

In case there is a slump in the diamond business, Cecil Rhodes might find employment in the museums as the \$10,000,000 prize beauty.

They have put a St. Louis man in jail on a charge of insanity because he believes he is in hell. The only trouble with that poor fellow is that he's too candid.

Ridding the heart of malice does not in itself free the hands from cruelty. A man may act cruelly from malice, but he may act just as cruelly from sheer coldness. He that would be kind must not only be delivered from the spirit of hate, he must be filled with the spirit of love. If the hands are never to be cruel, the heart must never be cold.

In the enterprising city of Buenos Ayres automobile carriages are no uncommon sight, in the form both of private vehicles and of delivery wagons. Cycle roads now radiate from Buenos Ayres to a distance of sixty and seventy miles in the surrounding country, and under the care of the Argentine Touring club these roads are reserved for the use of bicycles and automobiles.

A young missionary far in the interior of China received for baptism a little child. The name given was Moo Dee, so unusual a combination that the minister asked its origin. "I have heard of your man of God, Moo Dee," was the reply. "In our dialect Moo means love and Dee God. I would have my child, too love God." Mr. Moody was not a Chinese, but his name told in that language the secret of his life.

The manager of an immense business declares that it costs his house twenty thousand dollars a year simply to correct errors in invoices and other papers—mistakes due to poor writing and poor English, for which employees are responsible. "Some stenographers need but the idea to turn out the perfect letter," said he, "while others are a means of grace because they try the patience." The money lost because of ignorance and carelessness in that single house would pay the salaries of a considerable body of teachers in secondary schools whose pupils are supposed to learn how to write plainly and speak correctly.

A situation involving some tension has arisen out of a conflict of interests between the live stock companies and the frontier settlers. The companies wish to continue their occupancy of the great plains of the West as cattle ranges, and are urging the government to lease them to the highest bidder. The settlers wish the lands subdivided for homes and farms, and protest that they shall still be held open to individual purchase or to private entry under the homestead law, which gives 160 acres to each actual occupant who makes certain improvements. The governor of Nebraska invites other Western governors to a conference in the interest of the settlers.

Details of the sudden eruption from the central crater of Mount Etna, last July, are gradually coming to light through scientific reports. One of the most striking phenomena of the outbreak was the formation of an "eruptive pine" or "cloud-tree" directly above the crater. A famous example of these volcanic smoke-trees is that which was seen standing over Vesuvius during the destruction of Pompeii. But Etna is a far mightier and loftier volcano than Vesuvius. The verge of its great crater is nearly 11,000 feet above sea level, and the "eruptive pine" last July rose more than 16,000 feet above the crater. It was finally blown off by the wind, hiding the sun as it drifted away in an elongated black cloud.

An era of good feeling has begun to make its appearance among the various denominations professing Christianity. It is now not an infrequent occurrence in any of the large cities to see priests of the Methodist, Presbyterian, Catholic, Baptist churches, etc., in conference discussing reform topics. But just as this happy state of affairs begins to show on the horizon of the church world, J. Alexander Dowle has made his appearance at the head of a sect which threatens to grow into great proportions under the title of the Zion. Zion has set its face against all other denominations and has begun the construction of the city of Zion on the banks of Lake Michigan. The rapid strides being made by Dowleism has surprised church men generally. The real secret seems to be in its social and co-operative features. One of the corner-stones is a bank to which members may bring their money and check it out at pleasure. This feature may be adopted by other churches.

At a dinner given by a political club in New York recently a man who is unusually young for one who has attained to such prominence in his profession was for the first time in his life set down for a response to one of the toasts. When at last he was called on, his beardless face flushed and his manner was very embarrassed. Nevertheless he stood up and thus delivered himself: "Gentlemen, before I entered this room I had an excellent speech prepared. Only God and myself knew what I was going to say. Now God alone knows." And he sat down.

FARM AND GARDEN.

MATTERS OF INTEREST TO AGRICULTURISTS.

Some Up-to-Date Hints About Cultivation of the Soil and Yields Thereof—Horticulture, Viticulture and Floriculture.

Forcing Fruit Bearing.

(Condensed from Farmers' Review Stenographic Report of Wisconsin Horticultural Convention.)

