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espeare

zes himself, and gives us self, so, but in a much oet betrays his inner self to be writing of the crea- tion. I do not for one at there are times, and t end, when Shakespeare ne thought or feeling pro- the occasion, and to the ical personage who is re are other times when, as far as the action of the pment of the characters atiates on a theme aris- them, but somewhat de- the story. I hope it will ous if I say that I always ish the occasions when n, is speaking, rather than matist. Could there be ntively personal than t the close of "The Tam- anything more clearly and resive of Shakespeare's per relations of man and isband? Could there be itely individual than the "Measure for Measure,"

so we know not where!"

candid respecting life and the next, here and after- region somewhat more Shakespeare himself who puts into the mouth of :

est orb which thou beholdest, an angel sings, or un- sung-eyed cherubim, immortal souls, the vestiture of decay n, we cannot hear it."

in numberless others, we try as the expression and oundest intellectual and is the absolute fusion of mere trilling lyrical fac- ing, that constitutes the e poets who manifest it; have the so potent art of real in life into the Ideal, of the former. For this maginable quality of mind te, and no poet ever pos- and used them so lavish- Finally, we see what man- pare was when we find or himself a competency, place, where the romance n enacted, and there hav- broken his wand, leading moved for which the Duke sure" so suggestively ex- ce. But, mindful of ion of brevity, I will r attention; content if I enough to justify the as- w of Shakespeare all that ncerning any man. This s left us; the richest in- nation ever received; in- wisdom, arising from the strongest practical ofttest and most captivat-

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THE APIARY

MANAGEMENT PREVIOUS TO THE HONEY-FLOW TO PREVENT SWARMS

FOR preventing swarming and for increasing the amount of brood produced previous to and during the fore part of the white-honey flow, Mr. S. D. Chapman, of Mancelona, Michigan, has a system of his own. He uses eight-frame hives, and the system is about as follows: At the approach of the warm period, which is usually near May 20, in this locality, he shakes the bees from two frames of brood, placing these two brood-frames without the bees in an upper story, taking out two empty combs from the upper story to replace those just removed from the lower story. He now puts a queen-excluder on the first story and the second story over it. This gives the queen in the lower story two extra combs to use for breeding purposes and if there is young brood in the two combs placed in the upper story, this extra space in the two combs amounts to considerable. In a week or two, two more frames of brood are lifted up into another or third upper story, making a three-story hive. This method of lifting brood from the brood-nest into upper stories is continued until it is desirable to curtail brood production on account of the bees not maturing in time to be honey-gatherers.

During 1906 Mr. Chapman lifted brood according to this plan in three-fourths of an out-yard, when it turned cold and a strong north-west wind came up. On the colonies in the remaining fourth of the yard he put on the upper stories, but placed in them no brood. These last colonies were as good as the average of the yard. Shortly after the beginning of the raspberry flow he found that these colonies in the three-fourths of the yard, where brood had been placed in the upper stories, had from fifteen to twenty pounds of honey to their credit, and this gain remained throughout the season.

By following this plan, whole yards of bees have been worked for extracted honey through the whole season, without a single swarm issuing. It can be seen that powerful colonies need more room during the period just before and during the fore part of the white-honey flow than is provided in the ordinary hive in use today, and the above plan shows at least one method that may be employed with regular hives to provide this extra room at a time when it is necessary. Of course, when this time is past, the hive is brought back again to its normal size.

In the fall of the year 1906, during the early part of the buckwheat flow, our Pine Lake yard of 100 colonies was left without upper stories until the hives were crammed full of this early buckwheat honey for winter stores. At this time some of the most advanced colonies built comb and stored honey on the outside of the hives, and some of them must have had as much as 35 pounds of honey in the hive when they went into winter quarters. This was more honey than we were in the habit of leaving, and was even more than a ten-frame hive could hold, and still leave room for the colony to breed up in the spring. The consequences were that, when the upper stories were given in May, 1907, before the honey season opened, these bees in the Pine Lake yard carried a few pounds of this buckwheat honey in the brood-nest into the upper story to make room for the queen below, with the result that, when the honey was extracted, it was amber in color and had to be sold for one cent a pound less than the rest, which contained no dark honey. This is the only case of the kind that has come to my notice, and even this would not have happened under normal circumstances.

