Evils of Close Planting.

a bearing age, all right; but if expected to which, though planted about or before the li re and do good zervice as bearers, they middle of last century, are still healthy and mi ist have room in which to spread their bearing large crops. Similar trees may be lim be, and from which to get their susten- seen on the American side, near Wyandotte, and In the American Agriculturist, Michigan. A tree still older than any of Sam wel Hope says: A promising orchard of these is one planted by Governor Endicott, 30) trees, the property of a neighbor of in Mastachusetts 250 years ago, which en 1mine, just beginning to bear and on which ed its career only this year. Another plantthe owner realized \$900 last season, was ed on Cape Cod ten years later is still stand. sacrificed to the close-planting policy. The ing. Pear trees are permanent improvetrees, which one year ago showed evidence | ments to the farm, and will bring in their of health and vigor, have assumed a sichly | yield of luscious food for the table and profit. appearance. Cutting out every alternate able fruit for the market when the farmer's tree, with a liberal dressing of fertilizers, grandchildren are growing old. will save the orchard if the owner has the intelligence and nerve to do it at once. But what a loss to the soil, this production of 159 trees which can only be "cut down and cast into the fire." And "the survival of the fittest" will be set back two years at least by this plan of planting and then thinning an orchard. The apple tree demands a rich moist seil. It these conditions are furnished, it assumes large proportions and gives immense yields. Why, then, dwarf, starve and mutilate? Is it not better to have five thrifty trees producing fifty bushels of healthy fine fruit they contain as much as 64 per cent. of than fifty trees with fifty bushels of wormy, proteine and 4 4 per cant of fatty matter. knotty, grarly specimens fit only for pigs and thieving vargrants? In the latter instance the soil is taxed to produce the wood fifty trees instead of five. The cost of days. brchasing, planting, etc., all contributes toward swelling the contrast in the amount paid out. In the first instance you will be rewarded with satisfactory results; in the latter there will be disappointment, loss of time and money and a failure to realize when your orchard comes in bearing. The same results comparatively, though not so rapidly, manifest themselves with regard to the vine. Too close planting will sooner or | birds. later result disastrously. The proper distance for setting apple trees is from thirty leaves and keep the hens at work scratchto forty feet; for the grape not less than ing, they will lay better and keep in better fourteen to eighteen feet for vigorous growing vines. Of course varieties, methods of training, root pruning, top-dressing, etc., will modify these figures with regard to rake them up when they are dry, and store grapevines, but better have them too far | them away where they will keep dry. apart than too closely crowded.

PURE BRED STOCK.

While the demand for pure bred stock in Canada has not been active of late years, fowls. there is not a sufficient lack of demand to justify the term depression. Few of our breeders have retired from business, and a sufficient number have engaged in it to prevent any loss of ground, so far as the number of stock cattle is concerned. The lack of demand is reasonably enough ascribed to the comparatively low price of wheat and beef which have ruled for several years. Still early moulting hens. Old hens will Lot lay there are signs that here, as in the United until well feathered. States, the era of very high prices is over. In lividual animals, and some families of as ever, but they must be choice. The mere fact of pure blood will weigh less than in the past. The change may be unwelcome to some breeders, but nevertheless the wise will adapt themselves to it and aim at that individual excellence in breeding which, like analogous efforts in other departments of human labor, always leaves abundant room at the top. In the United States the change has come more rapidly than here, and it is now common for pure bred spring bulls to supposition that water is just what the be converted into steers and pure bred cows duck requires, and that dampness is no to be speved. The change will bring advant- injury, but the fact is when it is compelled ages to the farmer, and incidentally to the to remain during the night on damp breeding interest. The time was, not long ground, it becomes chilled and gets out of since, when animals of decided inferiority were purchased and locally "boomed" simply because they were imported or of pure blood. While reversion to the type of some remote ancestor of the days when the leading breeds had not become fixed in type is exceedingly uncommon, there is danger that the accidental defect of individual animals may be more or less transferred to their offspring.

