

NEWS AND VIEWS OF THE FARMER

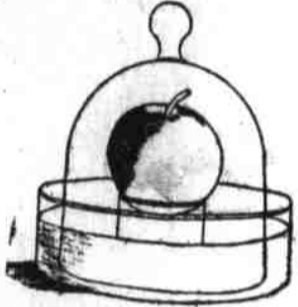
THE RESPIRATION OF APPLES

THE "BREATHING" OF APPLES AFTER THEY ARE PICKED BEARS AN IMPORTANT RELATION TO THEIR KEEPING QUALITIES.

By F. W. Morse, New Hampshire.

The respiration of animals is a well known action and the necessity for it in the living creature is fully appreciated.

The fact that plants and parts of plants must also breathe is not so commonly understood. Yet all living cells, whether a part of animal matter or vegetable matter, must have oxygen to keep them alive and they give up carbon dioxide and water as a result of the action of the oxygen on some of their contents. Parts of plants when cut off from the main stem do not die at once, and must continue to breathe. This is true, whether the severed part is a leafy branch, a fruit or a root; but some parts live much longer after removal than others, and the apple continues to breathe for many weeks after it has been picked from the tree.



The chief products of respiration are the same in plants as in animals, namely carbon dioxide (commonly called carbonic acid) and water. These products can be easily shown by placing one or more apples in a glass jar and covering it tightly. In a few hours a dewy film will cover the inner surface of the jar, that in time will collect into drops which will trickle to the bottom. On opening the jar, a little clear lime-water may be poured into it without touching the fruit, and the lime-water will be seen to turn milky, just as it will if an animal's breath is forced through it.

The taking up of oxygen from the air can also be readily shown by the following interesting experiment.

In a large basin partially filled with water set a small support on which is placed an apple and a small open dish containing a solution of caustic soda or potash. The apple should not touch the water nor the caustic solution. Cover the support and its contents by a large bell glass or wide jar with its mouth wholly in the water. Now as the apple breathes in the oxygen of the air, and breathes out carbonic acid, the latter will be absorbed by the caustic solution while water

will rise in the jar to fill the space made vacant by the removal of the oxygen. Finally the water will fill about one-fifth of the jar, space originally present and remain stationary, because the oxygen is all used.

Respiration, whether in animals or in plants, causes a destruction of matter in the cells much like the destruction of wood in a stove, and the rate at which this destruction goes on can be measured by determining the amount of carbonic acid that is breathed out in a given length of time.

Fruit, after having been picked from the tree is in the condition of a starving animal. Its cells still keep up respiration with nothing in the way of food to make good the losses produced by the action. Since apples and other fruits have no body heat to maintain, the breathing process is not so active as in animals, and they may last months after being picked from the tree. Yet there is a steady, continuous loss in weight as the weeks go by, although the fruit is sound and firm.

Respiration is partly a chemical reaction and in apples, like most chemical reactions in the laboratory, it grows more rapid as the fruit becomes warmer, and is slowed down when the fruit is cooled.

It is frequently the case that warm days with temperatures of 70 degrees or more occur late in the Fall, and sometimes continue for a considerable period. Fancy apples intended for long keeping in cold storage should be cooled as soon as possible and kept cold. The breathing process is at the expense of keeping qualities and must weaken the keeping qualities as it goes on. And this destructive action is from four to six times as fast out of cold storage as inside it.

Another fact in connection with the respiration is important. It is not stopped in cold storage, but simply slowed. Apples cannot be kept indefinitely, but keep about twice as long in cold storage as in a cool cellar.

If the farm as a whole doesn't pay, make some part of it a garden spot, for gardens always pay.

Much of the cry "back to the farm" comes from a class of writers who work in skyscrapers, live in flats and who would not exchange these hideous features of modern civilization for the best farm in the land.

Autumn is not the best time to prune fruit trees. Wait until March or June.

It is said that cherries cannot be grown profitably at any great distance from large bodies of water.

THE STUMBLING HORSE DANGERS

Some horses are naturally addicted to stumbling, others acquire the fault and still others have it thrust upon them by the carelessness or ignorance of the owners.

The horse that stumbles when a colt is almost incurable. His manner of traveling may be improved to some extent with careful driving with a tight rein and the moderately high checking, but a born stumbler is a hard case to deal with.

Many horses are made to stumble by wrong shoeing. If shod heavily in front and light behind they are almost certain to acquire the habit.

Weak joints or imperfectly formed legs are also causes of stumbling. Some colts are born with marked evidence of weak knees. We know of some cases where colts at three years that have never been driven were perceptibly knee-sprung. Such an animal can never be cured of this stumbling habit.