When I first began to produce extracted honey the plan then in vogue was to lift a frame of brood into the upper story to start the bees to work there immediately. While this was successful so far as getting the bees to work in the supers was concerned, yet it was a noticeable fact that the honey produced by this plan was never quite as good in color as when no brood was lifted above. I soon learned that it is not necessary to lift brood above to get the bees to working in the supers, drawn combs being found sufficient. Now, in lifting this frame of brood into the upper story there was always more or less honey from the previous season lifted with it, which honey was often gathered from buckwheat. This brought about the same result as that outlined above, and the old grade of honey being not to my liking the system was abandoned. This is the worst feature about the Chapman system, for the old honey that is likely to be lifted up with the brood causes all the honey to be of a somewhat darker color and perhaps of a poorer quality.

The Coveyou Plan

Mr. E. E. Coveyou, of Petoskey, Michigan, has a very good plan for handling his bees during the fore part of the honey-flow. He uses ten-frame hives, and before the honey-flow he gives the colonies another story of combs without putting an excluder between. The cells of these combs should be of the worker size, for the queen is allowed full sway through this story until the colony needs a first one. At the time this third story is given, the queen is placed below in the first story, a queen-excluder is put on, and then the third story of empty combs put over it. Finally, on top of all, the second story partly full of honey and brood is added. This plan has the advantage

of giving the colony an abundance of comb room and also an unlimited amount of breeding space for the queen during the critical swarming period previous to the honey-flow. This is one of the best systems I have heard of to be used for this purpose in connection with the queen-excluder, for, aside from the advantage gained by allowing the queen unlimited breeding-room during the early part of the season, all of the advantages of the excluder are secured in extracting-time, for the brood lifted above with the second story will all be hatched and the combs filled with honey long before extracting-time, for Mr. Coveyou does not extract until late in August—perhaps 30 days after the close of the raspberry flow.

Before putting on any upper stories Mr. Coveyou clips his queens, for he works three yards practically alone with the exception of extra help made use of at extracting-time, or when some extra work is to be done. By having his queens clipped, and by being with the bees every day during the swarming or honey season, he can have any swarms that may issue. It is obvious that, if the queens had not been clipped, the swarms would have gone to the woods and been lost. If a swarm should issue when he is working at some other yard, and returns to the hive, he is very likely to reach this yard by the next day; and when they come out again, as they almost assuredly will, he can have them.

Putting On Extra Supers

Knowing by experience that bees will enter upper stories without any hesitancy when placed on top of the hive or on top of any story that may already be on the hive, and as our extracting is not done until after the white-honey season is over, we have no lifting of full stories except at extracting-time. We put on the third story, when the second one is about two-thirds full, or at least before all the empty comb-room is used. However, no set rule can be given as to the proper time for putting on extra supers, as there is a difference in the colonies in this respect. Some bees will work in a few combs and begin to cap those started first, while those combs at the outside of the super will not be in use at all. In such a case it would be folly to put on another super as long as this condition continues. Other colonies will fill every available cell with honey before commencing to draw out the combs or to cap the cells. Such a colony will need more extra comb-room than the one first mentioned, for in the first case the bees seem to be more adapted to working wax and drawing out combs. It is well to humor these dispositions, and not compel the bees mentioned in the last case to draw out the combs to the full capacity of the space allowed. They should, instead, be given additional comb-room as they are able to use it, and they will store much more honey than if compelled against their will to draw out cells to the full depth at once.

At extracting-time, if one wishes to make two grades of his extracted honey, all of the partly filled and unsealed combs will be in the top stories if the plan just outlined is followed, and these can then be taken off and extracted by themselves. I believe this to be the ideal way, for the first-given supers are filled out more fully and capped more evenly than if they were lifted up and the empty ones placed beneath them next to the brood-chamber. Then with this latter plan of lifting the full supers up and putting the empty supers next to the hive one is likely to give additional room faster than the bees really need it, with the result that the honey is capped over when the combs are thin, and even when some of the outside combs may not be entirely finished.