SELLING CATTLE BY WEIGHT.

The buyers and sellers have, for the last two years, been exercised over the question of estimating weight versus the decison of the scales. American stock men, who were sellers, years ago decided that the scales | high priced pets. The best thing, therefore would save money. They are now generaliy found on the better class of our grain and stock farms. We are glad to know that our English friends are coming to the same line of belief. The Agricultural Gazette, London, gives the following, which cise as much neatness as possible in his busishows that there are stokmen on Great Britain who do not care to depend on the world to spoil from coming in too near guessing: A sale and purchase of lean stock | proximity with impurities, and firstclass of a somewhat unusual character was butter cannot be made from such milk, and completed at Malton Fai, the seller being it does not pay to make butter other than a well known Irish breeder, and the pur- first class. chaser a more celebrated ramdealer from the Beverley side. The two had attempted to do business in the old way, namely, by He takes a strip of flooring and sets it on a price per head, but having failed to strike the ground with the groove side up. In the a bargain it was suggested they should agree upon a price per stone-live weight. The result was, they fixed the price at 43 31 per 14 lb. The fifteen beasts were driven to the weighing machine, and the cattle weighed in pairs and the odd one. The total live weight was exactly 800 stones, which, at the agreed price, made a total of £170, or just 10s 3d per head more than the beasts could have been bought at.

FEEDING APPLES.

The following testimony of a Berkshire County farmer on the value of apples as a milk food, does not agree with the theory of some, but it does corroborate our own experience: I shall feed from 1,000 to 2,000 bushels of apples to my milch cows this fall, have proved in years that apples rate next a bushel a day to a cow, and then to a bus- with tread power. hel. I have fed as high as 500 bushels in a fall to my dairy of 13 cows, with the very farmers, and you will find it pays tar better drank at the fireside or in the saloon.

PEAR TREES.

Light is wanted on the length of time pear trees will flourish and bear fruit that One of the most common errors made have come into bearing in a few years after when an orchard is planted is to place the planting. Some kinds of pear trees are slow trees too near to each other. They are in hearing. Do they last longer than the small, and sixteen or twenty feet looks a early bearing varieties? As to longevity, long distance between them each way, so even this continent knows of some remarkthey are put in about a rod apart. If able instances. On the Canadian bank of planted with the expectation that half of the Detroit river, around Sandwich, are them are to be dead when they should be at | trees of the height of full grown elms,

HORSE CHESTNUTS AS FOOD.

According to the Paris "American Registers, the "German agriculturists have discovered a use for the much despised horse chestout. They dry, or rather bake them, and when thoroughly free from mosture, feed them to their castle, sheep and pigs, also to deer and boars. In the dried state these chastnuts crushed are considered both wholesome and nutritious, even mere so than acome. According to chemical analysis Sheep are not given more than one kilogram per day ; railch cattle up to five kilos, and animals for fattening as much as ten kilos a

POUNTRY NOTES.

All fowls, old and young, want green food in winter. Giving them free access to cabbage is a good way of supplying it,

At night a good teed of corn thoroughly warmed in the oven, will be appreciated. Be sure it is not so hot as to burn the

If you scatter some grain among straw or

Dead leaves can be turned to good account in the poultry house this winter; so

Burnt corn is a most excellent thing to feed to poultry, and is far superior to wood charcoal, which however, has a wonderful effect in promoting the health of the

For winter layers save the pullets of the larger breeds hatched in January or not later than March, the pullets of the small breeds that hatched in April, and the hens that moult early.

To be certain of eggs in winter, hens must be ten months old, well fed and housed. Select the early hatched pullets and the

Some of the most expert poultrymen occasionally feed their fowls turnips in winter. animals, will sell at probably as high prices They are not peeled, but cut into quarters and thrown into the yard. The birds know what to do with them.

> An exchange says a course of twenty four lessons in poultry keeping would be of more practical benefit to the majority of farmers' daughters than a course of twentyfour lessons on the organ or piano.

