



## Agricultural Department.

## BEE MATTERS IN MICHIGAN.

A semi-annual meeting of the Michigan Bee-Keepers' Association was held in Kalamazoo recently. The following is a condensation of the items of interest:—

Mr. T. J. Bingham put 150 swarms into winter quarters in a well-ventilated building, in January; their combs being frozen at the time. As soon as the combs thawed out, a bad smell arose and the bees began to die. The temperature varied from 7° to 45°, and there was plenty of honey (boneset) at all times within reach of the bees. In March he carried out 113 hives in good condition, and hopes to save the two now alive. Mr. L. H. Albright winters his bees in an outside cellar, putting them in December 1st; temperature above freezing, no upward ventilation; came out well this spring. The sources of honey supply are white clover, basswood and boneset. H. E. Bidwell wintered 80 swarms in cold frames, and they came out finely; only one case of dysentery. J. Tomlinson wintered out of doors, and banked with snow; lost 11 out of 26. F. J. Oatman winters in the cellar, but feeds sugar-syrup instead of the honey, all which he extracts and sells. He lost 8 out of 110 stocks. When put in cold frames, his bees come out of the hives and are killed by bumping their heads against the glass. Stocks that were perfectly healthy had not a single bee left at the end of two weeks. J. Heddon had also found the same trouble with cold frame wintering. Mr. Oatman puts mosquito netting on the under side of the glass, which prevents the bees from getting hurt.

In the discussion on "extracting" honey, J. Heddon took strong grounds against the practice, saying that apiarists ought to discourage the production of every single pound of honey which costs 30 cents to produce it, and which will be a drug on the market at 15 cents. He also urged that they should pay more attention to developing a good reliable market for their products. The relation of the producers to the "exclusive" honey dealers in cities was considered at length, with the conclusion that if they are to make money in their apiaries, they must get their surplus in small glass boxes, instead of waxed barrels. Others took the ground that extracting honey gives more room in the brood chambers, producing increase of numbers in the stock, and finally a greater production of honey. To this Mr. Heddon and one or two more answered that if the extractor is used no honey will be stored in the surplus boxes, producing a loss in proportion to the value of box honey above extracted honey. The general opinion of the members seemed rather against the use of the extractor.

## BEST FOOD FOR WORK HORSES.

In the report of the Maine State Board of Agriculture for 1872, as condensed in report of Commissioner of Agriculture for 1873, Mr. John Stanton Gould said:

I have found great difference of opinion with regard to feeding, and the amount of food necessary for keeping animals, and I resolved to go to headquarters. I spent considerable time in New York visiting the horse-railroad and the omnibus stables in that city and in Brooklyn, in order to learn their experience. I found those in charge very courteous. They opened their books and gave me every information desired. To sum up the results, looking over the record of their experience for several years, I found that they had all settled down, each company for itself, as the result of careful and repeated experiments, the details of which I was privileged to observe, upon one uniform rule for horse-railroad horses, and that was twelve pounds of hay and ten pounds of Indian meal per day. In that way, a railroad horse was kept up to his highest condition, and they were enabled to do their work more satisfactorily than under any other system that has been tried. Oats had been repeatedly used as an article of food, and the cost was carefully compared with that of the Indian meal. It was found at the time, that during the hot weather the feeding of this amount of Indian meal would be injurious; but the result of the experience was, that Indian meal, on the whole, for a railroad or omnibus horse, was the true thing. But they have one very curious practice, the reason of which I am unable to fathom, which I ought to state in connection with this, as possibly bearing upon the subject under discussion. They invariably water all their horses at 1 o'clock at night. They have an idea, how true it is I do not know, that watering their horses at night adds greatly to their power of digesting food, and prevents injurious consequences.

