part of any of our readers, in applying the knowledge given to the management of their own flower bor-

ders. Pampas Grass, spoken of in the article as hardy, will not stand the winter in Nova Scotia, but the method of protection mentioned in connection with it may be used for many other plants. The "freezing system" of tree planting has been in some favor in these northern regions, and receives its quietus from our Philadelphia friend. The simple method described of converting a bow-window into a conservatory will, we hope, lead to some such adaptations in our Halifax windows, so that the pasty, painted, paper images of plants that look out upon us from the street windows of fashionable drawing rooms, may be to some extent reduced.

We reprint the Directions for Flax Culture and Management prepared some years ago by the Society for the Promotion and Improvement of the growth of Flax in Ireland.

The Blue Book extracts we give on the Labour Markets of the world and the Industrial Classes in relation to Emigration, have a significance for us in this part

of the world that not a few of our public men seem to be slow to recognise.

This season there has been an unusually large crop of "gigantic" squashes, turnips, potatoes, &c., in the newspapers. But the most remarkable departure we have seen or heard of from the ordinary phenomena of nature, occurred in Mr. Troplet's garden, in Halifax, where a Duchesse d'Angouleme Pear tree bore two distinct crops of pears during the past season. The first crop was formed at the usual time, after which, the tree blossomed again on the same shoots and set another crop of fruit, which acquired considerable size before the cold weather came on. If we can raise two crops in a season of one of the finest and most delicate of all the French Pears, our climate cannot be so very bad after all. Parched California may ripen these pears a little earlier, but it will be something new under the sun for the Golden State to raise more than two crops in a season.

A correspondent of the *Colonial Farmer* reports a neighbour's big turnip as weighing, when cleaned and ready for cooking, 17½ lbs.; also "four well formed heads of cabbage growing on one stalk, and several with three heads on one stalk; he has, moreover, a goose a year and a half old that has just laid five eggs." It is true that, as a rule, two heads are better than one, even if they be sheepheads, but one head is enough for a good cabbage, and as for the goose, she must be a great goose as well as a young one to try to hatch out goslings on the winter pastures.

#### HINTS FOR NOVEMBER AND DECEMBER.

(From the *Gardener's Monthly*.)

##### THE FLOWER GARDEN AND PLEASURE GROUND.

It is now so well understood that we may have an immense addition to our list of hardy evergreens if we will only shelter them, that we expect all those who love these varied winter favorites will take measures this season to plant shelter belts in exposed places, or else to set the common hardy trees, like Norway and Hemlock Spruce, and Scotch, Austrian and White Fines thickly about, so that the rarer ones can be put between them.

Almost all young trees are tenderer than they are when older. It is therefore no test of the hardness of some rare thing, that a small plant is killed in the

winter. Silver Firs almost always get killed back for a few years in this section unless protected, but yet gain a little in strength. After they are ten years old they will endure our hardest weather. So Spanish Chestnuts, English Walnuts, and many others, will die back considerably, until they get strength. Therefore, protect any valued young plant, if possible, no matter how hardy its reputation may be.

Every one who has dug up a potato knows that when the tuber has finished its growth, all between it and the parent stalk dies. If the potato were to remain undisturbed till spring, frost and other things of course uninjuring it, it would push up from the place where it stood, and a new set of potatoes push out, and the space between them and the original, get wider every year. So, year after year, there would be this continual progression,—a wandering away from the first centre, until in time the living plant might be a mile away from the original spot which gave it birth. Something of this kind goes on in all herbaceous plants,—a part progresses, and a part dies every year. It is for the want of this knowledge that so many friends lose these plants. Though all herbaceous plants move in some such manner, they do not all go directly under ground, but make bunchy stocks above ground. In their native places of growth they manage to get covered with decaying leaves from the woods or shifting sands on the plains, but in cultivation nothing of this kind can be naturally accomplished, and unless art comes to aid the plants they soon die away. An Auricula, a Primrose, or a Carnation, is a good illustration of this. In the two former a new crown is formed on the top of the old one, and as the lower part in time dies away, unless new earth is drawn up success with such flowers will not be great. The best plan is to take up and replant every few years, or cover the running parts above ground with earth, so that they may have a chance to get new roots from the advancing stocks. This is noticed here at this season to show that earth is the natural covering for herbaceous plants, and therefore one of the surest ways of preserving them safe through winter is to draw earth over them. In the spring they can be unearthed and then divided and set a trifle deeper than before, which is all they want. We are often asked how to preserve Carnations, Chrysanthemums, Pansies, Phloxes, Hollyhocks, and so forth, safe till spring. The principles here laid down will explain the practice.

Pampas Grass, *Tritoma varia* and other half hardy things do much better when left out all winter and protected. The best protection is a dry-goods box filled with leaves. Many plants might

be saved in this way, and the increased beauty of the plants would pay well for the trouble. These ugly boxes may be objectionable, but probably the time may come when it will be thought worth while to have neat cases made expressly for them.

As soon as the ground gets caked with the first real frost, herbaceous plants should be protected. Though hardy, they will repay this extra care,—mostly natives of woods or grassy places in their native state, they expect a covering of leaves or dry grass. We find dry leaves the best material for the purpose, a few inches is a sufficient depth,—a little soil being thrown on to prevent the leaves blowing away. Where such material is not at hand, the common garden soil may be drawn over them, as before recommended.

The planting of trees will continue to engage our attention at every favorable opportunity. Many prefer at this season to remove trees in the winter by the "frozen ball" system. There is nothing gained by this practice. To those unacquainted with this mode of planting, we may as well describe it. Just before frost is expected, a trench is dug around a tree a few feet from its base, leaving the tree so, that with a rope at the top, it can be easily drawn over. A hole is then dug for it in the situation desired. When the "ball" has become frozen through around the tree, it is removed to the prepared hole; and, when a thaw comes, the soil filled in around it. We have said there is nothing gained by it, and there are many disadvantages. If the tree has been removed a "time or two" before, as most nursery trees have, it will have an abundance of fibres near the stem, and can be successfully removed without much regard to the "ball of earth," either in fall or spring. If it has never been removed before, that is a tree growing naturally, it will have no fibres at its base, and so no "ball of earth" can preserve them; so that a tree which can be moved successfully on this freeing system, can be as successfully done without it. The disadvantages of it are that it exposes the injured roots for a long time to the injurious action of the frost and the elements, besides the frequency of the operation being improperly done by several attempts being made at its completion. We have given the system a fair trial, and have done with it. The main object should be to preserve all the roots possible with the tree, keep them moist and preserve from injury, then go ahead and don't wait for frost.

##### FRUIT GARDEN.

Passing a fruit stand in Philadelphia this 6th day of October, 1871, we ask the price of some tolerably fair Duchesse d'Angouleme Pears, and are told that

for twenty-five cents we may take one of the coveted fruit away. As this would probably make \$20 per bushel, we could not but reflect on the present phaze of fruit culture, and what it ought to be, if it was properly understood. There have not been less than 200,000 dwarf pear trees, with at least as many standards, set out on the average for each year, during the past thirty years,—say *twelve millions* of pear trees, and yet to get a decent Duchess pear in one of our principal cities in October, we have to pay 25 cents. We know what some horticultural writer would say,—we know what some horticultural editors have done. They have started the cry that pears are a failure; that they will not do well in the climate of the United States. What an absurdity! There is scarcely an old city in the Union which cannot show its old pear trees annually loaded with its fruits. Throughout the whole of Pennsylvania especially, trees may be here and there seen which annually bear until the branches become quite recurved, like a weeping willow, with the load of fruits. Nine-tenths of the twelve millions are probably dead; but it was not the climate which killed them. It was barbarous modes of culture, and we expect when our instructions are carefully followed for their culture, pear growing will be found one of the most remunerative of crops. Remember the rule—keep the roots near the surface, and annually top dress. In choosing pear trees take those which have a light sappy looking bark. Bark bound things will stand a year without moving. If they are in this condition any age will do well from a one or two to a ten year old tree,—but generally a two or three year old will do best. Shorten half the wood at transplanting, and be sure to have the earth hammered tightly in. The heel and toe business makes but poor work, a heavy hammer is best.

In choosing Dwarf Pears, select those that have been budded close to the ground, as when they are replanted the stocks should be buried an inch below the pear scion, which prevents the attacks of the quince borer. If a long stem has to be buried, the usual consequences of deep planting result, and do as much injury as the quince borer. Also in choosing, select, if possible, plants that have been raised from cuttings, for layered stocks have almost always a long deep tap-looking root, on which dwarf pears do not do well. If we have to use such dwarf pear trees, better shorten some of this long trunk root before planting. Never plant what appears to be the stem of a tree far beneath the surface, under any circumstances, for disease will be most probably an ultimate consequence.

Apples, Quinces, and Plums should be examined before frost sets in, and if any borers have effected a lodgment—a jack-

knife and a strong piece of wire are all the implements necessary; a man will go over several hundred trees a day. It is a cheap way of preserving trees. If many of the remedies proposed by correspondents in our paper have been tried and found effectual, such as tobacco stems, etc., there will be few borers to deal with in the examination, but the best plan is to put a piece of paper round the stems, tie, and then gas-tar it. This serves for two years, and not only keeps out the insects, but is a safeguard against mice, which are so apt to girdle trees under the snow in severe weather.

In cultivating Raspberries on a large scale, they do best in hills, as the cultivator keeps them from crowding each other so much. For garden culture they are better in rows, the suckers to be kept hoed out occasionally as they grow; enough only being left that will be required for fruiting next year. Where canes are required for new plantations, of course a portion of the crop must be sacrificed to the suckers.

Strawberries are much better when protected through the winter, no matter how "hardy" they may be. Very coarse strawy manure is the best material, which can be raked off in early spring. A few inches is sufficient, just enough to keep the sun off when frozen, which all our readers know by this time is the chief cause of loss by frost.

#### VEGETABLE GARDEN.

It is little use to attempt to grow vegetables well, unless the soil is well trenched. They may be and are grown on thin soils, not only at a great expense for manure, and at a great risk of dying out in a dry season, and of having the roots rotted out in a wet one. In those parts where the frost has not yet been severe enough to injure the celery crop, it may have another earthing up. Care must be exercised in the operation not to let the earth get into the hearts of the plants, or they will be liable to rot. Where the plant has evidently finished its growth for the season, measures should be taken to preserve it through the winter. For family use, it is probably as well to let it stay where it is growing, covering the soil with leaves, litter or manure, to keep out the frost, so that it can be taken up as wanted. Where large quantities are required, it is better to take it up and put in a smaller compass, still protecting it in any way that may be readily accessible. It always keeps best in the natural soil, where it is cool and moist and free from frost, and whatever mode of protection is resorted to, these facts should be kept in view. Beets, turnips, and other root crops, will also require protection. They are best divested of their foliage and packed in layers of sand in a cool cellar. Parsnips are best left in the

soil as long as possible. If any are wanted for late spring use, they may be left out to freeze in the soil, and will be much improved thereby. Cabbage is preserved in a variety of ways. If a few dozen only, they may be hung up by the roots in a cool cellar, or buried in the soil, heads downward, to keep out the rain, or laid on their sides as thickly as they can be placed, nearly covered with soil, and then completely covered with corn stalks, litter, or any protecting material. The main object in protecting all these kinds of vegetables is to prevent their growth by keeping them as cool as possible, and to prevent shrivelling by keeping them moist.

In making new vegetable gardens, a south-east aspect should be chosen, as far as practicable. Earliness in the crops is a very great desideratum, and such an aspect favors this point materially. Too great a slope is objectionable, as inducing too great a run of water in heavy rains. The plots for the crops should be laid off in squares or parallelograms, for convenience in digging, and the edges of the walks set with edging. If water can be introduced, it is a great convenience.