The duck should have a dry floor in winter. Some persons are under the condition.

AGRICULTURAL NOTES.

A safe rule in feeding calves is to give just what they will lick up clean-and no more. It is also a good rule to apply to horses, cows, pigs, sheep and chickens.

The farmer who thinks there can be nothing new in agriculture should remember that thirty or forty years ago his grandfather thought the same way. It is a fact, agriculture has made more advancement during the past ten years than in any other ten years of the world's history.

Good stock is desirable, but many dairy men and farmers think they cannot get the for them to do, is to select the best, take good care of them, and improve their race by the use of a good bull. In this way they will soon have good average herds.

It is for the dairyman's interest to exerness. Milk is one of the easiest things in

An ingenious Kansas man is said to have invented a fence to keep out chinch bugs. groove he puts candle wick and saturates it with coal oil. The chinch bug, when it crawls up the side of the board and gets a snuff of the kerosene, retreats in disgust.

Any young man not now on a farm, who desires to become a farmer, should hire out to the best farmer he can find and stay there two or three years. He will then get trained for his work and be paid for his training. He can still further help himself by a course of judicious reading and study during the winter evenings. Such a course for a young man of common sense and energy will fit him to manage a farm wisely and well

Did you ever try working bulls? It is done successfully by many. It takes away their ferocity; gives exercise and stamina and yields a little income to the owner. and expect a good profit by so doing, as I They can be worked double or singly. Use a collar similar to that of a horse, and he can his thoughts to the unnumbered evidences to meal for cream and butter. I pick my pull like a horse, only it is best not to work of the Father's love and care for him, to the apples when fully ripe, mix the sweet him over three hours at a time, as he cannot saving power of the outstretched arm, to the and sour as evenly as possible, and put them | endure so much as a horse. The easier way in a large heap in my barn, letting them is to use him in a tread power; here he can sweat and become fully mellow, but not operate a churn, cut the hay or corn stalks, he will suddenly find himself out of the rotten. Then I begin by feeding a peck saw wood, pump water, turn the grindstone, to a cow once a day, and increase to half or do any other work you may require done

The Princess Clementine of Belgium, is best of success and profit. Try it, brother sixteen years old. Her two sisters were married at seventeen. She will inherit a than putting them in the cider barrel to be vast fortune and is said to be beautiful and us partakers of the richness and fulness of accomplished.

Soul Chords.

God's Heart is the heart of all hearts that are tender

His Love is the love of all loves that are His Smile is the light of all beauty and

splendor, His taithful compassions each morning are new.

Though Mother may love me Jehovar loves Though Father, yet his love may fail to

Their love is the love of "The flesh" and the " Letter. While His love is infinite, perfect, and

His Life is the life of all life that existeth, Where footstep of Spirit or mortal hath

All vital conceptions have come as he listeth; Within-at the source of all being-is God

I live nay, not 1, by the grace of his favor, My hie is the Spirit-life breathing within, Yet, bound by the human, in fruitless en-

deavour I waste it to compass the purpose of sin. I love; but my love is the faintest returning.

Of all the sweet fullness He measures to give : but my gifts are so mean, I am learn-

How sordid and selfish a vassal can be. Of yore, he, who lay on a stone pillow,

sleeping, While night-watchers, waiting, revealed the Divine. At morn pledged a tithe to the Lord, for

· His keeping. Though meagre the gift, how much better than mine!

For Love's aweet bestowments, that come at my call, For labor, with boundless, eternal fruitions,

I bless the Beneficent Giver of all. "The Elms," Toronto. L. A MORRISON.

Burnt Lands

PROF. CHAS. G. D. ROBERTS. On other fields and other scenes the morn

Laughs from her blue-but not such fields Where comes no cheer of summer leaves

And no shade mitigates the day's white

These serious acres vast no groves adorn ;. But giant trunks, bleak shapes that once

Tower naked, unassuaged of rain or breeze, Their stern, gray isolation grimly borne.