A. L. Hatch spoke on what can be done to make plant live, grow and bear fruit. He said in part: A tree or any plant should have a balanced ration. The soil must be suited to the plant to be grown, and must contain the proper foods. Thus, you can't grow apple trees successfully on muck soils. Cultivation should begin early in the season, for it is early in the season that the tree makes most of its growth. Every fruit tree and plant should make a good growth every season. We should mulch and cultivate our trees every year. I have found that spring pruning gives better fruitage than at any other season of the year. Later pruning removes foliage that contains growth matter.

Water sprouts and those not coming out where wanted should be rubbed off in the spring, while yet in the bud stage. The real winter protection is in so growing the tree that the wood is well ripened and hardened up to stand the winter. The man that permits the foliage of his trees to be damaged by insects or diseases will have trees with wood only partly ripened, and such will have less power to stand hard winter conditions than will the trees that have had good foliage to ripen up their wood.

Q. Do you recommend puddling the roots of all trees before setting?

A.—Yes, sir. But perhaps I should not say all trees. However, I do not know any other way of getting good capillarity, that is, getting the roots so intimately connected with the dirt that capillary attraction can operate between them. This does not mean that we should make a thick, heavy mud to hold the roots. Would not you, Mr. Kellogg, puddle your trees before setting?

M. S. Kellogg—Yes.

Q.—How deep is it advisable to cultivate the orchard?

Mr. Hatch—That depends on how much cultivation the orchard has previously received. If it has been always in grass, the roots will be found so near the surface that only very superficial cultivation can be given; but if the orchard has been cultivated from the first, the roots will be deeper. If I had trees that had been planted for ten years, and never cultivated, I would not cultivate more than four inches deep. Grass sod in the orchard is very injurious to the trees, especially at times of the year when soil water is deficient and trees have to depend to some extent on the occasional showers. In that case the roots of the grass drink up about all of the moisture before it gets down to the roots. I have dug up sod in the orchard hours after a good shower and found that not one drop had got within reach of the roots of the trees; every blade of grass was acting as a pump, pumping the moisture back into the atmosphere. There are multitudes of trees that by reason of the sod beneath them are thirsty most of the time during the growing season. You must remember that not a particle of food can enter the tree except by being carried in water; therefore you can starve a tree to death by depriving it of water. The reason that so many orchards in grass are moderately successful is because they get in the springtime the water from melting snow and from spring rains, and for a part of the growing season have all the water they can use. But they remain thirsty for a large part of the season.

Q.—Can't you extend the season of cultivation if the cultivation is light?

Mr. Hatch—Professor Bailey says that the orchard should not be cultivated after midsummer.

Q.—Can we make trees bear alternate years?

Mr. Hatch—Yes. If the trees are going to bear this year we can prune a part of them and prevent them from bearing a crop this year; they will then probably bear next year.

Superficial Farming.

There is a time in the history of every country when superficial farming pays better than any other kind of farming, or at least that is the opinion we hold without giving the assertion a systematic investigation. That time is when inhabitants are few and the rich lands free and abundant. The land is pastured over superficially, plowed superficially and cropped over superficially. The results are satisfactory. The new settlers, living in log cabins that cost nothing but labor, pay no taxes to speak of, and find it possible to get all the clothing and other necessities from the products of their own lands or flocks or herds. With all wants abundantly supplied there is no inducement to do anything but superficial farming. The fathers transmit their methods to their sons, and they to succeeding generations, and that mode of farming becomes fixed. In time the methods come to be regarded as "orthodox" for all conditions.

Meantime people become more numerous and land scarce. Populations crowd each other and the value of land rises. Taxes multiply, and the farm expenses become items of the first consideration. It is evident that new problems have arisen that the old-style farmers cannot solve. The customs of generations, however, prove strong, and the multitude of

farm owners will hang to them, even to the point of seeing their farms slip away into the hands of the mortgagees.

Superficial farming must be discarded. It is not in accordance with the changed people and times. It cannot give revenue enough to meet the obligations that the new conditions impose. Superficial tillage must give way to intensive tillage. Superficial pasturing must give way to a system of pasturing that utilizes the soil to a foot in depth instead of to a depth of two or three inches. Superficial operations of all kinds must be abandoned except in the far West, where lands are still cheap and conditions of life are primitive. The wise farmer will be willing to sell a part of his immense farm and use the capital thus obtained to operate in a more intensive manner the smaller area of land remaining.