Sometimes broccoli does not head before there is danger of frosts, especially if growing vigorously. If taken up with small balls of earth, and set in a damp cellar, they will still perfect themselves.

Asparagus beds, after the tops have been cleared off, are better covered with litter or stable manure. The plants shoot easier for it next season.

When the ground becomes frozen, or no other work offers, preparation can always be made for advancing prospective work when it arrives. Beau-poles may be made; and if the ends are charred, and then dipped in coal tar, the commonest material will be rendered nearly equal to the best cedar.

#### HOT AND GREENHOUSE.

Plants stored away for the winter in cold pits, require more care for the first month or so than at any other time through the winter season. Many of them have unripened shoots, or shed many of their leaves, and unless these be cut off and removed, gangrene and decay commit distressing havoc. Air should be given at every opportunity, and nothing omitted that will, in any way, tend to harden the plants, and send vegetation to rest. No more water should be given than just sufficient to prevent withering, and temperature should be kept as near 40° as possible, and every chance taken to render the air about the plants dry. When frost actually does come, no further care than protection from its embraces will then be required. Plants so hardened may stay covered up for weeks, without any light or air, and secure from the slightest injury. Mice

constitute the most troublesome enemy in a pit closed for any length of time; but we have, as yet, found nothing better than the recommendation given in back volumes, namely, to take peas and soak them twenty-four hours in water, then roll in arsenic and sow in a pot, as if in the regular way of seed-sowing. A few pots so prepared, should be placed in the pit before permanently closing up. The mice usually make for these pots at their first entrance to the pits. If placed on the soil, they seem to guess your secret, and will not "bite."

Plants in cellars need much the same care as those in pits. Avoid heat and dampness; frequently, however, plants suffer in cellars through getting too dry. They should be looked over, at any rate, once a month, and a little water given, if likely to become entirely dry.

Plants in windows and rooms usually suffer from excessive waterings,—very dry air about them,—too great a heat, or too much shade. As much as possible, room plants should be selected for their indifference to these requirements. Succulents, such as Cactuses, Mesembryanthemums, Roccos, Crassulas, Aloes, &c., care not how dry the room, but they demand all the sunlight possible. Camellias, Chinese Primrose, Azaleas, *Diontra spectabilis*, *Polyanthuses*, *Violets*, *Hyacinths*, &c., do not mind a little shade; but they abhor a high temperature. Others again, while disliking heat, want light; of these, are *Calceolarias*, *Cinerarias*, *Geraniums*, *Pelargoniums*, *Pansies*, *Daisies*, *Tree Carnations*, perpetual blooming *Pinks*, *Roses* and the like "Leaf plants," for the most part, like a close, moist atmosphere, and a moderate degree of heat to do well. For these, glass partitions and closely glazed cases are usually employed. A great error in the growth of plants in these cases, is to suppose they require no air. The closeness is to secure a moist atmosphere, not to exclude the air. Whenever, therefore, the temperature is low, and little evaporation going on, the opportunity should be seized to air the cases; a few moments are sufficient. A very pretty plant arrangement is made in parlors that have bay windows; the whole window may be closed off from the main part of the room by a sash, and filled with plants. Some on the floor,—some on shelves, and some pendent from the roof. A gas jet lamp will be quite sufficient, with the usual window shutters, to keep out frost during the night or extra severe weather, while the regular day temperature of the room will suffice for that time. When the gas is burning, provision should be made for the admission of fresh air from the room at the bottom of the case, and for the exit of consumed air at the top of the case. This is best accomplished by a tube to lead from the lamp.

It must, however, be remarked that the fumes of burning gas is highly injurious to vegetation, and any adaptation of heating by it will fail, unless provision be made to lead the fumes away. With this precaution, gas lights in town and where it can be had cheaply, would be very useful in heating small parlor plant cabinets.

To those who have larger plant cabinets or small conservatories, connections with heaters or hot water from kitchen ranges will suggest themselves. This is often done. The great error we have often noticed is, that the heat is led to the back only, when it should be continued right to the front or coldest part of the house.

When heaters are employed, the oxygen of the air is usually defective, and, besides, the air is very dry and ungenial to healthy vegetation. Evaporating pans around the mouth of the air flues should be used in such cases,—syringing done at frequent intervals, and pure fresh air given whenever a warm out-door spell furnishes the opportunity.

The most critical season to these plants is fast approaching. A very common error, especially in houses heated by smoke flues, is, to keep the temperature too high. Unless the house be heated by hot water, a temperature of 55° will do perfectly well. The absorbent property of heated bricks, in flues, is so great, that the excessive waterings necessary to replace the moisture they absorb is more injurious to the plants than a moderately low temperature. In a house heated by hot water, a temperature of 65° may be maintained with advantage. The house will be very gay with *Habrothamnus*, *Cetrums*, *Begonias*, *Pentas*, *Plumbagoes*, and so on, and the syringe must be kept in daily requisition. It is highly advantageous to put a little sulphur, lime water, or soft soap into the syringing water occasionally, as the red spider, mealy bug, or scale, respectively, may make their appearance; this, with a vigorous use of one's eyes and fingers at times will keep them pretty well in check. *Orchidæ*, those of them which bloom on finishing their growths, will begin to add considerably to the attractions of the "hot-house." As any come into flower, they should have less water at each time, but be watered more frequently than they have been accustomed to; a very slight "dewing" with the syringe is all that is required. Heavy waterings and high temperature, together, destroy more orchids than many would dream of. Still atmospheric moisture must be retained for them in any case.

It is said that in England, the extent of land covered with trees has increased forty thousand acres in the last thirty-five years, and tree planting is encouraged among landholders by liberal premiums.

## CONDITION OF CROPS IN THE UNITED STATES.

The Monthly Report of the Department of Agriculture, at Washington, contains the following account of the crops:—

The influence of drought and of the unusually low temperature of September have been unfavorable to the ripening of fruits and to the maturing of corn and other crops. No general or serious damage has resulted to corn, a large portion of the crop being well advanced by the high temperature of August before the recurrence of frost. The drought of midsummer has been almost unbroken in the West up to the date of these returns, interfering greatly with the seedling and growth of the areas which farmers have been able to plant.

### CORN.

In Maine and Vermont injuries from early frosts are reported, and in portions of the former State from grasshoppers. The other New England States indicate comparatively high condition. On Lake Ontario an injurious frost is recorded as early as the 21st of September, and injuries from frost are indicated in Erie, Franklin, Putnam, Ulster, and Wyoming. In some of the Upper counties of New Jersey, and in the highlands of North-east Pennsylvania, the fodder is much damaged, though the corn itself is too far advanced for material injury. In all the States between New York and Virginia, condition averages high. In Virginia the best soils well cultivated are covered with superior corn, and several counties report the best crop in several years; others have suffered from drought, as Clarke, where "many fields will not make a bushel per acre," while in Albemarle one farmer will harvest fifty bushels per acre on 500 acres. The crop has been reduced in quantity and quality in the Carolinas by drought, mainly upon uplands of a light character. The bottom-lands in Georgia have been flooded to an unusual extent at various times, and especially during the great storms of August, and drought has parched thin soils; otherwise the crop would have been superior. Similar causes have reduced the yield in Alabama, and drought has wrought much damage in Mississippi and the more western Gulf States. Arkansas is the only Southern State that claims average condition for this important crop. The increase in area was so large that a greater product than that of last year may be expected in the cotton belt.

In the West, Kentucky, Illinois, and Michigan, report reduced condition in consequence of drought; and while local damages from this cause appear in other Western States, their average condition is high, and a large crop is certain. Some fields were injured by frost in Northern Ohio and Michigan on the 21st September. The yield in Wisconsin and Minnesota will be heavy, without injury from frost; and in Iowa, Nebraska, Kansas, and Missouri, another overflowing harvest of sound corn is assured.

The present condition, expressed as a percentage, 100 representing a good crop is as follows: Above an average, New Hampshire, 111; Massachusetts, 103; Rhode Island, 101; Connecticut, 105; New Jersey, 102; Delaware, 108; Maryland, 103; Arkansas, 102; Missouri, 112; Ohio, 104; Wis-

consin, 108; Minnesota, 110; Iowa, 114; Kansas, 119; Nebraska, 112.

#### WHEAT.

The product of wheat, as calculated from county estimates of our correspondents, appears to be about 7 per cent. less than last year. The percentages of last year's crop in the several States are as follows: Maine, 87; New Hampshire, 106; Vermont, 94; Massachusetts, 104; Connecticut, 100; New York, 103; New Jersey, 125; Pennsylvania, 123; Delaware, 100; Maryland, 120; Virginia, 85; North Carolina, 65; South Carolina, 60; Georgia, 65; Alabama, 71; Mississippi, 84; Texas, 90; Arkansas, 85; Tennessee, 60; West Virginia, 103; Kentucky, 75; Missouri, 102; Illinois, 93; Indiana, 90; Ohio, 99; Michigan, 110; Wisconsin, 90; Minnesota, 75; Iowa, 90; Kansas, 113; Nebraska, 96; California, 90; Oregon, 101. The quality is generally superior. It is placed above an average in all the Western States except Kentucky, Iowa, and Nebraska.

Drought and grasshoppers reduced the yield materially in portions of Maine and Vermont. In Albany county, New York, there was loss of early-sown wheat from weevil, but in several of the best wheat-growing counties of that State the best result for several years was obtained. A fine crop in quantity and quality is reported in Pennsylvania; in some places where the straw was short the season was favorable for heading well. The wheat of the Southern States was considerably injured by rust. The Tappahannock is still the most reliable variety in that section. One correspondent in Tennessee (Sullivan County) reports that notwithstanding the general failure of wheat, he was able to secure, upon poor soil, 24½ bushels per acre, by the application of twenty two-horse loads of sheep manure per acre. Wheat was greatly injured in Kentucky by the frost of April 23, and the severe drought which followed reduced still further both yield and quality. The losses in the West were mainly from insects, slightly from winter-killing, and from April frosts, and to some extent due to drought which retarded growth and tillering. Spring-wheat was in many places almost destroyed by the chinch-bug.

The yield in Minnesota is greatly reduced. Several counties report an average of only eight bushels per acre. Disappointment is experienced in many places at the result in thrashing. The depreciation in Iowa is estimated at 10 per cent. The chinch-bug was especially injurious in the Northwest. The product is large in Kansas, notwithstanding the destruction of spring-wheat by this pest. In Doniphan County, fall-wheat is unusually heavy and of fine quality, averaging sixty-three pounds to the bushel and twenty-five bushels per acre, but spring-wheat is so destroyed by the chinch-bug as to be scarcely worth harvesting. In Nebraska there will be a large increase of fall sowing, as the result of experience of the past. The crop of Oregon is a good one; one county (Polk) reports a product of half a million bushels.

#### OATS.

The product of oats will be about as large as the crop of last year. The States producing more than 1870 are New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, Mississippi, Arkansas, Indiana, Ohio, Wisconsin, Iowa and Kansas. The quality in the Eastern, Middle, and Western States

is good. Drought and grasshoppers cut short the crop in Maine. The product is large in New York, though not uniform, some counties reporting less than last year, others an "enormous yield." The harvest was shortened in New Jersey by dry weather early in the season, and wet weather prior to harvesting; and also in sections of Pennsylvania, as in Berks, where the weight is reported at 24 to 30 pounds to the bushel. Rust prevailed generally in the Southern States, and drought wrought local injury. In Kentucky, oats is the best grain crop. In Illinois the product is an average one. In Decatur, as in many other counties, the crop is reported good, notwithstanding the drought, and in Livingston, as elsewhere, "the yield is 40 to 50 bushels per acre where not injured by the chinch-bug. In Lafayette County, Wisconsin, is reported "the finest crop of oats ever raised;" in some cases 95 bushels per acre. In Milwaukee County, the White Schonen (distributed by the Department of Agriculture) "averages 65 bushels per acre, the Norway 38½ bushels." In Muscatine County, Iowa, the yield is 40 to 75 bushels per acre. The losses from the chinch-bug were general in Missouri, yet a nearly average crop is reported; and Kansas has bid defiance to chinch-bugs, and claims an increase of 10 per cent. over last year.