Driving with a slack rein is another cause of stumbling and very often the sole cause. If a horse becomes fatigued it should be kept well up on the rein if driven over rough roads. No good horseman will ever take chances of allowing his horse to fall down by driving with a slovenly rein.

Stumbling often causes bad accidents, not only to the horse, but to the occupants of the vehicle he is drawing. We once saw a fine looking carriage horse who was being driven by a woman who allowed the reins to dangle loosely in her hands, fall on the lake shore drive in Chicago. He stumbled for more than 15 feet before he finally fell. He overturned the carriage in his struggles and when he was assisted to his feet it was found that both knees were broken and he was rendered useless for life.

Remember the importance of having plenty of humus in the soil, and that it is best and most economically supplied by growing clover and making good use of the manure that results from keeping live stock to consume the crops grown upon the farm.

SUCCESS WITH POULTRY

The poultryman who makes a success of the business is usually the one who selects one breed and sticks to it year in and year out, striving each year to bring them a little nearer perfection.

It has come to be generally recognized that success lies not so much with any one breed as with the manner of handling the breed chosen. On the other hand, the breed chosen should be the one best suited to your particular needs.

Redtop is an excellent grass to sow on low lands where it is too wet for other kinds of hay. It is not first class in quality, but will grow on land where other kinds will not succeed.

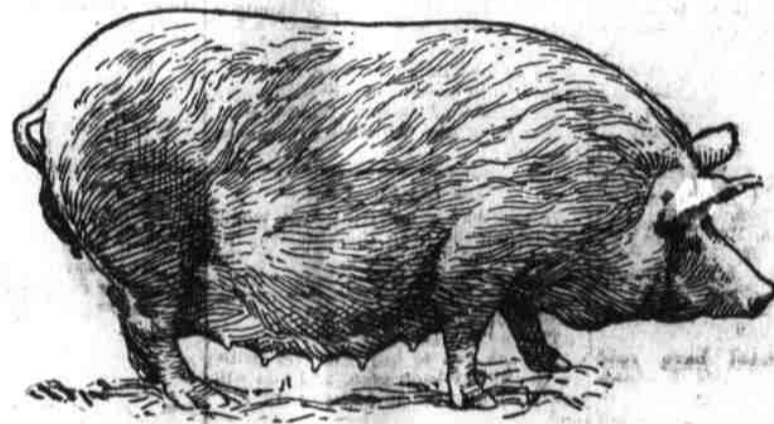
THE TAMWORTH FOR BACON

The Tamworth hog is not as popular in the United States as it deserves. A few pigs of this breed were brought over from England about 30 years ago, and until the last three or four years it was not regarded favorably.

The appearance of the Tamworth is somewhat against it. Its rather long head does not impress farmers favorably, and there is a general belief that it costs more to bring a Tamworth to maturity than almost any other type. Experiments show, however, that this claim is based mainly on prejudice, for the Tamworth in Canada has proven itself to be an excellent and economical feeder.

This breed is especially well adapted to bacon, because of its light shoulder, its length of side and a tendency to produce a greater portion of lean meat than many other breeds.

When the Tamworth is crossed on breeds of more fattening tendencies, and with finer bone, say the Berkshire, it makes an excellent bacon-hog. It is claimed by some breeders that the Tamworth is the best bacon-hog in existence, but this may be taken with a grain of salt.



Tamworth Sow, "Constance", 1st Champion English Royal Show

BUGS ARE WORSE THAN FIRE

There are insects whose methods of attack are so obscure and covert that they are not usually discovered at all by the ordinary farmer, who simply knows at the end of the year that his crops have not done well and the year has been an unprofitable one for him.

Perhaps some of the wheat straw worms have attacked his wheat, and the result has only shown in the shriveled condition and light weights of the kernels, with no apparent connection between the two.

His corn has not grown well, the ears are short and not well filled out at the tips, precisely as if his land was lacking in fertility or a drought had prevailed, and he may lay the loss to either the weather or his land, whereas it was the corn root worm that ruined his crop, a pest that he might easily have avoided.

His timothy meadow has died out, and he does not know why it should have done so, when had he looked carefully about the roots he would have found the short winged form of the chinch bug present there in myriads.

Such losses as these are not considered at all and do not enter into consideration, either by the farmer or statistician, unless they are of such magnitude as to devastate large areas of country.

Here we have a financial loss, falling upon a single industry nearly three times as great as that caused by fire, and to ask if such a factor should be reckoned upon and carefully considered by those engaged in that industry appears almost ridiculous.