## VALUE OF STONES IN THE SOIL.

The *Gardener's Chronicle*, one of the best of the English journals devoted to farming and horticulture, has an interesting article on this subject, from which we take the following paragraphs:—

Many beginners in gardening, and they are legion nowadays, seem to consider an absence of stones to be absolutely necessary to the good condition of the soil. Picking and raking their flower-beds year after year, the surface of the soil become so fine that after heavy rains it looks like a bed of cement, defying the admission of air or water. Warm showers, which are so essential at some seasons of the year to the well-being of the plants, never reach their roots, but run off to the sides of the bed. Bound up in this cold mortar in winter, the roots rot, and the plants die. In dry weather the soil bakes and cracks, thus literally lacerating or starving the roots at a time when useful work ought to be going on in the plant. The same idea prevails in connection with the soil for pot plants. Those who begin to grow a few things in pots first procure a sieve, and they look on every bit of material which will not go through a quarter inch mesh as unfit for their greenhouse plants. A continuance of such practice is the source of many failures among those who really love gardening and cherish their plants, but who do not consider that they are thus counteracting their own wishes.

In many gardens the rake has for a century past been combing off the surface stones, which, experience shows, serve to keep the plants in health. Should not the stones be rather buried than taken from the soil? The good results attending the trenching of old gardens are doubtless due to the bringing up of a fresh supply of these materials, which afterwards, drain and sweeten the dark, sour soil. Perhaps, however, it is in the bedding out department that the value of this material is greatest. The shortness of the time plants used for this purpose occupy their positions, prevents them from sending down their roots to any depth in search of such surfaces to coil against. A few stones or brickbats might well be placed at such a depth in the soil that the roots of the plants will soon find them. It is here that quick growth and abundant flowers are wanted in a short time, and to attain this, a deep, rich soil, with plenty of stones mixed in it, is recommended. This will not only encourage warmth at the roots, but drain the soil in wet seasons, and will moreover serve to keep the roots damp in dry ones; for in dry seasons, it may be remarked that the roots in deep soil, when in contact with stones, are moist.—*Observer*.

POULTRY AT THE CENTENNIAL.—A slip from the agricultural bureau of the coming International Exhibition at Philadelphia, has the following: The admirers of fine poultry will no doubt have an opportunity during the International Exhibition to gratify their taste fully, as it is the design of the Centennial Commission to provide everything requisite to the proper reception and display of fowls and birds of every class. It is desired by many that there be a permanent, as well as a temporary exhibition of poultry, and if applications for space for the exhibition of fowls during the six months covered by the exhibition, are received in sufficient numbers to warrant the outlay, the Commission will probably adopt measures to afford the proper facilities. If the design of a permanent exhibition be carried out, the display should be such as would impress the character of each breed upon the mind of the observer. This cannot be done when the exhibition is confined to trios in separate coops, but only by the display of as large a number as can be placed in one enclosure; thus affording by the multiplication of individual birds, each of the same breed, an opportunity of studying the characteristics of each particular family. Prominent poultry breeders could readily supply the birds for such an interesting and instructive exhibit. The temporary exhibition will commence on October 25th, 1876, and last till November 10th, a period of fifteen days. The Commission will erect shedding, and the birds will be exhibited in the same boxes or coops in which they were transported. For the purpose of preserving uniformity these boxes will all be made according to specifications furnished by the Bureau of Agriculture. Exhibitors will be required to assume all responsibility of feeding, and general attendance on their birds. Only such specimens will be received as are of pure breed, and even these must be highly meritorious. Further information may be had by addressing the Chief of the Bureau of Agriculture, International Exhibition, at Philadelphia.

TO OBTAIN FRUIT FROM BARREN TREES.—A correspondent of the *American Agriculturist* says:—I wish to describe to you a method of making fruit trees bear that I blundered on. Some fifteen years ago I had a small apple tree that leaned considerably. I drove a stake by it, tied a string to a limb and fastened it to

the stake. The next year that limb blossomed full, and not another blossom appeared on the tree, and, as Tim Bunker said, "it sot me a thinking," and I came to the conclusion that the string was so tight that it prevented the sap returning to the roots; consequently, it formed fruit buds. Having a couple of pear trees that were large enough to bear, but had never blossomed, I took a coarse twine and wound it several times around the tree above the lower limbs, and tied it as tight as I could. The next spring all the top above the cord blossomed as white as a sheet, and there was not one blossom below where the cord was tied. A neighbor seeing my trees loaded with pears, used this method with the same result. I have since tried the experiment on several trees, almost with the same result. I think it a much better way than cutting off the roots. In early summer, say June or July, wind a strong twine several times around the tree, or a single limb, and tie it, the tighter the better, and you will be pleased with the result; the next winter or spring the cord may be taken off.