#### BARLEY.

The product is greater than last year in New Hampshire, Vermont, New York, Ohio, Indiana, Wisconsin, Iowa, Kansas, and Oregon. The quality is above an average in all of the New England States, except Maine, and in New York, Tennessee, West Virginia, Ohio, Michigan, Wisconsin, Iowa, Kansas, and Oregon. As a whole, the quality may be said to be fully medium, and the quantity very nearly an average.

#### BUCKWHEAT.

This crop is comparatively a poor one, the average condition being low in nearly all the States. In Maine the growth was large, and blossoms abundant, but they did not fill. In all the States north of Virginia and Kentucky it was injured by the frosts of September 21 and 22, and in Southern Indiana and Ohio by the frosts of the 29th and 30th September. In Des Moines County, Iowa, it was "all killed by frost, September 21." In Dakota killing frost came as early as 12th of September. Drought has also reduced the yield.

#### POTATOES.

The potato crop is somewhat above an average in the New England and Middle States, Vermont and Delaware constituting the only exceptions; below an average in nearly all the States of the South; a poor yield in Kentucky, Missouri, Illinois, and Indiana, and a fine product in the Northwestern and Trans-Missouri States. Taken together, the product of the country must fall below an average.

**PUMPKIN PIES.**—Pare the Pumpkin, then grate it, and add sugar and ginger to taste, and milk enough to make it of the proper consistency; then line your pie-tins with crust, put in your pumpkin and bake in the ordinary way. After trying this once, no one will, I think, wish to go back to the old way of making pies of stewed pumpkin.

#### WHAT THEY SAY IN NEW BRUNSWICK.

Our neighbours in New Brunswick think it odd that our Board of Agriculture should have suddenly found themselves "all in a muddle," and they are at a loss to understand the causes that led to "the fix they were in." We don't like to cry over spilt milk, otherwise we should be tempted to give our friends a lucid explanation that would be quite satisfactory. All we wish to say is that the Members of the Board had nothing whatever to do with the action which led to the co-called "muddle" and "the fix." The *Colonial Farmer*, of Fredericton, says:—

The Nova Scotian Board of Agriculture has had a special meeting. An act was passed last year by the Legislature of that Province amending the Agricultural Act, and the legal effect of the amendment was found to be to abolish the then existing Board, without making any provision for carrying on the business until a new Board could be organized. They were therefore all in a muddle, and a special meeting was summoned at which Sir W. Young and other prominent individuals were present, and many were the expressions of regret at the fix they were in. However, after talking the matter over, a deputation was appointed to wait upon the Government, to see what could be done under the circumstances. The result was that the Government requested that the secretaries of local Societies be called upon to elect delegates so that counties may be represented at the Central Board, when the necessary Government appointments would be made. In the meantime it was ordered that the old Board continue to exercise the powers and functions of a Central Board until the new Board could be organized under the Act of 1871. It is said that had not this conclusion been arrived at, the Societies would have suffered much inconvenience and loss.

#### SHORT HORN HEADS.

Lovely as are the heads of the females, many bulls of the Bates blood are anything but good in this respect. There is an effeminacy in some of the sort which looks as if perseverance in one particular line had been carried too far, and nothing tells more of any such too close consanguinity than a feeble, weak, "pretty" head. You see it alike in man and beast. And yet you cannot of course, always "breed heads." With all the attention paid to this point at Warlaby, by far the worst "place" about the celebrated prize bull, Commander-in-Chief, was his head, and this was so bad as to mainly account for his ever having been beaten. It was more that of a steer than a bull, plain and common, with an unpardonable horn. On the other hand, Mr. Bates, whatever may have come of it afterwards, evidently attached due importance to this point, as the oft-told story goes of his once buying a bull at a long price, although he had never seen any more of the animal than his head.

The fatal mark against the head of the Shorthorn, "the damned spot," which, like that on Lady Macbeth's hand, nothing can



wash out, is the black or smutty nose, as held to be too sure a sign of bad blood or impurity in a close or more remote degree. But there is no telling how or when you may throw back to a cross, and Collings crossed with the Kyloc, while there were "unsuspected jumps in the dark," that are, nevertheless, very much matters of history. Perhaps no animal of any repute was ever credited with so many black noses as a well-known Northern "Duke," and there are tribes in descent from him which throw black noses to this day. There is, however, a difference between a thorough smutty nose, and one which is only dark in patches, of which Mr. Pawlett's prize bull, Baron Warlab, is a very recent example. Many maintain that this was not a smutty nose in the true acceptation of the term, and so one set of judges would pass him, and another bench set him aside. At the Manchester meeting of the Royal Agricultural Society they ordered him out, and at the Oxford meeting they awarded him a prize. According to Mr. Wright—in 1846—"There are many well-bred Shorthorns with dark muzzles. This has been considered by many to be a recent introduction through some inferior cross; but, without denying that, let it not be forgotten that some of the early Shorthorns were not entirely free from it, although not very common, but the sire of Foljambe could not boast of much delicacy there." When, somewhere about the beginning of the present century, Mr. Thos. Booth was showing his Shorthorn herd to a neighbour, the other objected to what he called their raw noses—"in his day the stock was nearly all black nosed, and he never knew a raw-nosed cow that was not delicate." It must be remembered that this was the word of a Yorkshire farmer, as uttered in the district from which the best Shorthorns have sprung. Early maturity or quick feeding is the chief recommendation of a Shorthorn; and so when we look one in the face we must bear in mind that what we want is, as Mr. Carr puts it, "a placidity and composure of mind, a phlegmatic disposition, suggestive of fattening propensity." In fact, a frisky Shorthorn should be something of an anomaly.

Not so the Devon. I should myself have a fancy for a certain wildness or boldness in the head of a pure North Devon; and when Captain Davy says this should in many points resemble the head of the deer, he seem to me to have very happily illustrated his subject. There is, of course, no surer tell-tale to this beautiful breed of animals than the blood-like head and lively look, as one may often distinguish in this way the little "native" gentleman from his commoner, heavier-countenanced cousin, born and bred on the fat lands of Somerset. With such a description apt to my hand, it would be worse than idle to attempt any other than that I have from Captain Davy:—"The head should be small, with a broad indented forehead, tapering considerably towards the nostrils; the nose of a creamy white; the jaws clean, and free from flesh; the eye bright, lively, and prominent, encircled by a deep orange-coloured ring; the ears thin; the horns of the cow long, spreading, and gracefully turned up, tapering off towards the end; in fact, the general aspect of the head should in many points resemble that of the deer. At the same time the expression must be gentle and intelligent. The horns of the bull are thicker set and more slightly curved, or in some instances standing out nearly square, with only a slight inclina-

tion upwards. Fault has been found with the length of the horn of the Devon as being disproportionate, and we have been recommended to get them more like those of the Shorthorn; but I hope, and indeed feel sure, that our breeders will never consent to give up one of the grandest characteristics of their breed."

Here, again, we have the raw nose, as the old Northern farmer contemptuously called it, and here, too, precisely the same sort of discussion crops up.—"A black, or even a spotted, nose is very much disliked, and a calf so marked is never kept by the best breeders. Now the wild cattle in Chillingham Park are of a creamy white colour, with black muzzles; may not the appearance at rare intervals of these black muzzles, and also of the white of which I have already spoken, be additional proofs, if any be wanting, that the Devons were originally descended from the wild cattle which were natives of these islands. I never heard these marks accounted for. Judging from the rude state of agriculture until, we may say, within the last 200 years, it is just possible that our ancestors were not so fastidious about the colour of the nose as we have since become, and did not object to breed from an animal with a black muzzle."

So says Captain Davy, and his theory is well put; but still it is not so clear why we should be so fastidious in preferring a white nose to a black. The Shorthorn breeders say the smut comes originally from a cross, although this would seem to be something of a hypothesis at best. Can the cause of a black nose be further shown by any accompanying want of style or quality—in a word, does its appearance necessarily imply an inferior animal in other respects? In support of my own theory, I am glad to say that some of the best and most successful Devons I have ever seen have had the handsomest heads, and I need but name Mr. James Davy's Temptress family to recall their fine deer-like character, telling as truly of their lineage as the longest pedigree in the Herd Book.

The mottle-faced Hereford is fast going out of fashion. Few people would object to buying a good mottle-faced cow, but no breeder of note would care to rear a bull thus marked, as he might be difficult to sell, for undoubtedly the white faces are now all the fashion. A well-known judge and breeder tells me that, beyond the colour of the face, and the length and straightness of the horn, the good points in a Hereford bull's head cannot differ much from those to be appreciated in other breeds. While, however, the horn of the bull runs straight and level from the poll, those of the cow and ox gradually curve upwards. The eye of the male should be rather lively than otherwise, and that of the cow conveying precisely the same calm, comfortable, good-tempered look which I have already identified with the Shorthorn. The face should be of a beautiful clean white in colour, backed by a rich red, more especially in the bull; the horn also white or light yellow, occasionally tipped with black, and the nose white; although here, again, we have the evil of black noses, which come, it is said, more frequently in Herefords than in any other breed of cattle. The head should certainly not be small in proportion to the other parts, as, in fact, a head either large or small out of proportion, is simply a deformity in any animal. A really good head must have a certain length and breadth, to which such a phrase as small can never reach. Mr. George

Smythies has favoured me with a measurement of the head of Governess, a choice Hereford cow, the property of Mr. Green, of Marlow:—

	Inches.
Length of face.....	21½
Between eyes.....	12
Round nose.....	35
Length of horns.....	20
Width of horns from tip to tip.....	37½

It is said that Professor Owen, if you give him only the thigh-bone of some antediluvian creature, will work up the frame of a perfect monster, and with these dimensions he could, no doubt, fashion out a model Hereford. Governess, however, was altogether on a larger scale than the animals now exhibited, which are neater and finer, as no doubt but few heads would measure against her. One of the kindest heads I ever saw on a Hereford cow was that of Stately 2d, the property of Mr. Evans, of Swanstone, though she never did quite so well in public as might have been expected; but—

"If to her share some trifling errors fall,  
Look in her face and you'll forget them all."

The champion Hereford bull of his day, on the contrary, begins with a somewhat mean, small head; whereas there should be something very noble in the head of a white-face, when seen at his best.