Apple Maggot.

One of the worst pests that the apple grower has to fight is the railroad worm, called also the pulp worm, and the apple maggot, says a communication from the Vermont Experiment Station. The fruit growers of Vermont are unanimous in giving this insect the first rank among their insect enemies. It is worse than the tent caterpillar. That can be entirely overcome by spraying, whereas spraying has no effect on the railroad worm. The railroad worm, or apple maggot, is the cause of the pulpy, punky condition of the apples as we find them now in the stored fruit and in that offered for sale. The eggs are laid just under the skin of the apple by a small fly. This fly begins her work in June and keeps it up pretty much all summer, so that there may be worms of all ages in the apples. She has a strong preference for sweet apples, and has practically ruined the crop of Talmans last year. Still she works in all varieties, sour as well as sweet, and causes hundreds of dollars' loss to the fruit grower. The authorities at the Vermont Experiment Station frankly admit that no satisfactory way of dealing with it has been discovered. They say that considerable good can be accomplished by keeping hogs or sheep in the orchard to pick up the windfalls. These windfalls are usually full of apple maggots, and the hogs digest them out of existence. Experiments are being made at various places in the United States, and we hope eventually to know some more effective way of dealing with this pest. But for the present we must rely on the practice of destroying the windfalls.

Protecting the Pigs.

To prevent the sow from crushing her young the Canadian Report advises placing a board eight inches wide horizontally about eight inches from the floor. The same paper makes another suggestion, and perhaps a better one, saying: "A small enclosure in one corner of the pen, kept dry and well littered, will also prove of great service in protecting the little ones, as they will naturally go there to sleep." This smaller enclosure should have a small trough placed in it so that the little fellows may be fed separately there and early taught to eat. The first feeding given should be a small quantity of warm, new milk, for which, after a few days, a little larger quantity of skimmed, slightly warmed, may be substituted. In this feeding keep a close watch for symptoms of indigestion. Keep the troughs scrupulously clean. If they are allowed to become filthy and soured, the food placed in them will soon become unwholesome. This applies to the trough in which the dam is fed, as well as to the one in which food is placed for the little fellows. This gradual training to eat will lead to easily weaning them when about two months old without any loss in condition or check in their growth.

Exterminating Elder Bushes.

About the only complete way is to grub out every bit of the roots. Cutting them on certain days in August, or in particular phases of the moon I never paid attention to. But I would not destroy them all, says Samuel Miller in Rural World. Let a little patch of them stand for family use. The leaves when bruised are a cure for a gall. The blossoms dried make a medicinal tea, and jelly of the fruit is an excellent relief for a cough. A teaspoonful of it dissolved in a tumbler of hot water will give great relief when the throat is sore and there is hoarseness. Then I consider an elderberry pie one of the best, and a wine made of elderberries is fine and by no means hard to take.

Quality of Seed Corn.—The yield of corn is dependent in no small degree on the quality of the seed, which should be selected before the corn is cut, having regard to the size and character of the stalk as well as to the ripeness and type of the ear. When the season is especially favorable for thoroughly maturing the ears, enough seed to last at least two years should be gathered, completely dried out before frost, and stored in a warm, dry place. A difference of 2 per cent in the yield of dry matter on two adjacent acres was noted in favor of the crop grown from well-ripened seed over the yield from seed grown in a wet, cold season.—Clinton D. Smith.

Mixed Grasses for Pasture.—In selecting grasses for the pasture those that mature at different periods should be chosen, so that a good supply of feed may be coming on at all times of year. The stock do not do their harvesting all at one time and so do not require that the grasses ripen simultaneously. The larger the number of grasses the better.

Wheat is grown in practically all countries of the world, but comes to greatest perfection in cool climates.

DAIRY AND POULTRY.

INTERESTING CHAPTERS FOR OUR RURAL READERS.

How Successful Farmers Operate This Department of the Farm—A Few Hints as to the Care of Live Stock and Poultry.

Dairy Notes.