CUTTING ALDERS.—A *Country Gentleman* correspondent says with respect to the time of the year for cutting black alders to prevent them sprouting again:—Many kinds of bushes will not sprout if cut in the latter part of summer. It is an old saying, that bushes cut in the old of the moon in August, will not sprout. I have tried it with good success generally; but what we call white bush will sprout, and I have sometimes thought grew more thrifty. In regard to black alders, I have cut them at all seasons, but prefer to cut them in March or April, before the frost is out of the ground. As they usually grow on moist and marshy land, the frost holds them fast, and the grass and fern brakes are not then in the way, so that a man can cut a third faster than in the latter part of summer, and time is not so valuable. The philosophy of cutting alders in the spring is this: The sap will run profusely from the stubs and they bleed to death, so they have not strength to grow sprouts.

THE EFFECTS OF LIME.—Lime improves the quality of any grain crop grown on land to which it is applied. The grains have thinner skin, are heavier and give more flour. The flour is said to be richer in gluten, but there is much difference of opinion on the subject. It is said to hasten the ripening of wheat, but our experience is quite different on this point, as we have known it to delay the ripening of grain crops. A more marked improvement is produced in both the quantity and quality of the spring-sown than of the winter-sown crops. It hardens the straw of cereals and prevents it from falling down under the weight of the ear. Potatoes, turnips, peas, beans, rape, colza, and all the brassica tribe, are greatly improved by lime. On flax alone it is injurious, diminishing the strength of the fibre. Hence, in Belgium flax is not grown on limed land until seven years after the lime has been applied.—*Exchange*.

BUTTER MAKING EXPLAINED.—Cream rises because of the comparatively light specific gravity of the butter globules. The cream arranges itself upon the surface according to the size of the globules, the largest globules being at or near the top. Cream is, therefore, an uneven product, rising in layers. Each layer is different and produces a different quality of butter, and one layer is better for butter-making than another. The cream rising first is the richest, produces the best butter, and churns the quickest. The second skimming is poorer for manufacture, and the third may be worthless for first-class butter. Hence in practice a dairyman may obtain too much butter from his milk, the increase in quantity not sufficiently compensating for the decrease in quality, brought about by the churning of globules which should have been left in the buttermilk. *Agriculturist*

SPAVIN.—A person writing to the *N. Y. Tribune* for information on this subject received the following reply: A bone spavin is very difficult, if not impossible, to cure. The disease is constitutional, and although by blistering a spavin may be cured temporarily, in the case of a young horse, yet it will return again as soon as the animal is worked. The prevalence of spavins is due to the misguided practice of breeding from unsound mares, on the very wrong but common principle that "any mare is good enough to bring a colt."

—Give each of the boys and girls some young animal for their own, and teach them to take the best of care of them, and don't forget who owns them when they come to be valuable. The "boy's calf" that became "father's cow" has crushed the ambition of many a farmer's son and made him long for a position behind a counter or before the mast.

TESTING SEEDS.—It is said that they test the vitality of grass seeds in Northern Europe by placing a quantity of them on a knife blade and heating it over a lighted candle. The seeds which are alive will crackle, while the dead seeds will char on the blade.

## DOMESTIC.

CORN MUSH ROLLS.—Work wheat or rye meal into cornmeal mush until stiff enough to roll with the hands. Make into a long roll as large as the wrist, cut off slices an inch thick, and bake forty minutes.

FRUIT MUSH.—Either of the above kinds of mush may be greatly improved by the addition of raisins stemmed and washed and stirred in on the surface of the mush when set back to simmer. Valencia raisins will cook within an hour, but Malaga require one and a half hours.