There is no animal which tells more of high breeding than an Alderney, or rather, a Jersey-born cow. There is a refined air and carriage, a certainly comely "presence," which would forbid all thoughts of the butcher, and never carry one's appetite beyond a syllabus on thin bread-and-butter. A Shorthorn bears "beefsteaks" on his very visage, whereas we shudder at the notion of cutting prime pieces out of old Daffodil, or of putting a round of Nora Creina in salt. It would be worse than killing and eating the pet lamb, let alone the question of Daffodil ever possessing any prime beef; while Nora, more palpably, being all angles, can have no rounds. No—the head and beaming eye of the Alderney speak again of her purpose, of rich cream and yellow butter; but the charm here is all on the cow's side. Beyond a peculiar, wild, wicked eye there is not much to admire in the head of an Alderney bull, and even the cows lose much of their graceful character when bred away from their native isle. In the Jersey scale of 36 points for a perfect cow or heifer, one each is allowed for the following excellencies:—"Head, small, fine, and tapering; cheek small; throat clean; muzzle fine, and encircled by a light colour; nostrils high and open; horns smooth, crumpled, not too thick at base, and tapering; ears small and thin (one point), of a deep orange colour within (one point); eye full and placid." The eye of the bull must be lively and his horn tipped with black, but beyond these the points are much the same. Mr. Dumbrell, of Ditchling, who has the largest herd of Alderneys in the kingdom, has thus sketched the head for me:—"The horns should be fine, tapering, and crumpled, coming level from the head, and not turned up. The ears large, plentifully fringed with fine silky hair, with the inside skin of the ear of a deep rich orange colour, and the hair between the horns fine. The eyes, placed wide apart, should be large, prominent, bright, and intelligent; the forehead wide, and depressed in the centre; the cheek fine, and very tapering to the nostrils, which should be large, and the muzzle black, edged with tan. The head itself should be

distinguished by a certain unmistakable evidence of good breeding, which is readily recognisable, but not so easily put upon paper." The Jersey Society goes on to distribute the other points over the back, the barrel, legs, and so forth; but if we put down 15 points for the head, and 10 for the udder, leaving the other 11 for general appearance, we should arrive at a tolerably accurate, if not so elaborate, an estimate of an Alderney, which, after all, you must judge mainly for and aft. I cannot believe in any man entering a ring with a pencil in his hand and carefully entering one point for this, another for that, until he had proved a very pretty little sum in simple addition. He would surely "bother" himself during that somewhat tedious process.\*

Mr. McCombie, again, speaking of course of his much-beloved Blackpolls, says:—"A perfect breeding or feeding animal should have a fine expression of countenance; I could point it out, but it is difficult to describe upon paper. It should be mild, serene, and expressive. He should have a small, well put on head, prominent eye, with a clean muzzle. Thick legs, thick tail, sunken eyes, and deep necks, with thick skin and bristly hair, always point to sluggish feeders." Some years since I was at a meeting of the Highland Society at Aberdeen, when rather a good story got about as to the heads of these famous Polls. Some philanthropists from Paris were present, and so struck were they with the Aberdeenshire cattle, that they offered on the part of some French humane society, an extra medal for the best bull, the impression being that an animal without horns could do little injury either to the herd or herdsman. Whereas the Poll has, in "fancy" parlance, rather "a fighting mug of his own," as often enough, like bulls of other breeds, a bit of temper, and with that hard bullet-head of his he will at times butt away like a nigger. However, the medal was duly awarded, and the French embassy returned, no doubt able to report that it had discovered a breed of cattle which must have flourished in Arcadia in the Golden Age—so gentle, so mild, and so harmless.

Let us look to another kind of Scotch cattle, and what would the West Highlander be without his head? The butcher will say in answer—"the very best beef"—but with his head all his character is gone. There is a wild grandeur, I had almost said majesty, about the head of the Highlander, that should count up very fast in any scale of his points, as perhaps no other animal shows in this respect such insignia of Nature's nobility. You may read of his Highland home in his clear bright eye, his magnificent horn, and his rough, but right royal coat. And the Southron would seem to have a deal still to learn in this way, for at the Smithfield Club Show of 1869, the judges selected as the best Highland ox an animal with an ugly "cowy" half-Ayrshire head, that was, no doubt, a mongrel; and a

\* Since writing this, I have heard an amusing story in point. A scale had been settled for certain breeds of sporting dogs, and at one of the shows the judges, after having awarded the premiums in a class, went on to prove their decisions by the new system. They accordingly noted down so many points for the head of the first prize dog, so many for his tail, so many for style, and so forth; and they proceeded to appraise the second and third prizes after the same fashion. The several totals were then carefully counted up, when it was found that each of these three dogs had precisely the same number of points in his favour!

now class had straightway to be instituted, in order to avoid such awkward "findings" for the future.—*Bath and West of England Society's Journal.*

### THE INDUSTRIAL CLASSES OF EUROPE.

The surplus labour of the old countries of Europe and Asia is flowing out in continuous streams to the uttermost ends of the earth. Old country governments feel it to be their duty to make known to their peoples the advantages and disadvantages of the various countries available for emigration, and the governments of new countries lacking in population feel it to be their interest to set forth the capabilities and resources of their unoccupied lands, mines and fisheries. There has recently been issued, in the form of a Blue Book, a series of "Reports from Her Majesty's Diplomatic and Consular Agents abroad respecting the condition of the Industrial Classes and the Purchase Power of Money in Foreign countries." The following abstract of, or rather selection from, these Reports is copied from the *Literary World* :—

At home we have an immense community overstocking the labour market here—jostling, and pressing, and knocking each other in the rough scramble for existence and daily bread. Is there profitable remuneration for them abroad? If so, what particular class of labour is required? Why should not the Agent of the Government send home reports on such matters? Such was the first idea which suggested itself to the late Earl of Clarendon, and a truly excellent one, and well was it carried out. A second series of reports has been published still more satisfactory than the first. "It has been pointed out to me," wrote his lordship in June, 1870, "that the value of the information obtained would be much increased if particulars were given generally—(1) in regard to the purchase power of money in foreign countries as compared with England; (2) in regard to matters connected with the preservation of health; and (3) in regard to the quality of work executed in the several departments of labour." On all these matters full particulars are given in this second series, to which we invite the attention of the reader. The series of reports of which this is one, promises to be one of the most useful ever published by our Government for the benefit of its people. It has, of course, its drawbacks, or it would not have been a Government blue-book. It contains pages and pages of statistics of no earthly interest to any human soul. For instance, how can it be a matter of concern to any that in 1863 butter was selling in Prussia at ninepence farthing per pound, in Pomerania at tenpence farthing, in Silesia at ninepence halfpenny, in Saxony at

tenpence halfpenny, in Westphalia at ninepence farthing, in the Rhineland at tenpence farthing, and in the Monarchy at ninepence three-farthings, and that in that year the difference between the highest and lowest prices actually amounted to one penny three-farthings! Yet we have four pages devoted to such figures in a tabular form. Again, under the head of Spain, we have pages devoted to such matters as the following:—"Of the registration of proprietors, and of their titles to slave property, and the declarations and notices to be made before the magistrates; on the education, both civil and Christian, that owners should give to their slaves; of their victualling and clothing; of the employment of slaves," and so on. And this is the more absurd as the consul who draws up this report of Puerto Rico honestly confesses that there is nothing in the place to induce the British artisan or labourer to emigrate there. If he worked in the fields in that climate he would be dead in less than three months; and if his work was indoors, the jealousy of the natives, the demoralising examples around, the absence of all means of educating his children, the fact that he would have to make a profession of the Roman Catholic religion, &c., would soon drive him away.

The chief merit of this volume is that it gives a complete and comparative view of the state of the labour market in all the countries of which it treats. An additional recommendation of it consists in the fact that these reports are official,—by men who write, not from hearsay, or from passing impressions or hasty glances, but from a knowledge the result of long residence in the countries and amongst the people of whom they write. Mr. Edward Herries apparently is an exception. He writes from Florence—"In conclusion, I take the liberty of remarking that never having lived among artisans, I can speak of their manners and customs only from hearsay. I am probably no better acquainted with the mode of existence of an average workman than an average workman is with mine, and I cannot help thinking that if an average workman were obliged to give an account of my habits, occupation, income, and expenditure, the statistics furnished by him would be strangely incorrect." Yet Mr. Herries' contribution is by no means the least valuable of the lot. It is something to have the Government make these inquiries. Hitherto the emigrant has been at the mercy of any charlatan or interested individual who has an interest in directing to any particular part of the world a stream of British emigration. Multitudes have thus been led to wretchedness,—a fate from which these reports may save them. They will learn that it is better often to bear the ills they have, than to fly to those they know not



of. They will learn where there is a demand for labour, and what is the class of labour required, and they will learn the character of the work done by foreign workmen, and the kind of men with whom they may be expected to compete in the markets of the world.

#### THE ENGLISH AND THE BELGIAN LABOURER.

The working man here is neither highly paid nor fed, and perhaps these two causes, combined with the cheapness of spirituous liquors, may contribute in a measure to keep him in a position of inferiority in comparison with the English artisan. It appears astonishing, however, that a workman should, despite these drawbacks, not only maintain himself and family decently, but even save money, and occasionally buy the cottage he lives in out of his savings. Yet such is the fact, and the secret seems to lie in the habits of strict economy and thrift practised by the artisan. In this country, too, he marries much later in life than the English workman, and, after marriage, his wife and children are expected to contribute their share in gaining a livelihood.

Provisions, again, are procured in the cheapest possible manner. The artisan in most cases, particularly if he lives in the suburbs of the town, hires a piece of land at about 1s. per Flemish rood, equal to about 400 square feet; this he plants with the small potatoes remaining over from the previous year's supply, increased by the purchase of a few additional sets; and though it might be supposed that the smallness of the sets would yield only sorry results, yet by dint of hand labour in the mornings and evenings, by the artisan, himself, and his family, and by the judicious application of liquid manure from the tank—without which no working man's establishment is complete—a fair crop is obtained, sufficient in quantity for the use of the family during the winter. It not uncommonly happens that he has a surplus, the sale of which realises enough to pay his house-rent. He also obtains a second crop of vegetables from the ground, and it is no exaggeration to say that he does not allow an inch of his miniature farm to remain unproductive.

Thus the Belgian artisan manages to live, and though his pay and his food are inferior to those of the English workman, yet his life is, in some respects, a less laborious one; his wants are few, and those wants are easily satisfied.

#### BELGIAN WORKMEN'S DECORATIONS.

The word "decoration" does not at once convey to the English reader the idea implied by the same word in French, and yet it is not easy otherwise to describe the badge of distinction (worn externally like the star of an order of knighthood), which was instituted in Bel-

gium in the year 1817 as a special mode of rewarding skillful and meritorious artisans. According to the Royal Decree establishing this industrial order, as it might be termed ("Décoration ouvrière") it was intended to be exclusively conferred upon workmen and artisans "of recognised ability and irreproachable conduct," but subsequent decrees extended its use to persons employed in agricultural pursuits, and in the fisheries, the order being divided into two classes, the first limited to 500, the second to 1,200 persons. Those who have obtained this honourable distinction are entitled to wear the "decoration" attached by a tricolour ribbon (the national colours) on the left breast. It consists in an oblong badge of elegant workmanship of gold for the first class, and silver for the second, relieved by a border of blue enamel and surmounted by a crown, and forms, attached to its ribbon, a handsome ornament. It is accompanied by an artistically engraved diploma, setting forth the name, occupation, and qualifications of the recipient, the same being usually framed and hung in a conspicuous place in the artisan's dwelling. These decorations, which are greatly prized by working men, have had the two-fold effect of exciting as a stimulus to exertion on the part of the artisans and of benefiting the masters by inducing good workmen to remain steadily in the same employ, the distinction being generally granted on the recommendation of the employers, and being looked upon as a reward for long and faithful services, as well as for good conduct and approved ability. The way in which they are usually obtained is the following: the employer or master addresses a request to the municipal authorities, enumerating the particular claims of the candidate. The application, if favourably entertained at the Town Hall, is then transmitted to the Commissary of Police of the district in which the artisan resides, for his support as to the character and conduct of the applicant. Both must be excellent to afford a chance of success, one of the conditions invariably insisted upon being that the children of the claimant regularly attend school. After undergoing this ordeal the application is submitted to the Minister of the Interior, upon whose recommendation the decoration is conferred by a special decree signed by the King.

The following is a list and description of the working men who have recently received the decoration of the second class extracted from the "Précurseur" newspaper of the 28th of September, 1870:\*

P. Jacobs, unmarried, 53 years of age, carpenter, has been for over forty years in the employ of M. Bex, timber merch-

ant and contractor, at Antwerp. He is a very able workman, and has shown special skill in the construction of doors, window frames, and wood-work generally.

C. Van Offel, married, 62 years old, carpenter. Van Offel has been also for thirty-nine years in the employ of M. Bex, and is in no degree inferior to Jacobs in point of ability and conduct.

A. Moreels, married, aged 44, working jeweller. Moreels has been constantly employed in the workshop of M. Dandeloey, jeweller, at Antwerp, where he served his apprenticeship. He has been foreman to the establishment for over twenty years to the entire satisfaction of his employer, who is happy to testify to the ability and good conduct of his assistant.