At the Geneva Experiment Station a series of six rooms for curing cheese has been arranged, and they are so perfect in their construction and arrangement that any kind of temperature between 40 and 90 degrees can be maintained indefinitely. The rooms referred to are separated from the outside walls by a passage four feet wide. This proves a strong defense against the influences of the outside atmosphere. Each room is separated from the passage and the other rooms by double walls and air spaces. This makes it possible to keep the temperature under control within two degrees. Hot air flues from below and cold air flues from above enter each chamber, the cold air flues connecting with ammonia expansion coils and lime tanks. These flues are controlled by dampers operated by compressed air in connection with thermostats. This arrangement regulates the temperature automatically, and the manager can go to sleep in confidence that he will not wake up in the morning and find his experiments ruined by a change of 20 or 30 degrees in the temperature of his curing rooms. In these rooms have recently been carried out some experiments to ascertain if the flavor of cheese is greatly affected by the temperature in which it is cured. Four temperatures were tried—55, 60, 65 and 70. The lowest temperatures gave the best flavors, and the cheese improved in flavor with age. These rooms at Geneva are model ones, and without doubt will greatly influence the construction of future curing rooms in our largest factories.

At the recent meeting of stockmen in Fort Worth, Texas, a resolution was passed requesting congress not to enact into law a bill to further tax oleomargarine. The vote was passed with but three dissenting voices, though it is perhaps worthy of note that only a few delegates—possibly a hundred—were present at the time the vote was taken. Since the National Live Stock Association includes in its membership some dairymen's associations, the vote of the majority was in the nature of a blow from behind. The argument used was that oleomargarine raised the price of steers as well as cottonseed oil. But the fact is that the increased value to steers is a matter of cents rather than of dollars, and the manufacture of bogus butter is bound in the end to hurt the market for steers more than it helps. When the dairymen can manufacture butter and sell it without competition with a counterfeit they will devote their energies to producing butter. But dairymen have been driven out of the business by the thousands in the past ten years and many of them have been forced into steer raising. Had it not been for oleomargarine there would be thousands now producing butter that are raising steers. The fewer dairymen, the more steer raisers. The result is sure to be a rush into steer raising till the breeders become so numerous that the profits will be again reduced to a narrow margin. The beef producers are hurting themselves when they deliver a blow at the dairy interests.

Howard and Butler Not Pardoned.—Reports from Washington show that Howard and Butler will not be pardoned. They have too often violated the internal revenue law relative to oleomargarine. Attorney General Griggs, in advising the president not to pardon the prisoners, said: "It is obvious that the business in which Wilkins was engaged must have been one of great profit, otherwise he could not have afforded to make the very large payments in compromise which he did make or offered to make. That he was aware of the fraudulent and dishonorable nature of the business in which he was persistently engaged, appears from his own statement, made in a letter addressed to the commissioner of internal revenue, Oct. 31, 1893. It is absolutely clear that for such a persistent violator of the law something more than a money penalty was essential. The sentence of imprisonment imposed in this case was peremptorily required by the circumstances. Nor can I say that the sentence was anything but moderate. I do not think that the sentences should be interfered with."

Poultry Notes.

We notice the remark by a writer in an exchange that no one kind of food contains enough protein to keep the hen going and give a surplus for eggs. The statement is certainly a good way from the facts in the case. He might just as well have made the remark that no one food contains enough of the carbo-hydrates to keep a hen going and furnish a surplus of the carbo-hydrates for eggs. We do not believe that any one food should be fed exclusively, but certainly there are foods that not only contain enough protein, but contain too much. Take, for instance, wheat. It contains too much of the protein to serve for a single food. A well-balanced ration requires about six parts of the carbo-hydrates to one of protein, while wheat contains about four parts of carbo-hydrates to one of protein, which makes the protein in excess. If a hen were fed exclusively on wheat she would be compelled to eat nearly 50 per cent more protein than she could use to get the carbo-hydrates necessary. Balanced rations are the

most economical, and every poultry raiser should try to figure them out, or at least should learn enough of the science to recognize a balanced ration at sight.

A certain poultryman says that he has not had a ventilator on his poultry house for ten years and does not want one; that he prefers his ventilation to come in through the minute cracks and go out the same way. He says this is heresy, but works well with him. We venture the assertion that he never had a properly constructed ventilator; that the only ventilator he ever had was a hole in the roof, with more or less attempt to make it appear artistic. The common mode of constructing ventilators is barbaric, and such ventilators are indeed worse than no ventilators. They are generally in the top of the roof, and permit the air to fall directly down on the birds. No man should attempt to construct a ventilator unless it is to be built on the most scientific principles.