The months roll over them, and mark no But when Spring stirs, or Autumn stills, the year,

Perchance some phantom leafage rustles Thro' their parched dreams-some old-time

notes ring strange, When in his slender treble, far and clear, Reiterates the rain-bird his complaint.

"The Wind Has Blawn my Plaid Awa."

" Over the hills, an' far away, It's over the hills an' far away. O'er the hills, and o'er the sea, The wind has blawn my plaid frae me. My tartan plaid, my ae good sheet, That keepit me frae wind and weet, An' held me bein baith night an' day, Is over the hills, an' far away.

"There was a wind, it cam' to me, Over the south, an' over the sea, An' it has blawn my corn an' hay, Over the hills, an' far away, It blew my corn, it blew my gear, It neither left me kid nor steer, An' blew my plaid, my only stay, Over the hills, an' far away.

"But though 't has left me bare indeed, An' blawn my bonnet off my head, There's something hid in Highland bras, It hasna blawn my sword away. Then o'er the hills, an' o'er the dales, Over all England and through Wales, The braidswords yet shall bear the sway Over the hills and far away."

A Street Minstrell

One late November afternoon, I sudden heard a gentle rune. I could not see whence came the song, But, tranced, stopped and listened long : And that drear month gave place to May. And all the city slipped away. The coal-carts ceased their din, -instead I heard bluebird overhead; The pave nents, black with dismal rain, Grew greenly to a country lane; Plainly as I see you, my friend, I saw the lilacs sway and bend, A blossoming apple orchard where The chimneys fret the foggy air; And wide mown fields of clover sweet Sent up their fragrance at my feet; And once again dear Phyllis sat The thorn beneath, and trimmed her hat.

Long looked I for my wizard bard : I found him on the boulevard ; And now my urban hearth he cheers, Singing all day of sylvan years, Right thankful for the warmer spot,-A cricket by July forgot!

Fraise and Prayer.

SARA J. DUNCAN.

The spirit of praise goes with and belongs with the spirit of prayer. It will often happen in the experience of a much tried and tempted disciple that, even in the depths of his distress, praise to his God will be the readiest and surest road out of those depths and up to the heights of spiritual joy and exaltation. If he dwells in prayer only on his needs and sins and sorrows, he will miss one of the supreme delights of communion with God. On the other hand, if he turns promises of succor and sustenance, and for all these pours out his heart in gratitude, depth into which he allowed himself to fall, and his only prayer need be for a continnance of the very blessings which have evoked his heartfelt praise. The God we praise is the God from whom all blessings flow, and we cannot praise him too often or too much for his wondrous love in making

his blessing.

Frogs Not Profitable.

In the Boston "Journal" some weeks ago appeared a quotation from another paper regarding a "frog farm" in which the extravagant statement was made that an income of \$5,000 could be obtained from raising these inhabitants of the marsh for sale. Fred Mather, superintendent of the New York Fish Commission and fishery editor of "Forest and Stream," demolishes this assertion by an interesting article in the last issue of of the "Forest and Stream". Therein he writes :

For the past four years this question of frog culture has given me some trouble in answering private letters from would be frog farmers, and in a legacy left by the late Seth Green, who wrote an article on it in the report of the New York Fishery Com. mission for 1873. This was widely copied, and each year some imaginative reporter gives an account of a mythical frog farm which has never existed. In 1875 this farm was located near Smithtown, Long Island. and I went there and found that there was no frog farm in that vicinity, nor was there any man living near the same place bearing the name given. The next year the apocryphal form was located near Philadelphia, and I had the same experience. Since that time I have only wasted postage in the parsait of the fabled industry.

Mr. Green gave the results of two years' experience in which he gathered frog spawn and hatched it, but lost his polywogs and abandoned frog culture, but he encouraged others to try it by saying the "difficulties can be overcome by patience and persever-

ance." Yet he further said : "When they become frogathey live on all kinds of insects, and the only thing I can see to make success sure is to procure insects in large quantities, enough to support a great number of frogs." And here is where For life, in this era, with all its conditions, the impracticability of raising frogs lies.