H. Plato, widower, aged 41, cabinet-maker. Plato has been for twenty-five years, in the establishment of M. Colpyn, and has, according to the declaration of his employer, shown particular skill and taste in the ornamental branches of the trade. He is highly inventive and intelligent as a workman, and is of irreproachable character.

J. Constenople, married, 55 years of age, mattress-maker. Constenople has been employed since 1837 by the Company for constructing beds for the army. He is a zealous, able, and well-conducted workman.

#### STATE OF LABOUR IN CHARENTE.

The working classes generally in the Charente Inférieure are in comfortable circumstances; poverty, accompanied with distress, is almost unknown amongst them; where it does exist it is usually traceable either to the fault of the individual or to his misfortunes, such as long illness; it rarely, except in cases of marked improvidence, arises from inability to obtain employment and remunerative wages. The artisans and workmen are, as a rule, honest, steady, provident, and remarkably abstemious and sober; and this observation applies with equal force to the workpeople of both sexes.

There is an absence of that strong separation between classes which exists in England and in various other countries; and this levelling upwards of the different classes, whilst it may have the effect of depressing in sentiment and character those of higher rank, has a perceptible influence in giving to the lower classes an independence of character and amount of self-reliance which, though not without drawbacks, raises them in the social scale, and by the confidence it creates, materially assists their efforts to better their position. It is thus that, in most branches of employment, it is rather the employed than the employer who regulates the rates of wages; sometimes the employer considers that he is conferring,

\* The first class medal is, as a rule, conferred only upon those who have previously obtained the second class.

not receiving, a favour, when he accepts board, lodging, and fair wages from an employer who will necessarily derive profit from his work; this feeling is rather encouraged by the circumstance that in many lines of business but a slight distinction, except in financial and general superintendence, is maintained between employers and employed; they dine together, work together, and the employed in some measure controls the work with which he is entrusted.

The general conditions of labour and social communion have therefore the tendency to diminish the harsh distinctions between master and servant, cause the latter to have more pride in his work and a stronger feeling of responsibility; and it may be said with justice that the French workman, not only in the amount and quality of his work, but in the honest desire that it should be creditable to him, can be favourably compared with the workman of any other country.

#### FRENCH ECONOMY.

Comparing, in a general manner, the purchase power of wages in the Charente Inférieure with the purchase power of equal wages in England, but little difference is to be noticed; in this district some of the necessaries of life are dearer, others cheaper than in England, and the economies which may be effected, or the comforts obtained, on a given amount of wages, will very much depend on the character or providence of the individual concerned; but, in order to form a just appreciation of this question, a marked distinction must be drawn between what the English workman and the French workman esteems to be the necessaries of life. The French, from their extreme moderation in food, their economical mode of dress, their sobriety, and providence, are able to live cheaper than a British workman would contentedly do; and many things which an English workman would consider as indispensable necessaries, a Frenchman of the same class would look upon as useless luxuries; and therefore French workmen are often found to save yearly a respectable portion upon wages which would barely be found sufficient for the maintenance of a British workman in the same position. The system of saving and economy has also a beneficial effect on the French workman; by giving him hope in the future, and enabling him, year by year, to make small investments which, accumulating, permit him in time to change and improve his position. Cases have constantly come under my notice where French workmen have agreed to purchase interests in lands or houses on the condition of paying small instalments out of their earnings spread over a series of years. Artisans and others are also continually found who, having purchased a farm or strip of vine-

yard (a contingency to which all seem to look forward), whenever misfortune befalls them are not ashamed to return to their former occupations, and if they have earned a sufficiency to recommence farming or other affairs on their own account, with better prospects of success. The British working man might, with advantage, emulate those examples which are here found to elevate the character of the working class, and lead to their contentment and prosperity.

#### GREECE AND ITALY.

From Greece we learn, as is evident from the state of the country, the Greeks are not much inclined to hard work, but rather to headcraft. They speculate instead, their object being to gain as much money as possible in the shortest space of time, and with the least possible bodily exertion. The Italian operatives on the whole have a good character. In Tuscany the principal of admitting the persons employed to some participation in the profits of their employers has been adopted with success. In North Italy there are many co-operative societies. From Rome we learn

#### HOW TO MAKE A FINE VOICE.

The very fine quality of the Roman voices is attributed to the custom of the mothers swaddling their babies, and when the mothers are employed out of doors the baby is suspended from its back to a nail in the wall and allowed to cry for several hours together, which continued act of crying exercises and forms the vocal organs in an extraordinary way.

#### A DUTCH REPORT ON STRIKES.

I have spoken of the Report drawn up by a mixed committee of working men and employers of labour at Arnheim to study the question of the rate of wages in connection with a mechanic's necessary expenses, and I stated the result at which they had arrived. It may not be amiss, in connection with the subject of which I have been speaking to close these few observations by naming the measures which the Committee recommended for adoption in order to bring the income and the expenditure of the artisan into harmony in the way most accordant with justice and order.

The Committee begin by deprecating the idea of resorting to any but perfectly legitimate measures for the attainment of the object in view. Alluding to the means so rapidly resorted to in other countries, they write:—

“A strike, even though it be on a grand scale, does not have the effect of making the workman less dependent, for it does not tend to promote a good understanding between masters and men; but, above all, it misses its aim, inasmuch as the master, having capital, can afford to await the end of the strike, or can avoid

all delay by finding fresh hands. Then it follows that the workman, annoyed at seeing others stand in the way of the success of his movement, very often resorts to violence against those who have supplanted him, or even to the destruction of his employer's property; i. e., of that capital out of which his own labour is to be paid. At this point he comes into collision with the public authority, which represses every act of violence. If it happens that he has remained a calm spectator, he sees after a time that his strike has been ineffectual, and, forced by need, returns to his work on the same or on scarcely better terms than before; then in his return, all the hardship for him, his dependence on his employer's capital is the same, and long does he feel in his household the results of the weeks during which he continued to consume while he ceased to earn.”

The Committee then state that they would recommend two methods which, together, would have the effect of bringing the workman's wages into proportion with his expenses; that is to say, they would recommend a direct and an indirect increase of wages.

The direct increase they propose to effect by amicable arrangement with the masters, who should be invited to follow an example recently set by one of their own number, and make a general advance of 1 cent (¼d.) per hour to begin with, issuing a circular or a notification to all their hands to that effect.

The indirect increase they say can be accomplished in two ways: the one by the lowering of prices through the establishment of co-operative stores; and the other by the acquirement of greater dexterity in the performance of work. Dwelling on the second of these two methods, they say:—

“The reason that all wages are not alike is because all labour is not equally productive. The man who works better than his neighbour will be better paid. The reward of labour is in constant proportion to its power. By how much the power is greater, by so much will the productiveness of the labour be greater, and the workman be better paid. Give the workman the opportunity of increasing his knowledge; let the School Board look after the workman of the future; let industrial schools be formed for the purpose of fitting him for his work; and lastly, let the workmen who show the greatest aptitude be enabled to go and see what is done in all countries, and obtain the stimulus of a noble ambition. . . . Above let all the workmen stimulate one another into taking a pleasure and an interest in their work. . . . The workman must proceed with his own development, and by his example and conduct influence his comrades but the other classes of society must aid him in procur-

ing means for his intellectual and moral development."

#### TRADES UNIONS.

The recent establishment of Trades Unions has been productive of pecuniary benefit to the working-classes, but has destroyed the good feeling that previously existed between them and their employers, and has lately given rise to protracted but fruitless strikes. The increase of wages and the slight reduction of the hours of labour which has taken place of late years has not been so advantageous as might have been expected; and there would seem to be less disposition among the men engaged in the building trade to attend evening schools and avail themselves of the opportunities for self-improvement than was to be observed when their pay was lower and their labour longer. It is, however, affirmed, on the other hand, that this deterioration is not so much to be found among the natives of Hamburg as among the strangers who have been attracted here in large numbers from the interior by the higher pay that is generally to be obtained.

#### RUSSIAN TREATMENT OF FOREIGNERS.

Recent Russian resolve requires all Russian enterprise to employ no foreigners or foreign material if they can be avoided; and it is notorious that foreigners are only sought where and when the Empire fails in supply, and then the most binding contracts are useless once the foreigner's art is learnt tolerably well by natives, who are quick at imitation; the smallest pretext is made an excuse for dismissing the foreigner; he is arbitrarily dismissed, and his only hope for even moderate redress lies in the influence and pains-taking of his Consul, who, in nine cases out of ten, refers the applicant to the civil tribunals, where no sane man would venture a lawsuit unless he resolves to settle down in the country ten or fifteen years to await an uncertain issue. It is upwards of ten years since an Englishman, who, with a Russian partner, set up a fine flour mill in this town, which, once in working order, the Russian tried to buy him out of; finding this impossible, the Russian dragged the Englishman into the tribunals; the mill was closed with everything perishable and imperishable in it; the doors were sealed, and so they remained up to this morning, when I drove past the establishment, and so probably matters will remain for another ten years; in the meantime, the unfortunate Englishman, who, believing the power of his adversary was in the fact of his nationality, became a Russian subject, and, after spending his last penny on his suit, has been reduced to the purchase of a donkey, and, assuming the garb of a Dulcamara, travels from fair to fair, selling bread and soap-pills as a specific against ague. I could quote volumes of

cases of unfair and arbitrary treatment to which Englishmen, decoyed out of England, in some instances with capital and families, have been subjected. Mr. Geo. Furness' case is too recent and well known to require further comment than the passing remark that he was quarrelled with the very moment the Russians learned to pave the streets of Odessa for themselves; and he is now in the Russian tribunals, adding to his ruinous losses daily, with every right on his side, but not the same conviction as to the final redress which will be awarded him.

Mr. William Millar, the son of an English General, who has for more than twenty-five years instructed, as superintending engineer of the Nicolaiev arsenal, nearly every one of the engineers and engine-drivers attached to the Black Sea naval force,—resides at this very moment a few doors from me in quasi poverty, having been shelved on the reduction of the naval establishment here in 1866, to make way for his foreman, received the scanty bounty of £65, and that only on the kind request and assistance of Her Majesty's Ambassador, and considers himself most fortunate (after being upwards of a year without employ, without means to get to England with his family, and actually lacking bread for it) to have obtained a temporary Government job at something short of £25 per month, and that too fast drawing to a close. Engineers, ship and boat builders, millers, tin-plate layers, boiler constructors, plumbers, farriers, stud-grooms, jockies, farmers, dairymen, painters, bookbinders, and in one instance even a lot of French colonists, men, and respectable men of all classes and callings, have, during my long sojourn in this country, applied to me, smarting under treatment such as I have described. With every possible will to aid them, beyond a compromise, in which my applicants, as a rule, have come worst off, nothing was possible; and though I consider that there is a vast opening for the introduction of labour from without, I should indeed be sorry to recommend any one to immigrate, however binding he may make his compact upon a Russian employer. Only very recently I refused, for the very reason I have mentioned, to assist Russians to obtain Englishmen for iron-shipbuilding, on a concession made of promises at Odessa; and my experience of shabby and scanty treatment palmed off on Englishmen and foreigners still more recently caused me to refuse to aid a plan for bringing out some plumbers, farriers, and wheelwrights, whom it was desired to bring out to South Russia to replace Prussians who had to return home consequent on the war.