LEMON TARTS.—To the juice of one large lemon, add one pint hot water. Boil and thicken with one tablespoonful corn starch. Sweeten to taste. Line patty pans with pie-crust, fill with the prepared lemon juice, put a pastry leaf, or rather ornament, on the top and bake until the crust is done. Serve cold. Tart pies can be made in the same manner and save time. Other fruit juices, in larger proportion, can be used instead of lemon, with fine results.

SAGO JELLY CAKE.—Pour three cups of boiling water on one cup of sago; let it stand two minutes; add three cups of finely-chopped tart apples, the juice of one large lemon, one cup of stoned raisins, and one gill of sugar. Mix thoroughly and dip one inch thick in deep patty pans, or biscuit pans. Bake in a moderate oven one hour or less, but do not brown. Let them stand till very cold, then put on plates and serve for supper. This can also be baked in a pudding dish and taken out in slices when cold.

TO BAKE A CALF'S HEAD.—Boil the head, after being well cleaned, until all the bones may be easily drawn out. Lay the pieces of meat on a dish, and cut them into small pieces. Season with Cayenne pepper, mace, cloves, nutmeg, parsley, onions, sweet-marjoram, and a little thyme, a small bit of each chopped up fine. Sprinkle over it salt to your taste. Lay some lumps of butter over it, and as much water as will cover it; then put it in the oven, and when baked tender take the meat out, also three or four eggs must be beaten up with the butter, and added to the gravy, which must then be thickened over the fire. Keep it stirring during this part of the process, and then pour it hot over the meat, which may then be served.

OYSTER SHELLS FOR EGGS.—One who has felt obliged to exercise all her womanly thoroughness and persistence in following up for a series of years the most approved plans for egg-farming (on a small scale) can testify that no one thing is comparable to a continuous supply of oyster shells. Choose home-loving, docile Brahmas if you will; or lively Leghorns, or half a mixture of both; but deny them oyster shells, and they will barely pay their way from November to April. You may even be tempted to wring the necks of your self-supporting, soft-eyed "Spangles;" but try oyster shells for a while; and if they can be had in no other way, you will order a barrel of oysters from the sea-shore, and think the shells alone have paid all expenses.—*Mrs. Farmer, in Country Gentleman*.

FRENCH POLISH.—The readers of the *Bazar* may be glad to know how the fine original polish of furniture may be restored, especially in the case of such articles as pianos, fancy tables, cabinets, lacquered ware, etc., which have become tarnished by use. Make a polish by putting half an ounce of shellac, the same quantity of gumlac, and a quarter of an ounce of gum-sandarac into a pint of spirits of wine. Put them all together in a stone bottle near the fire, shaking it very often. As soon as the gums are dissolved it is ready for use. Now make a roller of woollen rags—soft old broad-cloth will do nicely—put a little of the polish on it, and also a few drops of linseed-oil. Rub the surface to be polished with this, going round and round, over a small space at a time, until it begins to be quite smooth. Then finish by a second rubbing with spirits of wine and more of the polish, and your furniture will have a brilliant lustre, equal to new.—*Bazar*.

HASTY PUDDING, OR CORN MEAL MUSH.—Have the water boiling and the meal ready. Sift the meal into the boiling water with one hand while stirring the water with a spoon or "puddingstick" in the other, until enough meal is in. The quantity required will depend on the grade of the meal, and can be judged closely only by experiment. If fine, it should be made at first as thick or thicker than wanted when done. The coarser meal may be made thinner, and it will make the better mush, though it will require longer cooking. Set where it will barely simmer, cover close and cook one hour at least; of course, three or four hours will improve it, and if the heat be carefully adjusted, it will neither burn nor form a very thick crust. Serve warm. What is not eaten warm need not be wasted. If steamed thoroughly without mashing or mixing with water, it will be almost equal to new. It can also be nicely browned by cutting in slices and cooking on a griddle slightly oiled.