Putting empty stories on top is probably the only practical way to manage when a queen excluder is not used between the hive and the supers. If the extra supers are added intelligently when the season is near the end, by giving the colony only what storage room it will need, the queen will thus be crowded down into the hive below, leaving the supers nearly free from brood. In order to follow this method one should bear in mind that it is part of the system, in that the amount of brood in the upper story is to be curtailed toward the close of the season, as explained, and then the honey is left on the hive a week or two after the close of the season, to allow it to cure thoroughly. Incidentally, the brood that may be left in the upper stories has thus hatched out before extracting.

The old orthodox plan of placing the empty super above the queen-excluder and under the partly filled one is still practiced by the majority of Michigan bee-keepers and when the first one is about two-thirds full it is lifted up and an empty one placed beneath. This plan is continued clear through the season, the advantage claimed for this system of extra work being that, by lifting up the full stories and placing the empty ones next to the brood-chamber, the bees are stimulated to greater activity by this dividing of the hive when placing the empty combs next to the brood-chamber. Now, while I admit that it may be advisable to put an empty comb-honey super next to the brood-chamber, after a long experience I fail to see where the advantage is in the production of extracted honey, and where there is any gain in lifting up heavy upper stories during the honey season, especially when the extracting is all done at one time.

The Use of an Excluder to Prevent Brood in the Supers, and How By Them a Whiter Honey Is Secured

Before leaving this subject I would say that, if one does much extracting during the honey-flow, or in the case of a beginner who has had but little experience, I would advise the use of an excluder, for there must be no

unsealed brood in the extracting-combs or the honey obtained will not be of good quality. The very sight of these young grubs floating on top of the honey would be enough to condemn the plan of trying to manage without an excluder. If a visitor should happen to come in, those grubs would, of course, be called worms, and it would not help the sale if it should get out that the honey is "wormy." Then there is the food provided for the larvae, some of which is thrown out with the honey, and this surely makes the honey of a poorer quality. My advice, therefore, is to use an excluder under such circumstances until you learn a better way.—E. D. Townsend in Gleanings in Bee Culture.

AROUND THE FARM

BREAKING COLTS

THESE remarks are intended to apply to draft or general-purpose horses, but may be applied to any breed with good results. After many years of observation and experience, I am led to believe the best time to begin a colt's education is when he is quite young, even at three or four days old, provided he is strong and healthy. It is much easier then, is often convenient, and is lasting, when followed up with a little care and attention. The young foal should be at no great distance from the buildings until he is at least two or three weeks old, so that he may be sheltered from chilly nights and rains, so that there should be no trouble to give him the little teaching he requires at that age. When I had a foal born in a box stall, as soon as he began to run round the stall, I used to catch him in my arms and hold until he ceased struggling, then allow him to walk away towards his dam. After this was repeated a few times, I put a sort of halter on him, by taking a strap about three feet long, putting one end over his neck and back under his throat and around his muzzle, and up to his throat again, taking both ends in the right hand; and, by this, guiding him towards his dam before letting him go. In this way I have taught foals to lead very nicely in two or three weeks, without a struggle. It is true it may be done in much less time than this by being a little harsh, but taking time is often the fastest way to teach either horses or colts. When the foal has been learned to lead, it is good practice to lift his feet for a second at a time at first, each foot in turn, a little longer each time, until he allows his feet being lifted as desired. This is especially desirable as some colts give a great deal of trouble at first shoeing. At this stage the foal may be allowed to run with his dam until weaning time. All that is necessary is to try to keep him from getting wild by caressing occasionally, but do not fool with him, or allow anyone else to do so. Attend to his health and education—nothing else. A few days before weaning, it is well to put on a proper halter, give him another lesson at leading, and learn him to stand tied. He may have become wild by this time if he has, corner him up in the stable and halter him. The best way to teach him to stand tied is to put a rope or a surcingle, fasten it between his fore legs, put the other end up through the ring of the halter, and tie about as high as his nose; he will not pull much, and if he does he cannot hurt himself. This is especially a good way to tie a colt three or four years old that has never been handled, as a big, young horse, weighing about thirteen hundred, can break almost any halter. It is good to put something under the rope to prevent it cutting back of the withers. Colts should not be left alone until they are accustomed to stand quietly, as at first they are liable to become fast in various ways. When the colt has been weaned, and will lead and stand tied properly, he should be allowed all the exercise he requires in the paddock, or else, where out, if there are others to play with, all the better. He may now be allowed to run for a couple of years. All that he will need is attention to his health, and a little caressing occasionally. At two years and a half, if a big, strong colt, he should be broken to harness. If the colt is undersized, it is well to let him run with a good large bit, and let him stand with it on for a hour or two each day for a week, to harden his mouth, as, without this, the mouth usually becomes chafed. Two weeks would be better to teach him to drive. A surcingle should be put on, with rings half way down his sides, or a little lower, to put the reins through. In this way, a driver can turn a colt whether he wants to or not. Take him into a paddock, and see that there are no colts within sight to annoy him. Be sure to have a whip, and be also sure to use it as little as possible. A very few lessons should teach him to drive very nicely, after which he should be hitched up double, if convenient, as colts always break better to harness with company. A short drive should be sufficient at first, increasing each time as the colt becomes hardened up. It will depend on the size and strength of the colt as to when he should be put to work. Colts that are big and strong I always put to work regularly at three years. I have found it most profitable to break colts this way, as they take to their work more kindly, and are ready as soon as they are big and strong enough to work. It also prepares