It would seem to go without saying that such elements should not only receive most careful consideration, but every effort should be made by farmers to familiarize themselves without the minutest details in order to be every possible means protect themselves against loss.—F. M. Webster.

A purplish red comb indicates bad health in a fowl.

THE INDIAN RUNNER DUCK

THE MOST BEAUTIFUL, AND BY MANY PEOPLE THOUGHT TO BE THE MOST PROFITABLE OF ALL THE DUCK FAMILY.

By Anna Galagher, Ohio.

It is only comparatively a few years since the Indian Runner ducks made their appearance in America. They came originally from the West Indies, where they have been raised for years, chiefly as egg-producers. They derive their name from their native land and racy, upright carriage.

In color they are fawn and white, with yellow shanks and light-green bill; the latter being sometimes splashed with black.

The body is long and narrow and is carried in an almost upright position. Neck is long and thin, with finely formed head.

The Indian Runner is rather small, fully matured ducks weighing from 4 to 5 pounds. Drakes from 5 to 6 pounds, live weight.

But they grow very rapidly while young and are easy to raise. What they lack in weight is more than made up in their other qualities.

To begin with, they are very prolific layers; beginning when about 6 months old, their eggs are pure white and a little larger than those of a Plymouth Rock hen.

They are superior in quality to any duck's eggs that we have ever eaten, and as a rule, they bring higher prices in the market.

The ducklings reach a marketable size when about 12 weeks old. When forced, they will weigh 4 to 5 pounds at two months.

The meat of the Runner is of superior quality; fine in the grain, juicy, and excellent flavor. Hotels and restaurants pay fancy prices for ducklings.

The eggs are in good demand, also. In winter when eggs are high the Indian Runner is "the job". Any enterprising person can work up a trade among hotels and restaurants that should prove highly profitable.

There is no great danger of strong competition, as comparatively few poultry raisers have taken up this branch of the industry, notwithstanding the fact that nearly all kinds of poultry products are bringing unheard-of prices in the open market.

Duck culture, in the past, has been more or less neglected, owing to the general belief that ducks cannot be successfully raised without a stream or pond of water. The fact is, however, that the Indian Runner requires only sufficient water to drink.

They are small feeders as compared with other ducks. One Pekin will consume as much feed as two Runners, and that not be satisfied. Unlike the former, they are great foragers.

In summer the Indian Runner when given free range will find the greater part of his living in the fields. But of course when being fattened for mar-

ket, they need some grain. It would be well to say right here that for best results the grain should be either ground or cooked.

A great many would-be duck raisers fall, because they insist upon feeding the ducks, both old and young, whole grain.

The matured birds can get along, but the young ones most certainly can not. Don't try to raise ducklings on whole wheat, cracked corn and "chick feed". They simply cannot digest it.

About the only kind of grit that a young duck will eat, is sand, and whole or cracked grain requires something sharper than sand to grind it. Those who have Indian Runner ducks would do well to keep them



Indian Runner drake and duck.

over winter and see what they will do toward keeping the egg-basket filled when bidly is on a strike.

Begin by culling out all the surplus drakes and under-sized specimens. If the ducks are expected to furnish eggs next spring for hatching purposes, now is the time to procure drakes from some other flock.

It is not a good plan to keep closely related birds. One drake for every seven or eight ducks is about right. Drakes may be kept for seven years, but ducks will not lay so well when of that age. Few duck raisers care to keep old drakes unless they happen to be high-priced birds.

In many sections, Indian Runner ducks are so scarce that food specimens bring almost any price asked.

Fresh eggs, poultry, fruit and vegetables form a diet that all physicians recommend. More chickens and eggs and less red meat should grace the tables of the American epicure.

Have regular hours for feeding your poultry. Irregular feeding often causes a derangement of the digestive organs and this means impaired health and fewer eggs.

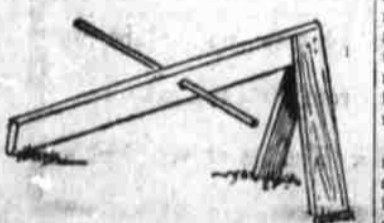
DEVICE FOR SHOCKING CORN

When corn is to be shocked in the field, it should be thoroughly ripe before being cut, as too early cutting affects both the yield and the quality of the grain.

The shock on the ears should be turning yellow. If not already dry, the latter is preferable, even if the lower blades are overripe.