It is no trouble to gather large quantities of frog spawn and haven millions of tadpoles, nor to feed the latter on meat and vegetation, for they eat both. The enemies of the tadpele, or polywog, are numerous, and large frogs will eat small once. As an instance of the latter fact, I once took a dozen large American bullfrogs to Professor Mcore, of the Derby Museum at Liverpool, and they quickly swallowed the small European frogs that were in the tank where he placed them, Even if it were impossible to feed the frogs on meat, which it is not, the batrachian is of slow growth, and the balance would be on the wrong side of the ledger when they were

sent to market. I will travel to see the frog farmer "living on an income of \$5,000," all from his frogs. In my long experience as a pisciculturist the frog has been under constant notice; and I have tried to feed them on meat and mussels without success. My belief is that frog culture is a delusion, and that such a thing as a frog pond does not exist, and unless some genius arises who can find a way to feed his trops on beetles, flies and other insects, which, with some snails, constitute their natural food, there will never be a frog farm. The supply of frogs to New York markets comes mainly from Canada and places of sparse population, where they are not extensively eaten. Forty years ago Americans did not eat frogs, and every marsh in the country contained large ones. Now they are almost extinct scarcities in the State of New York, and do not breed and grow rapidly enough to pay to catch them. I think it probable that the batrachians, like the reptiles, are of long life and slow growth, and that a man would get very tired waiting to see a crop mature. Perhaps he might wait ten years to get large ones, but uever having raised a frog to maturity I can not say. The belief in their slow growth is based on the fact that many polywegs do not get their legs the season they are hatchsd, but pass the winter in the tadpole state;

Cold Water Fishes.

this points to slow maturity.

It will be a surprising fact to many readers than do warm waters. The schools of herrings about the coasts of Japan greatly exceed those of England, though the Japanese waters are the colder by at least twenty degrees. An idea of their numbers may be had from Capt. H. C. St. John's "Notes and Sketches."

In May and June this fish appears in incredible numbers. The straits, bays and creeks are alive with herrings. They are in such numbers that those nearest the beach are pushed out of the water, and the shore for miles is thus kept constantly replenished with fresh fish; countless numbers of secgulls, eagles, crows, besides foxes, wolves, and bears, find an ever ready meal, and the way the sea-gulls just picked the tidbit from the back of the neck, and left the remainder of the fish, showed how well they knew the suply was constant.

The Japanese simply run a net straight out from the shore, one hunderd and fifty or two hundred yards along a line of stakes. At the end of the net is a bag, into which along it, soon find their way. When required, the fisherman only have to go off, haul the bag up, and opening the end let the fish fall into their boat.

This species of herring is both large and coarser than our own. The temperature of the water in which they appear to flurish to such an extraordinary extent averages thirty-six degrees, whereas that in which our own fishes is found averages fifty-four degrees to fifty eight degrees.

Money in Pills.

Dr. Henry Miller, who made \$3,000,000 in the manufacture of pills, was buried at Wilmington, Mass., Sunday, in a casket which cost \$9,000. Four coal-black horses carried him to a temporary brick tomb which cost \$500, on a catafalque which cost \$2,000, and at the tomb the casket was placed in a big red cedar box, which cost \$250, held together by sixty big brass screws which cost \$18. Owing to the fact that his life ended rather suddenly another coffin equally magnificent, and intended to hold the first, was not completed in time for service. When completed it will have cost as much as the other, and the two will be placed, one within the other, inside of an oblong glass case three inches thick, to be made at a cost of \$300. The final resting place to be built at a cost of 10,000, will be a tomb in the village burying ground.

City Poet-"What a very queer-looking vellow weed that is." Young Lady-"Yellow weed! Goodness me! This is the beautiful 'Golden rod' that you raved about in your last poem."

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