the average colt at any age, but anyone who raises two to four colts a year for market, and picks up a likely horse or colt and prepares him for sale, is sure to find some with undesirable characteristics. This has been my experience. I rather enjoyed breaking horses, and did not mind if they were difficult to manage, but have sometimes had more than I wanted. Sometimes I knew what they were when I got them; sometimes I got them the way David Harum got his, and have had quite a few bad characters—the sulky, the cross and vicious, and the rattle-brained. They are all hard to manage when they are over five or six years, and their habits become settled. They are sure to give trouble. I will give a couple of instances of sulky, or balky, horses, as they are sometimes called, which came my way. One was eight or nine years old, and the other six; neither had ever earned his board up to this time, and both had changed hands many times. The former, when he got into his temper, would stand with his head up, his ears hanging, and his eyes half closed, and deaf to all entreaties to move on. It was very evident that the whip and all other extreme measures had been used, but kindness with firm and gentle training, had been omitted from the beginning. I must now go back and teach him what he should have been taught before he was put into harness. It was not that he would not work sometimes, but he only worked when he liked, and a horse, to be serviceable, must do his work when wanted, and willingly. After allowing him to stand in the stable a couple of days, until I knew he would be pleased to get some kind of exercise, I began by taking him out night and morning for a drive around the paddock for half an hour, as a colt, and, when put into his stall, gave him a rub-down and a handful of oats before I left him. He seemed to enjoy the little exercise he was getting. After a couple of days I put the harness on and drove him around the paddock, being very careful not to ask him to do anything I could not compel him to do, for this was the mistake that had been made with him from the beginning. I always carried a whip, and, although I did not punish him, it was useful in making him obedient to the reins and the word of command. In this way I taught him to go around the paddock without reins anywhere I wanted. He now needed more exercise than he was getting, so I put the riding saddle on him. He did not like it very well at first, but got him going after a little twisting and turning, only allowing him to walk, always finishing up with half an hour in the harness, the rub-down and the handful of oats before I left him. He was doing all right. It was now time to increase his work, so I hitched him to a pair of shafts and, attached them to a stone-boat and drove him around the paddock around which he had been well accustomed to go, and where I knew he would not refuse; also driving him a short distance out of the paddock when the opportunity presented itself, standing on the stone-boat sometimes, and always rewarding him when put into his stall. In addition to his training, I began to give him a little more work around the buildings, such as drawing manure to the field, loading very lightly at first, and giving him another vehicle to follow, for great care must be taken with a horse of this kind to make haste slowly, so that everything he does is a lesson for the better. Now, it took fully three months of careful training of this kind before he was reliable, after which he would do any kind of work when wanted. It will easily be seen that this kind of breaking is not profitable.