A frame should be provided for shocking the corn, which may be constructed as follows: Nail two pieces of one-by-six-inch material five feet long to one end of a two-by-three-inch scantling ten feet long. Bore an inch hole three or four feet from the end of the scantling to which the legs have been nailed, and insert an iron rod or something similar. Let the free end of the scantling rest on the ground; the other end is, of course, supported by the one-by-six piece. With the iron rod thrust through the hole, the device is ready for use.

The corn is placed in the four right angles formed by the scantlings and the iron rod, four or five or six bundles



being placed in each of these corners with the butts set well out at the bottom. Care should be taken to avoid setting the bundles too straight and to see that the corn is evenly distributed throughout the shock.

A little negligence right here will keep one busy re-setting the shock. The other extreme is to be guarded against also, as the contents of the shock will damage more or less unless the work is done so as to turn off the water.

Too much care cannot be exercised in shocking the corn; a little slovenly work in this operation will ruin the product, even if all the other conditions for a good article are met.

Failure at this point, more than anything else, is responsible for the prejudice against this method of handling the corn crop. If the stalks are wet and moldy, the resulting product will be disappointing, regardless of the care which has been exercised in the previous and subsequent handling of the crop.

The total production of honey in the United States is approximately 42 million pounds per annum and its value is something more than \$ million dollars.

When you finally consent to the bees going to town for a vacation have them return on a regular basis. The amount of water given during the absence will be a matter of course, unless you can give liberally.

CARE OF THE FARM FLOCK

Many sheep owners neglect their breeding ewes in late summer and early autumn, thereby incurring severe losses, not only in having low-grade lambs in the fall, but also in the failure of the ewes to get with lamb at mating time.

At this season of the year flock owners should put their ewes under the most favorable conditions to take on flesh so that they may be put in the best possible condition by the time the mating period arrives.

Sheep husbandry is a branch of animal feeding that will not run itself and only the man who gives his sheep the best of care and feed will succeed in the business.

Unless they are maintained strong and vigorous, deleterious influences are bound to creep in and cut down the profits. It is well at weaning time to have supplemental forage crops at that they may have an abundance of grazing.

When they recover their normal condition, gradually increase their rations until they begin to gain in flesh. The ewes that have suckled their lambs will be certain to be reduced in flesh and should be put in more vigorous condition before mating.

Many flock owners make a serious mistake by disposing of the ewes that are in a run-down condition at weaning time. The way to judge the value of a breeding ewe is to examine the quality of the lamb. In nine cases out of ten the very best lambs belong to the ewes that are run down in flesh condition in the fall.

DO ANIMALS THINK?

Recently an Indian elephant has covered considerable territory toward the solution of the much discussed problem, "Do animals think?" Ordered to drag a tree, which proved too heavy, tired and excited to continue her efforts, the chain by which the beast was fastened finally broke and she made a dash for the jungle. It was supposed she would mix with the wild elephants and be seen no more, but in an hour back she came bringing with her two other elephants, and by their united strength the tree



was easily moved. After the job was finished the two strange animals disappeared, but the one faithfully remained to go forward with her higher education.

If your wife is splitting the stove wood the less you can do to keep the fire going for her.

Instead of selling the best mothers we should devote attention to conditioning them for the mating season. Some make the mistake of feeding the ewes a highly concentrated ration of fat-producing feeds to bring them to a good flesh-producing too rapidly, but this often proves detrimental to their breeding qualities.

The best ration for this purpose is one made up largely of pasture and forage crops and the grain produced on the farm. Many breeders feed some of the very highly concentrated by-products feeds but my experience has been that oats, barley, wheat and a very little corn is better for the ewes at this time.

If given plenty of pasture and forage the ewes can be kept in a fleshing condition with very little additional grain feed; but if the season is exceedingly dry it will pay to supply supplemental feeds at once.

A little dry roughage is eaten with great relish and many sheep owners feed a dry ration once a day, thus getting the ewes gradually accustomed to the dry ration before they are placed in winter quarters. This provides against deranging the ewes' digestive organs and modifies the influence of the sudden change in feed.

MUCH SMALL FRUIT VINES.

A successful West Virginia raspberry grower gives the following reasons for mulching:

It prevents the growth of weeds. It retains moisture in the soil. It adds humus, one of the necessary elements.

It keeps the fruit clean and prevents mud at picking time. It saves labor, the cost of mulching an acre with forest leaves or straw not exceeding \$15.

It prevents deep freezing. It makes the fruit more solid for cultivation and better for shipping purposes.

It prevents the baking of the soil caused by tramping at picking time. It has the disadvantage of encouraging mice and establishing a surface root system. However, we have not noticed any serious damage from either of these things.