Oats as a poultry feed are very valuable, in spite of the fact that so many poultry growers never feed them. If the men who think the fowls do not like it will put oats where the hens can get at it at all times of day they will soon find that the hens have discovered that there is virtue in oats. Oats are as valuable for hens as for horses. Being so well balanced as to proteins and carbo-hydrates, they furnish a most nutritious and excellent food. We notice that some one advocates feeding oats in the morning with a mash, having soaked the oats overnight in water put in at the boiling point. This may be an improvement on the ordinary method of feeding oats.

Enteritis of Fowl Fever.

A writer in the Farmers' Gazette, published at Dublin, Ireland, says:

The germ of the disease reaches the ground in the droppings of the sick birds. It reproduces itself rapidly in dirty pools, puddles and manure heaps, such as are frequently seen in the vicinity of dwelling houses, and thence it is carried about on the feet of passers-by or animals of the farm. The smallest particle of the droppings of sick fowl may produce thousands of poisonous germs. It is only by swallowing one of these germs that fowl fever can be produced. It is most important to remember this. Ducks and geese are not liable to this disease, but turkeys and pigeons are, and it affects all ordinary barnyard fowl, irrespective of their breed or of their vigor of constitution.

The first signs of sickness are observable three or four days (not longer) after the disease germs have been swallowed. They are: A tired, sickly appearance, staggering walk, ruffled feathers, the comb and wattles sometimes turning black, great thirst, and constant droppings of the consistency and color of fluid mustard. These last two symptoms are always present, even if the first mentioned are not observable. In severe cases the birds will die within twelve hours after the symptoms appear, but the usual course of the fever occupies three days.

There is no remedy that can be relied on to cure a bird suffering from this disease. The best course is at once to destroy any bird attacked by disease; and as the disease germs are distributed in the droppings of sick birds, the longer such birds are permitted to live the greater is the risk of spreading disease. If for any reason it is decided not to kill the sick birds, the following course may be taken: At once on observing the before mentioned symptoms, isolate the infected birds, confining them in a place from which they cannot escape, and feed them with bread and milk, or a raw egg beaten up in milk, and if possible with plenty of barley water.

Where Oleomargarine Goes.

According to the reports from the oleomargarine factories, the bulk of it last year was disposed of as follows:

Colorado	1,123,537 lbs.
Illinois	18,638,321 lbs.
Indiana	3,228,228 lbs.
Kansas	3,638,544 lbs.
Kentucky	1,490,877 lbs.
Louisiana	1,043,502 lbs.
Maryland	1,791,950 lbs.
Massachusetts	2,033,000 lbs.
Michigan	2,092,000 lbs.
Minnesota	1,343,000 lbs.
Missouri	3,133,000 lbs.
Nebraska	1,024,000 lbs.
New Jersey	5,875,000 lbs.
Ohio	8,830,000 lbs.
Pennsylvania	11,433,000 lbs.
Rhode Island	3,594,000 lbs.
Texas	1,518,000 lbs.
Virginia	1,159,000 lbs.
West Virginia	1,206,000 lbs.

The Triad Sow.—When a sow has proved herself a good mother it is best to continue using her as such just so long as results are satisfactory, even if the period should extend to twelve years or over; there is little sense in marketing old sows, the best of them are only despised, and their age does not cut much figure. When they must be sold they should be well fattened; they then make fair mess pork. When boars are old and no longer required for use, it would be better to kill and bury them in a dung heap than to pursue the course usually followed; they are mostly low in flesh, and require a lot of food before they are sold, and during this time they are a nuisance to the farmer; then they are a curse to the drover, and a blister to the packer. Nobody wants their meat at any price and they often do more damage in a car of good hogs than they are worth. Keep them on the farm, and put the food they eat where it would do more good. This advice may sound strange to some ears, but we know it is right, and hope it may be put into practice.—Canadian Farming.

Molasses for Stock.