In Odessa we learn there is a great demand for English governesses, nurses and servants. In Saxony and other parts of

Germany, free trade, that is, the abolition of the guilds of labour, is said to be most beneficial. In Sweden during the last six years there has been a great decrease of drunkenness consequent of education, restrictions on the sale and use of spirituous liquors, and on the acts for regulating the employment of children and persons under adult age in factories. The following we earnestly recommend to the consideration of masters and men. It refers to the

#### SUPERIORITY OF THE SWISS WORKMAN.

One of the many advantages possessed by the Swiss working man over his fellow-competitors in other lands, especially in England, is that, owing to the education he has received, he is able to find in a variety of rational pastimes that necessary relaxation from work which the others are unfortunately but too often reduced to seek in vacant indolence or low debauchery. To provide him, therefore, with the means of spending his leisure hours at least pleasantly, if not usefully, and thus to save him, as far as possible, from falling into vicious habits, is the self imposed task of numerous societies, not a few of which are founded by workmen themselves. Under their auspices local circulating libraries have been formed in many parts of the country, even in some of the most secluded rural communes, the works of which they are composed being carefully selected in order that they may suit the taste and position of those for whom they are more particularly intended. In 1869 the Canton of Geneva already possessed forty-three of these libraries, with 39,000 volumes, and that of Lucerne forty-one. The number in the remaining Cantons has not yet been ascertained. There are, moreover, numerous other public libraries, containing works of a much higher class, as well as museums in all the principal towns. Almanacs, reviews, and newspapers are likewise published for the special use of the working classes, and many of the daily papers give out on Sundays an extra sheet with the object of affording them additional reading matter. Lectures on the social and political questions of the day, and other attractive subjects, are frequently given, not only in the great centres of population, but also in the remote communes, where, in the absence of regular lecturers, the village clergyman or schoolmaster, and sometimes even ordinary workmen, undertake this task. There are innumerable working men's associations, which have some regular places of meeting, where books, periodicals, games, and refreshments, are provided for the members, whose time is chiefly engaged in debating, getting up dramatic performances, and acquiring a knowledge of modern languages, book-keeping, drawing, arithmetic, history, &c. Much attention is also devoted to

music, both vocal and instrumental, as a means of innocent recreation, singing being taught in all the primary schools. There is hardly a village which does not possess one or more choral societies, and in many cases a brass band. The rural districts of the Canton of Lucerne may be cited as an example of the general taste for music, the beneficial effects of which cannot be too highly appreciated. In this little strip of territory there are no less than sixteen principal choral societies, seventeen musical societies, thirteen theatrical societies, and twenty-five brass bands. Lenzberg, a town of 2,000 inhabitants, could already, some years back, boast of possessing 200 pianoes. In obscure villages, dramatic performances are sometimes given by the peasants themselves. In some parts of Switzerland pageants are periodically got up at considerable expense to commemorate some event of extraordinary interest in the local annals. Rifle matches and athletic sports are common throughout the country. All classes without distinction take part in these pastimes. Such being the case, the question naturally arises how it is that the working classes can dispose of so much leisure time. The answer is already at hand. Besides the evenings when their work is generally over, they can here turn to good account the Sundays and holydays (the latter are of course much more numerous in the Catholic Cantons than in the Protestant), instead of being driven, as often happens elsewhere, by the want of rational amusements, to ramble about listlessly, making an occasional halt at a public-house, or to sit at home decorously drunk.

In Antolia and many other parts it is intimated that while the British artisan would not thrive alone, as one of a colony he would have a very good chance. This is a subject worth considering. But on the whole it is to the vast continent of America that the emigrant must turn; in Europe or Asia or Africa he seems to have but a poor chance of getting on. Everywhere there is the pressure of a superabundant population, but even there there are signs of a glut. At Buffalo, for instance, thanks to the constant influx of Germans and Irish, the supply of unskilled labour has reached the point of saturation, and in California there seems to be no end of Chinese.

#### DROUGHT AND FIRE IN THE NORTHWEST.

Our correspondents in the Northwestern States send us distressing details of the effects of the two months' drought throughout the most of that region, and of the terrible fires which have, in a great measure, resulted therefrom. The earth is dried to such a depth that it acts as a conductor, and living trees are falling

from the action of the fire which undermines them. Streams and wells are unprecedentedly low, or entirely dry; vegetation is dried up; fields are so parched that there is little succulent food for stock. The fire-fiend has followed with appalling fury, causing fearful destruction of life and property. For several weeks great fires have been raging in the woods, in the dried marshes, and along the lines of railways, consuming buildings, fences, crops, and destroying live stock, desolating hundreds of square miles, and rendering homeless and without food or employment thousands of men, women, and children, just at the opening of winter. The loss of life is of frightful magnitude, and rarely in the history of the world have these fires been equalled in the destruction of human life and of property, and in the desolation of whole communities. Towns and villages have been swept out of existence in the space of a few hours, and thousands of human beings have been burned, drowned or have fallen victims to other violent forms of death. Not less than fifty villages, in the States of Wisconsin and Michigan, have been wholly or in part destroyed. The town of Peshtigo, Wisconsin, with a population of 1,500 to 2,000, has been entirely consumed, not a vestige of its habitations remaining, and those only of its population escaped who threw themselves into the water and reached the opposite shore. Hundreds were burned, suffocated, and drowned. This fire, driven by the high winds, swept over an area of eight miles square, destroying houses, barns, fences, etc., and the loss of life will number over a thousand. The Belgian settlement of Brussels was almost entirely consumed, many persons are missing, and the survivors are left destitute amid the ashes of their ruined homes. The whole coast, from Green Bay to Menomonee, has been devastated, many villages consumed and their population made houseless wanderers, dependent upon charity for the necessaries of life. On the east shore of Green Bay the loss of life is placed as high as at Peshtigo, and the destruction of buildings, fences, stock, &c., is complete. More than a dozen towns along the eastern shore of Michigan have been swept away, and many hundreds of people left without food or shelter. A large district, including several towns, has been devastated on the western coast. The town of Manistee, with a population of 4,000, has suffered severely by the flames, and the loss of property is stated at not less than one million of dollars. In the counties of Huron and Savigac, with a total population of 24,000, ten thousand must commence life anew, having lost everything but their lives. Besides the frightful loss of life reported, hundreds have been disabled, many partially roasted, causing additional suffering and destitution through-

out the region devastated. Detroit, Port Huron, Milwaukee, and other cities have converted all available space into hospitals, and the citizens have become nurses.

Dest. active fires are also raging in the forests and on the prairies of Minnesota, Iowa, Missouri, Indiana, Ohio, Kansas, Colorado, Wyoming, Dakota, and in Ontario, Canada, involving immense losses of property, of live stock, and of human life. In Minnesota the fire swept over the prairie into the forests of Glencoe, Le Sueur, Mankato, and New Ulm. The fire is said to have reached nearly as far south as the Iowa border, and east to the Minnesota River. Many small towns have been completely destroyed, and the farms in the track of the flames have been almost invariably swept of buildings, fences, crops, &c. Northern Minnesota is also the field of similar disasters. Nemaha and other counties in Kansas have suffered from these prairie fires; also various sections of Missouri and the other States named. In California fires are said to be raging in the mountains the whole length of the State. Copious rains in the regions of the Northwest, which have been the most fearfully scourged, have diminished the ravages, and may soon exhaust the destructive power of the flames; but the devastation already accomplished is sickening to contemplate, and the sufferings of the people must be great the ensuing winter, and the agricultural interests of the burned districts will be crippled for some time to come.—*Commissioner of Agriculture, U. S. A.*

#### DIRECTIONS FOR THE PROPER MANAGEMENT OF THE FLAX CROP.

COMPILED BY THE COMMITTEE OF THE SOCIETY FOR THE PROMOTION AND IMPROVEMENT OF THE GROWTH OF FLAX IN IRELAND.

The following directions have been carefully arranged from the mass of information obtained by the Society, and their agriculturists, during their four years' experience, in the improved system of management. By this system, Irish flax has been produced, which brought, in some cases, the high prices of £90 to £140 per ton:

#### SOIL AND ROTATION.

By attention and careful cultivation, good flax may be grown on various soils; but some are much better adapted for it than others. The best is a sound, dry, deep loam, with a clay subsoil. It is very desirable that the land should be properly drained, and subsoiled; as, when it is saturated with either underground or surface water, good flax cannot be expected.

Without method, there cannot be success,—different soils require difference of rotation. In the best soils of Flanders, flax is grown in the third year of a seven-course rotation, or the fifth of a ten-course rotation. It is not considered generally advisable to grow flax more frequently than once in ten years.\* In Belgium, it invariably follows a grain crop,—generally oats; and, in this country, where oats is such a principal crop, the same system might be profitably pursued; but it must be understood, that it is only after oats following a green crop or old lea, and never after two or three succeeding crops of oats, which bad practice still prevails in some districts. It is a very general error, among farmers, to consider it necessary, that flax should follow a potato crop. Except on very poor soils, a better crop will be produced after grain, and the double benefit of the grain and flax secured. If old lea be broken up, and potatoes planted, a very fine crop of flax may be obtained in the following year.

#### PREPARATION OF THE SOIL.

One of the points of the greatest importance in the culture of flax is, by thorough-draining, and by careful and repeated cleansing of the land from weeds, to render it of the finest, deepest, and cleanest nature. This will make room for the roots to penetrate, which they will often do, to a depth equal to one-half the length of the stem above ground.

After wheat, one ploughing may be sufficient on light friable loam, but two are better; and on stiff soils, three are advisable,—one in Autumn, and two in Spring, so as to be ready for sowing in the first or second week of April. Much will, of course, depend on the nature of the soil, and the knowledge and experience of the farmer. The land should be so drained and subsoiled, that it can be sown in flats, which give more evenly, and much better crops. But, until the system of thorough-draining be general, it will be necessary, after oats, to plough early in Autumn. Throw the land into ridges, that it may receive the frost and air; and make surface drains, to carry off

\* The following rotation, which would bring flax once in ten years, has been proposed:—First year, potatoes; second, barley, laid down with grasses; third year, cut for soiling; fourth year, pasture; fifth year, flax; or the one one-half might be better in flax, the other in oats, so that, with the return of the rotation, which would be in five years, the flax could be put on the ground which, in the last rotatory course, was under oats, throwing a range of ten years between the flax crops coming into the same ground.

A gentleman, of much practical knowledge, recommends the following as being the most profitable:—1. Oats after grass and clover. 2. Flax pulled in August; then ploughed and harrowed in two cwt. guano and two cwt. gypsum; then sown with rape. 3. Potatoes or turnips, well manured. 4. Wheat, and sown in Spring, with clover and rye-grass. 5. Hay and clover. 6. Grazing. 7. Oats. 8. Flax and Winter vetches; guano, as before-mentioned. 9. Turnips, well manured. 10. Barley, sown with rye-grass and clover. 11. Clover and hay. 12. Grazing. 13. Oats.

the rains of Winter. Plough and harrow very early in Spring; and again, a month after, to bring the land into good tilth, and clean it thoroughly from weeds and roots. Following the last harrowing, it is necessary to roll, to give an even surface and consolidate the land, breaking this up again with a short-toothed, or seed harrow, ere sowing.