The cost of growing raspberries by nature's method, as it is called, is not very great. Picking is a nice job where there is no mud on weeds and where the canes have been properly pruned. Don't leave any old canes standing in the fall.

THE FALL WEB-WORM

In the Fall the unsightly webs of this insect are seen all over the land. The adult, a little white moth, lays its eggs on the leaves of fruit and other trees and plants early in summer.

The young caterpillars spin the protective web. They are of a pale yellow, with long hairs, two black rows down the body, and a black head.

These worms will quickly destroy a tree and should be burned as soon as they appear, because after they have eaten the leaves they drop to the ground and spin a little cocoon within which they hide themselves and then change back to the chrysalis state.

There are two broods of this insect in the south every year and one in the north.

Spraying with Paris green when the worms are very young will destroy them.



a—Fall web-worm. b—Caterpillar.

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GROWING SUNFLOWERS

Sunflower seed is used mainly for birds and poultry as feed. It is a native of Kansas and the far Western country.

Sunflowers can be grown in any good corn land, but it takes the nitrogen out of the soil in great quantities, and therefore the crop should not be repeated on the same soil.

Plant with a drill or corn planter as you would corn in rows about 3 1/2 feet apart. The seeds should be three or four inches apart in drills and thinned later on to about 15 inches.

Requires from 10 to 15 pounds of seed per acre and it should be planted a little shallower than corn. The cultivation must be very shallow so as not to disturb the roots. After the plants are in bloom pinch off all but three or four heads. Harvest before the seeds are fully ripe as they begin to shatter early and it is also difficult to protect them from the birds which fall upon them in great flocks.

It is not easy to harvest the sunflower as they shatter so easily.

WASTEFUL FEEDING.

Feed has grown to be so high priced that wasting it seems like squandering gold; yet the careless feeder wastes an enormous amount of feed every winter when a little watchfulness and sound judgment would save it.

When stock are fed a tempting grain feed before or at the same time they are given their roughage ration they invariably become somewhat dainty as to what they eat, picking out but the very best of the roughage and rejecting all the rest.

When this habit is once formed the stock will often go hungry rather than eat what has been picked over and which really is very good feed. Therefore, one must systematize his feeding in such manner as to guard against the habit being formed.

This should be done by constructing a feeding trough of feed or roughage, but at the same time we do advise one to feed so as to deprive the animal of possible profits, consistent with the good health of the herd. For this reason we should feed the roughage before the grain or at a time when we know the stock to be hungry enough to eat all the roughage, and then a certain amount of grain, and we consider that the system saves us a great quantity of food supplies every season.

The house where colts are stored should be well ventilated because colts will stand a good deal of cold and damp, but it is fatal.

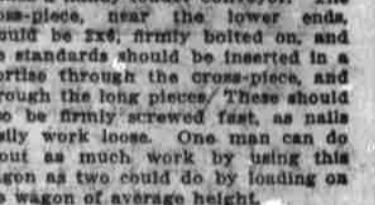
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THIS RACK SAVES MUSCLE

It is no easy job to load corn fodder upon the ordinary wagon. It is hard work, with heavy strain and tug all day long. A little two-wheeled wagon can stand up to the work, but the work is much easier. A pair of old wagon wheels, to which are bolted poles or planks from 12 to 18 feet long, the ends resting on the ground, makes a handy fodder conveyor. The cross-piece, near the lower ends, should be fast, firmly bolted on, and the ends should be inserted in a mortise through the cross-piece, and through the long pieces. These should also be firmly screwed fast, as nails easily work loose. One man can do about as much work by using this wagon as two could do by loading on the wagon of average height.



GRAPE FRESH ALL WINTER.

A clever French process by which vine growers in France are able to market fresh outdoor grapes all through the winter is thus described. Bunches of the finest grapes when ripe in autumn are cut in such a way that to each bunch a piece of the vine five or six inches long remains attached. From this piece the stems of the bunch hang, an arrangement vitally necessary to the success of the operation.

A large number of the wide-mouth bottles, filled with water, is ranged in a cellar and in the open end of each is inserted the pieces of vine stems. The bunches of grapes hang outside. The grapes do not touch the water, but are thus supplied with moisture through the vine stem, which is immersed in water. By this process choice varieties of table grapes are kept in perfect condition for the whole winter.

The temperature of the cellar is uniform and moderately low, and care is taken daily to supply the bottles with the water lost by evaporation. Fruit thus carefully tended is somewhat costly, but there are many patrons who willingly pay \$2 a bunch for the delicacy of fresh grapes in midwinter.

More than 1,000,000 acres of Irish potatoes were planted in the United States this year. This is about 3.3 per cent larger than ever before.

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