In a number of European experiments reported molasses feeds were tested with dairy cows. No deleterious results were noticed, even when 4 to 5 pounds of molasses was fed daily. An extended study of the value of molasses as part of a ration for pigs, steers, sheep, milk cows, and horses was recently reported in a French agricultural journal. The principal conclusions from the investigation were as follows: When molasses formed part of the ration of sheep, pigs, and steers, the gains in live weight were rapid. When molasses was fed to milk cows the total milk yield and the amount of fat and milk sugar in the milk was increased. The increase is not regarded as sufficient to warrant the conclusion that molasses is a suitable food for milk cows. Molasses is regarded as an excellent food for horses. It was readily eaten, and vigor and weight were maintained when it was added to the ration. Molasses may be advantageously employed for rendering inferior hay or fodder more palatable.

The report of the Canadian Experimental Farms already referred to notes briefly the successful use of molasses in fattening steers. Three to 5 pounds was fed per day, diluted somewhat, and poured over the cut coarse fodder. It is said the steers developed a great liking for it, and to all appearances it gave good results. The test was summed up as follows:

The most important points in favor of this new feeding stuff may be stated as follows: (1) It contains a large percentage of sugar, the most assimilable form of carbohydrates found in cattle feeds. This class of nutrients is used by the animal for the production of energy, the maintenance of the vital heat, and the production of fat; (2) it stimulates the appetite, and (3) probably increases the digestibility of the other constituents of the ration.

In the experiments cited above beet-sugar molasses was fed. An interesting experiment in which cane-sugar molasses was added to the ration of horses was recently reported in an Australian journal. At the Karawah sugar plantation in the Fiji Islands over 400 horses were satisfactorily fed a ration containing a considerable amount of molasses, as much as 30 pounds per head daily being fed at different times. The ration finally adopted consisted of 15 pounds of molasses, 3 pounds of bran, and 4 pounds of maize per head daily. In addition, green cane tops were fed. The health of the horses remained excellent. Molasses did not cause diarrhoea, but rather constipation, which was counteracted by the bran fed. Feeding molasses effected a saving of over \$45 per head per annum. Such a saving was, however, believed to be possible only by reason of the large quantities of waste molasses and valueless cane tops available on the spot. The experiment was continued for a considerable time. Some of the conclusions drawn were as follows:

For working horses the sugar cane molasses is a satisfactory substitute for starchy food, being readily digested and transformed into work. Fifteen pounds of the molasses can be given to a 1,270-pound working horse with advantage to the health of the animal and to the efficiency of its work. It produces no undue fattening, softness, or injury to the wind. The high proportion of salts in it has no injurious effect. An albuminoid ratio as low as 1:11.5 has proved highly suitable for heavy continuous work when a sufficient quantity of digestible matter is given.

These are only a few of the tests which might be cited. It is not the purpose of this article to recommend that molasses be generally adopted as a feeding stuff, but rather to call the attention of those who are interested to the subject so that tests may be undertaken or experience already gained may be reported.

Care of the Breed Sow.

The sow that has been bred for a litter of spring pigs should not be neglected now. She should have a good, comfortable place to sleep, writes Wallace Jamison in Modern Farmer. It should be warm and dry, and she should not be crowded in with other hogs. If she can have the run of a woods lot or pasture field, so much the better. A little grazing every day will be good for her and the pigs expected. It will help to keep her in good condition. If she must be confined in a pen, she should be fed some food of a laxative nature. A little wheat bran with the kitchen slop will be beneficial. The feed given her is not only for her sustenance, but is also giving a start to the pigs that is to follow. If good, vigorous pigs are wanted, their welfare should be looked after now. The sow should not get too fat. She wants to be kept in good growing condition, and her surroundings and feed should be such that she will be contented and happy. A poor, bony, squealing sow, with her fore feet on the top rail of the fence when you go to feed her, is not the sow to bring forth pigs for you to be proud of and profit by.

Feed for Pigs.—For pigs just after weaning we find nothing better than wheat middlings and skim milk. Sometimes we cannot get all the skim milk we want, and have to divide the limited supply among those most needing it. We have used ground oil cake and ground flax seed in very small quantities, steeped with the middlings; but though they are better than nothing, they do not equal milk. Of the two, probably the ground flax seed is the better, but it should not constitute more than about five per cent of the total food. By the time the pigs are about three months old a little ground grain is usually added. We like barley for this purpose, and often add a few oat grounds as freely as possible.—Ex.