#### SOWING.

The seed best adapted for the generality of soils is Riga, although Dutch has been used, in many districts of country, for a series of years, with perfect success. American seed does not generally suit well, as it is apt to produce a coarse, branchy, stem. If used, it should only be on deep, loamy soils. Select plump, shining, heavy seed, of the best brands, from a respectable merchant. Sift it clear of all the seeds of weeds, which will save a great deal of after trouble, when the crop is growing. This may be done by fanners, and through a wire sieve, twelve bars to the inch. Home-saved seed, grown from foreign, has been used, in many cases, with success. It is suggested, that a small portion of the crop may be allowed to stand, until the seed be fully ripe, and then pulled, and the seed preserved for sowing; but the seed saved from it, in the following year, should only be used for feeding, or sold for the oil-mills. The proportion of seed may be stated at three-and-a-half Imperial bushels to the Irish or Plantation acre; and so on, in proportion, to the Scotch or Cunningham, and the English or Statute measure. It is better to sow too thick than too thin; as, with thick sowing, the stem grows tall and straight, with only one or two seed capsules at the top, and the fibre is found greatly superior in fineness and length, to that produced from thin sown flax, which grows coarse, and branches out, producing much seed, but a very inferior quality of fibre. The ground being pulverized and well cleaned, roll and sow. After sowing, cover it with a seed harrow, going twice over it,—once up and down, and once across or anglewise; as this makes it more equally spread, and avoids the small drills made by the teeth of the harrow. Finish with the roller, which will leave the seed covered about an inch, the proper depth. The ridges should be very little raised in the centre; when the ground is ready for the seed, otherwise the crop will not ripen evenly; and when land is properly drained, there should be no ridges. The sowing of clover and grass-seeds along with the flax is not advised, when it can be conveniently avoided, as these plants always injure the root ends of the flax. But carrots may be sown in suitable soils, in drills, so that the person pulling the flax may step over the rows, which may be afterwards hoed and cleaned, and

should have some liquid manure. A stolen crop of rape or Winter vetches may be taken after the flax. Rolling the ground, after sowing, is very advisable, care being taken not to roll, when the ground is so wet, that the earth adheres to the roller.

#### WEEDING.

If care has been paid to cleaning the seed and the soil, few weeds will appear; but if there be any, they must be carefully pulled. It is done, in Belgium, by women and children, who, with coarse cloths round their knees, creep along on all-fours; this injures the young plant less than walking over it (which, if done, should be by persons whose shoes are not filled with nails); they should work, also, facing the wind, so that the plants, laid flat by the pressure, may be blown up again, or thus be assisted to regain their upright position. The tender plant, pressed one way, soon recovers; but if twisted or flattened by careless weeders it seldom rises again.

#### PULLING.

The time when flax should be pulled is a point of much nicety to determine. The fibre is in the best state, before seed is quite ripe. If pulled too soon, although the fibre is fine, the great waste in scutching and hackling renders it unprofitable; and, if pulled too late, the additional yield does not compensate for the coarseness of the fibre. It may be stated, that the best time for pulling is, when the seeds are beginning to change from a green to a pale brown colour, and the stalk to become yellow, for about two-thirds of its height from the ground. When any of the crop is lying, and suffering from wet, it should be pulled as soon as possible, and kept by itself. So long as the ground is undrained, and imperfectly levelled before sowing, the flax will be found of different lengths. In such case, pull each length separately, and steep in separate pools, or keep it separate, in the same pool. If the ground has been thorough-drained, and laid out evenly, the flax will be all of the same length. It is more essential to take time and care to keep the flax *even, like a brush*, at the root ends. This increases the value to the spinner, and, of course, to the grower, who will be amply repaid, by an additional price for his extra trouble. Let the handfuls of pulled flax be laid across each other, diagonally, to be ready for the

#### RIPPLING.

Which should be carried on at the same time, and in the same field, with the pulling. If the only advantage to be derived from rippling was the comparative ease with which rippled flax is handled, the practice ought always be adopted. But, besides this, the seed is a most valuable part of the crop, being worth, if sold for the oil-mill, £3 per acre; and, if used for



feeding stock, of all kinds, at least £4 per acre. The apparatus is very simple. The ripple consists of a row of iron teeth screwed into a block of wood. This can be procured in Belfast, or may be made by any handy blacksmith.\* It is to be taken to the field, where the flax is being pulled, and screwed down to the centre of a nine-foot plank, resting on two stools. The rippers may either stand, or sit astride at opposite ends. They should be at such a distance from the comb, as to permit of their striking it properly and alternately. A winnowing sheet must be placed under them, to receive the bolls as they are rippled off; and then they are ready to receive the flax just pulled,—the handfuls being placed diagonally, and bound up in a sheaf. The sheaf is laid down at the right hand of the rippler, and untied. He takes a handful with one hand, about six inches from the root, and a little nearer the top, with the other. He spreads the top of the handful like a fan, draws the one-half of it through the comb, and the other half past the side; and, by a half-turn of the wrist, the same operation is repeated with the rest of the bunch. Thus the flax can be rippled without being passed more than once through the comb. He then lays the handfuls down at his left side, *each handful* crossing the other, when the sheaf should be carefully tied up and removed. The object of crossing the handfuls so carefully, after rippling, when tying up the beets for the steep is, that they will part freely from each other, when they are taken to spread out on the grass, and not interlock, and be put out of their even order, as would otherwise be the case. If the weather be dry, the bolls should be kept in the field, spread on winnow-cloths, or other contrivance for drying; and, if turned, from time to time, they will win. Passing the bolls first through a coarse riddle, and afterwards through fanners, to remove straws and leaves, will facilitate the drying. If the weather is moist, they should be taken in-doors, and spread out thinly and evenly on a barn floor, or in a loft, leaving windows and doors open, to allow a thorough current of air; and turned twice a-day. When *nearly dry*, they may be taken to a corn-kiln (taking care not to raise it above summer heat), and carefully tumbled, until no moisture remains. By the above plan of *slow drying*, the seed has time to imbibe all the juices that remain in the husk, and become perfectly ripe. If it be taken, at once, from the field, and dried *hurriedly* on the kiln, these juices will be burned up, and the seed will become shrivelled and parched, little, nutritious matter remaining. In fine seasons, the bolls should always

\* The best ripples are made of  $\frac{1}{2}$  inch square rods of iron, placed with the angles of iron next the ripples,  $\frac{3}{16}$ ths of an inch asunder at the bottom,  $\frac{1}{2}$  inch at the top, and 19 inches long, to allow a sufficient spring, and save much breaking of flax.

be dried in the open air, the seed threshed out, and the heaviest and plumpest used for sowing or crushing. The light seeds and chaff form most wholesome and nutritious feeding for cattle. Flax ought not to be allowed to stand in the field, if possible, even the second day; it should be rippled as soon as pulled, and carried to the water, as soon as possible, that it may not harden.

#### WATERING.

This process requires the greatest care and attention. River water is the best. If spring water has to be used, let the pond be filled some weeks, or months, if possible, before the flax is put in, that the sun and air may soften the water. That containing iron, or other mineral substances, should never be used. If river water can be had, it need not be let into the pond sooner than the day before the flax is to be steeped. Place the flax in the pool, in one layer, somewhat sloped, and in regular rows, with the root end uppermost. Cover with moss sods, or tough old lea sods, laid perfectly close, the sheer of each fitted to the other. Before putting on the sods, a layer of rushes or rag-weeds is recommended to be placed on the flax, especially in new ponds. Thus covered, it never sinks to the bottom, nor is it affected by air or light. A small stream of water allowed to run through a pool has been found to improve its colour. It will be sufficiently steeped, in an average time, from eight to fourteen days, according to the heat of the weather, and the nature of the water. Every grower should learn to know when the flax has had enough of the water, as a few hours too much may injure it. It is, however, much more frequently *under-watered* than *over-watered*. The best test is the following:—Try some stalks of average thickness, by breaking the *shove*, or woody part, in two places, about six or eight inches apart, at the middle of the stalk; catch the broken bit of wood, and if it *will pull freely out, downwards, for that length, without breaking or tearing the fibre, and with none of the fibre adhering to it*, it is ready to take out. Make this trial every six hours, after fermentation subsides, for sometimes the change is rapid. Never lift the flax roughly from the pool, with forks or grapes, but have it carefully handed out on the bank, by men standing in the water. Spread on the same day it is taken out, unless it be raining heavily; light rain does little harm. If it cannot be spread, let it be set on end, or separated into small parcels, to prevent it heating in the heap. It is advantageous to let the flax drain for a few hours, after being taken from the pool, by placing the bundles on their ends, close together, or on the flat with a slope.

#### SPREADING.

Select when possible, clean, short, thick

pasture ground for this operation; and mow down, and remove any weeds that rise above the surface of the sward. Lay the flax evenly on the grass, and spread thin, and very equally. If the directions, under the head of rippling, have been attended to, the handfuls will come readily asunder, without entangling. Turn it two or three times, while on the grass (with a rod about eight feet in length, and an inch-and-a-half in diameter,) that it may not become of different shades, by the unequal action of the sun, which is often the case, through inattention to this point. Turn it when there is a prospect of rain, that the flax may be beaten down a little, and thus prevented from being blown away.

#### LIFTING.

A good test of its being ready to lift is, to rub a few stalks from the top to the bottom; and, when the wood breaks easily, and separates from the fibre, leaving it sound, it has had enough of the grass. Also, when one stalk in fifty is perceived to form a *bow and string*, from the fibre contracting and separating from the woody stalk. But, the most certain way is, to prove a small quantity with the hand-break, or in a flax mill. In lifting, keep the lengths straight, and the ends even, otherwise great loss will occur in the rolling and scutching. Tie it up in small bundles; and if not taken soon to be scutched, it will be much improved by being put up in small stacks, loosely built, with stones or brambles in the bottom, to keep it dry, and allow a free circulation of air. Stacks built on pillars would be the best.

#### DRYING.

By fire, is *always most pernicious*. If properly steeped and grassed, no such drying is necessary; but to make it ready for breaking and scutching, exposure to the sun is sufficient. In some districts, it is put to dry *on kilns*, in a damp state, and is absolutely burnt, before it is dry, and the rich oily property of the flax is always greatly impaired. On this point, the Society can scarcely speak too strongly, as the flax is either destroyed, or rendered not worth one-half of what it would be, if properly dried.

#### BREAKING AND SCUTCHING.

If done by hand, should be on the *Belgian* system, which is less wasteful than that practised in Ireland. If by milling, the farmer will do well to select those mills in which the improved machinery has been introduced. The Society would also recommend, that the farmer should endeavour to have his flax scutched by a mill-owner who pays his men by the day, and not by the stone, even if it should cost him higher in proportion—the system of paying the scutchers by the stone, rendering them more anxious to do a large

quantity in the day, than to produce a good yield from the straw.

#### THE COURTRAI SYSTEM.

This is the universal mode in the district from which the finest flax we receive is brought. As soon as pulled, the flax is stooked without binding it. The handfuls are set up, resting against each other, the root ends spread out, and the top ends joining like the letter A, forming stooks about eight feet long, and a short trap keeping the ends firm. In this way, it will resist wind and rain well, and dry fast. In six or eight days, it may be stacked in the field; the seed to be taken off at leisure in Winter; the flax to be steeped the following May—a system which possesses the advantages of affording the farmer the best season of the year for steeping and grassing, and a time of comparative leisure, when his attention is not called off to the harvesting of other important crops. It has, in many cases, when tried in this country, proved highly successful; although, in others, it has failed, from want of experience, perhaps, in watering and grassing it. The treatment, in this way, has made the flax, in some cases, worth two or three shillings per stone more, than part of the same crop, steeped green. It is recommended that trials of this system should be made, in the first instance on a small scale.

#### MODE OF USING FLAXSEED FOR FEEDING CATTLE, &c.

The seed, given by itself, is too strong and oily to be very wholesome food; and, besides the mucilaginous matter prevents the seed from being bruised by the animals' teeth, or dissolved by the gastric juice. It is much better to take the bolls to a mill, where there are edge-stones, without thrashing out the seed, and to have them ground under the stones, set very close, or have the seed cracked in an oat bruiser; or the small farmer, when no other means are within his reach, may use a metal pot, bedded in clay, and pound the bolls in it, with hard wood pestle, made to fit the bottom of the pot. About a dozen of strokes are sufficient to make the bolls into a fine meal. The chaff and seed, mixed together, afford most excellent nourishing food. It may be given steamed or boiled; but it is best to steep the mixture from twelve to twenty-four hours in cold water, and then mix it up with lukewarm water, to the consistence of gruel. It will have formed a rich and finely dissolved jelly, easily digested, and of the most wholesome and nutritive quality, excellent to be given cows for producing plenty of milk and butter, for horses, for young cattle, or for pigs; a pint of linseed and half a bushel of the chaff, may be given at a feed.\* A farmer, who has once experienced the advantages

\* Four quarts of unbruised bolls contain, on an average, a pint of pure seed.

of saving the seed bolls of his flax crop, will never neglect it again, as they can be turned to advantage one way or other.

#### TO AVOID EXHAUSTING THE LAND BY GROWING FLAX.

It has always been urged against flax culture that it exhausted the soil; but this is not necessarily the case. If the seed be saved, and the cattle fed upon the bolls, a valuable addition will be made to the manure heap, as perhaps, the richest manure is produced by this kind of food. The putrescent water from the flax pools should be carefully preserved, and either used as a top-dressing for grass, or mixed with the weeds, and other refuse of the crop, in a heap to ferment. By these means, almost all the matter abstracted from the soil, by the flax crop would be returned in the shape of manure—the fibre being supplied by the atmosphere alone.

#### AMHERST AGRICULTURAL FAIR.

This Exhibition took place on the 24th of October. The number of entries was 197, being something less than last year. The attendance is reported as not large notwithstanding the weather was favorable. Some very good horses were on the ground. The show of neat Cattle was fair. The best pair of oxen girted seven feet six inches and seven feet eight inches; the best two year old steers weighed 2,600. There were eleven entries of sheep. The cereals, vegetables, and dairy produce made a good show, but there was a sad deficiency in manufactures. The *Chignecto Post* observes in reporting upon this Exhibition that "Cumberland is undoubtedly a magnificent Agricultural county, but its people do not yet feel that interest in its Agricultural Fairs sufficient to make them of real value to the country."

A day will come when the Legislatures of our own as well as the sister Province will make strict inquiries into all matters connected with Agriculture.

We consider the present, a most critical time, as regards this interest. Should investigation show that the large amounts of money annually granted are not productive of general good, but that the great body of farmers hold themselves aloof from taking any interest in the Societies, from what is well known to be a fact in a great many cases—the indisposition to contribute a paltry dollar towards advancing the interest of their special calling, it need not surprise anybody should the Governments readily discover their best policy would be to help only those who help themselves.

[The above is from a recent issue of the *Colonial Farmer*. We do not pretend to judge how far the remarks are applicable to the Agricultural Societies of New Brunswick, but this much is certain that they do not apply to our Societies in Nova Scotia. From another article in the same journal it appears that every dollar paid by members draws three from the Government, that is in New Brunswick. But in Nova Scotia our farmers have to take much more of the

burden upon their own backs. Last year they subscribed \$3046, and received from the Government \$3372. Most of the money was spent in the purchase of thorough-bred Stock. Very little of it goes for prizes, much of the prize funds being raised by subscriptions and otherwise, independent of the annual subscriptions of members, which alone count in rating for the Government grant. Here we feel that the time has come for a large increase of the Legislative grant, and if the policy be to help those who help themselves; then our farmers have a pretty strong claim, having raised their subscriptions from \$1800 in 1864 to \$3000 in 1870, without receiving any additional government aid.—Ed. J. of A.]

#### THE QUEEN OF AUTUMN.

We have not seen the chrysanthemum cultivated as it deserves to be in ninety-nine gardens out of every hundred we have visited. It is certainly one of the most "popular" of all flowers, yet its "homes" are far separated, and thousands of people who profess to love flowers could not now present a friend with a single flower or the promise of one. The bedding plants are no longer attractive, the plant houses everywhere are filled, the craving for flowers is as active as ever, and yet were amongst the thousands of gardens in the suburbs of London, to say nothing of other great centres, shall we find one in which the chrysanthemum has the place of honor to which it is entitled by sheer merit and usefulness? There can be but one answer, and it is "Nowhere." This, however, must be qualified with the observation that a select few of the choicest floricultural spirits here and there do appreciate it and bestow upon it the small amount of care it requires and deserves. Our correspondent, Mr. James, of Ineworth, has furnished the best lesson perhaps of the value of the chrysanthemum in a private garden, and the more to be commended, doubtless, because he has not only communicated his routine of cultivation to the readers of the *Gardener's Magazine*, but has presented proofs of his skill in the beautiful specimens he has exhibited at South Kensington. Those who cultivate the chrysanthemum with zeal equal to that of Mr. James are few and far between, yet we ought to be able to count them by hundreds, for in its season, it has no competitor, and may be truly designated the Queen of Autumn. That we do not meet with chrysanthemums in conservatories and sheltered boarders, except as rarities, is perhaps to be ascribed in part to a prejudice against them founded on ignorance, but in part also, no doubt, to the immense absorption of glass, labor and admiration by the ordinary run of bedding plants, which have become a conspiracy of

usurpers, claiming and obtaining all the strength of almost every garden for their presentation and keeping. Nevertheless, the gloom that has suddenly fallen on the gardens that were but lately gay with bedding plants, renders the chrysanthemum "conspicuous by its absence," and it would be a delightful relief from the dreariness that prevails, could we see in the conservatory, and the more suitable of the plant-houses for the intrusion of visitors, well-grown specimen chrysanthemums mixed with other plants, or, better still, such a solid phalanx as Mr. Forsyth will presently invite the public to behold in the only trade exhibition of the flower that the metropolis can now boast of. The numerous exhibitions by Chrysanthemum societies in all the great trading towns tend to diffuse a knowledge of the plant and promote an appreciation of its beauty; by the impressions made do not spread far, else we should hear of many more exhibitions than we do in rural districts far removed from great towns, where the need of November flowers is fully as great, and the poverty of the gardens even more noticeable.—*The Gardener's Magazine.*

#### WASHINGTON ITEMS.

We select a few items of interest from the Report of the Department at Washington.

**UTILIZATION OF SURPLUS POTATOES.**—In cases where the potato crop is so large as not to be readily marketable, and more or less in danger of decaying through the winter, the surplus can be so treated as to furnish a valuable article of food, capable of preservation for a long time. For this purpose the potatoes are to be washed clean, steamed, peeled while still hot, and finally pressed through a fine sieve. The potatoes thus compressed are then to be laid, while still hot, upon gratings and dried as quickly as possible, say in ten or twelve hours, in order to avoid any souring or putrefaction, this being generally the result of drying too slowly, or with an insufficient heat. The potatoes dried in this way are of an excellent flavor, and can be packed and kept for years in a dry place, and are serviceable for provisioning ships, armies in the field, &c. About 1,000 pounds of fresh potatoes will make 100 pounds of the dry article, which, when properly prepared, will have precisely the flavor and appearance of freshly boiled potatoes.

**SPRKY GROWTH OF RADISHES.**—In the publications of the Acclimatization Society of Palermo, we are informed that radishes may be obtained at any season, and very quickly, in the following manner: The seeds are to be first soaked for twenty-four hours and then placed in bags and exposed to the sun. They will

begin to germinate in about twenty-four hours, and are then to be set in a box filled with well-manured earth, and moistened from time to time with lukewarm water. In five or six days the radishes will attain the size of small onions. To grow radishes in winter the box is to be placed in a warm cellar, covered with a top, and the earth moistened from day to day with lukewarm water.

**EFFECT OF KEEPING FLOUR IN BARRELS.**—As is well known, flour kept in barrels for a long time often acquires a peculiar odor, supposed to be derived from the barrel. Professor Poleck, of Silosia, has lately made a careful examination of such flour, and has ascertained that this smell actually indicates an incipient decomposition prejudicial to bread-making, the gluten of the flour having in part become changed into a soluble body. Thus, while sound flour preserved in sacks contained 11.06 per cent. of gluten and 1.44 per cent. of soluble albuminous matter, four other specimens of flour taken from different barrels were severally composed of 8.87 per cent. gluten to 2.14 per cent. soluble albumen; 7.40 per cent. to 0.90 per cent.; 7.28 per cent. to 4.44 per cent.; and 6.54 per cent. to 6.46 per cent. Two samples with more than 6 per cent. of soluble matter had an acid reaction, while the others were neutral. Professor Poleck believes this chemical change of the flour to be induced by the fact that the barrel prevents communication with the atmospheric air and the equalization of temperature. This view is confirmed by the oft-repeated observation that flour in sacks keeps fresh for a much longer time, and that the mustiness in barrels always develops first and exists in the highest degree in the centre, viz. that portion most remote from the outer air.

**HOGS IN NORTHUMBERLAND, PENNSYLVANIA.**—*Northumberland County, Pa.* Hogs have become so numerous, and the corn crop is so large and good, that fresh pork will, it is thought, by the holidays, sell for six cents per pound by the hundred weight. Small pigs four to five weeks old, can now be purchased for fifty cents per head. In fact hogs are more plenty now than before the war. Our breeds have also been improved, being mostly a cross between the old country hogs and the large and famous Chester County white hogs.

**DISEASES OF STOCK.**—*Gloucester Co., Va.*—Horned cattle have been attacked with "murrain," and large numbers have died. One farmer lost two-thirds of his head, embracing nine out of eleven milch cows. The mortality has been far beyond that of any previous year for the last twenty-five years, and it still continues.

*Knox County, Tenn.*—Cattle, especially milch cows, are still dying near where

the Texas cattle were fed as they were shipped through to Virginia. Cholera is again making its ravages among the hogs and chickens in different parts of the county.

*Woodson County, Kans.*—Many cattle have died of Spanish fever in the southeastern portion of the county during the last two weeks. A drove of Texas cattle were driven through that part of the county in August, and in about two weeks the disease broke out among the native cattle. Several horses died of the same disease. The symptoms of the horses were the same as of the cattle.

*Lubec County, Kans.*—Spanish fever is prevailing among cattle; has proved fatal to many herds.

*Lebanon Co., Pa.*—A disease among chickens (said to be worms in the throat) has in many instances destroyed nearly whole flocks. Tobacco-smoke, turpentine, and drawing out the worms with small pinchers, are remedies used with more or less effect.

*Graves County, Ky.*—Hog cholera is raging to considerable extent, and chickens are affected by a similar disease.

*Spencer County, Ky.*—Hog cholera is prevailing in isolated cases.

*Lucas County, Iowa.*—Many hogs have died of cholera, some farmers have lost all; no remedy found.

*Newton County, Ark.*—Number of hogs reduced 60 per cent. the past summer by cholera. "Murrain" is making sad havoc among the cattle of this county.

#### AUTUMN COLORS OF FOLIAGE.

We have before suggested that we should, in selecting trees for planting, keep in mind the character of their autumnal foliage. It is so pleasant to have bits of bright color here and there, and they will be all the brighter if brought out against a background of evergreens. We made a good hit in this way by accident, having planted a Sorrel-tree (*Oxydendrum arboreum*) in full view from our study window. We admire the tree for its abundant long strings of Lily-of-the-Valley-like flowers, and placed it near the house. This autumn its foliage has ripened up to a rich crimson, against which the white seed-vessels, which look almost like the flowers which preceded them, show in fine contrast.

There is scarcely anything so brilliant at this season as the Virginia Creeper. We pass a hemlock directly upon a river bank, and upon its trunk is a dense patch of the foliage of the creeper that in previous years had been a wonder of color. This year it turned a dull brown, and remained so for several days. The other evening we found the brown changed to a blaze of scarlet. The colour had come in a single day, more brilliant than words can describe. This happened on a warm day, when there had been no frost for weeks. Indeed, it is now well established that frost has little or no agency in producing the autumnal tints of our forests, the most brilliant effects being produced in warm seasons, when the leaves have an opportunity to ripen completely.

Mr Quinn sent us this spring some scions of a Japanese pear which he said was worth growing for the beauty of its foliage. The leaves are of enormous size, about as large as one's hand, and of a fine, glossy green, which in autumn turns to a brilliant scarlet. We have not seen the fruit and do not know what species of pear it is, but it is highly ornamental, either in its green dress or in its flaming colors.—*American Agriculturist.*

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