I will give another instance of a horse of the same kind giving good satisfaction; I think I may say by accident. He was a fine, big chestnut, of the Hackney type, with a dash of the Thoroughbred; over sixteen hands, looking like a hunter, six years old. He took very unkindly to harness, and it was very evident he had never been taught any manners. The owner told me all about him, and let me have him very reasonably. After giving him a few lessons around the paddock, and teaching him to do as he was told, I put the saddle on him, as he was a likely horse for that purpose. He took very kindly to the saddle and seemed to be in his element when exercising. In this respect he needed no breaking. I then began trying him at hurdles, and, to my surprise, he took them very easily, and in two or three weeks had developed into an excellent jumper, and I had no trouble placing him as a hunter, where he gave good satisfaction to the purchaser. It sometimes happens that a horse which is not serviceable in one line of business, can be very good in another. It is a good idea, when a horse difficult to manage turns up, to commence by giving him anything he will do. After, with good judgment and care, he will work into anything he is wanted to, and be a very serviceable animal.

Quite a few cranky and undesirable characters have come my way, and, on the whole, I would say they are unprofitable, as they take up too much time, and they demand the strictest attention and care, which is often not convenient to give them. I would therefore say to the amateur, beware of the horse that stands with his head up, his ears hanging, and his eyes half closed; it is a sure sign of trouble. I am glad to say the cross and vicious are not often met with, but are sometimes dangerous. The big, strong, healthy, even-tempered horses and colts were always the ones that I found the most profitable.—M. R. W.

WINTER DRINKING WATER

A good many farmers' wives warm all the fowls drinking water in winter. After a few years' experimenting along this line on laying and non-laying hens, we concluded that warmed water was no better than fresh water of natural temperature right from the well. A bucket of this with a warm stone dropped in it will not freeze in a good hen-house in day-time in the coldest weather. Try it.

WITH THE POULTRYMAN

HOW CAN WE GET EGGS FROM OUR HENS IN WINTER?

THIS subject has probably filled the minds of all keepers of hens at one time or another, and it is a subject that will not down, at least with such as keep hens for eggs mostly and those eggs are intended for market. It is a fact that with some people, especially such as keep poultry for show purposes, or for selling eggs at fancy prices, during what is termed by poultrymen the hatching season, that eggs are not desired during a part of the winter. Every keeper of fancy stock, that caters to the public, with the products of his yards makes it a point to have his hens in a condition to receive the greatest number of eggs when the orders for such begin to pour upon him, and it is very proper and surely to his interest so to do. A hen that has laid all winter will not lay much, if any, in the spring, and a hen that has rested during the winter, or at least has not been a prolific layer, ought and will, with the proper care and food, to be a good layer. But this article is not so much for fanciers, as for such that make it a business of eggs for the general market.

I have found through years of close association with almost every breed of chickens, that as a rule it is not the hen's fault if no eggs are received as much as it is the owner of that hen. We have breeds enough to select from, so the most exacting can and should be pleased. Some breeds are known better than others, some are favored more than others. There are breeds and breeds, but I will say that proper care and food will make most, if not all, of them good layers. We have breeds that are known for their good laying qualities, others are not so well thought of, while from others we hear of only poor success. I say again that it is not so much the breed, as it is the care they receive, that makes the result a good or poor one. A person that keeps poultry for eggs, and wants a part of these eggs in winter, when as a rule fresh eggs are scarce, and prices high, this person must do his duty all season to work for the end he seeks. A hen, no matter whether good, medium or poor in laying qualities, will lay, if at all, in the spring of the year. It is the time that Nature has provided best for such, and as I say, if a hen lays in the spring, that is no thermometer at all as to her being a good layer. A hen that can be kept at it and that lays the greatest number in a year, as a goodly part of those are laid when they bring the best price, that is the hen to have and that is what we must strive to obtain. But how? We must go back to the beginning. In order to get hens to have them laying when winter comes on, it is necessary to have them hatched early enough in spring to get them grown and in fit condition to lay. This can be done with most, yes, I believe, with all breeds, even in the North. Some mature earlier than others, and we must act accordingly. A hen that starts laying, say, in October, with proper housing, food and care, can be kept at it very easily. But let cold weather come on and catch your hens so they will be chilled and frosted, and you will find it the hardest kind of work to overcome and all the proper foods will have little effect on them. If your old hens are wanted to supply your winter eggs, you have also a duty to perform to get them in shape.

A hen that has come through moult poorly or not at all will never be good as a layer. We must get them through moulting early in the fall, so they will be in tip-top shape. Help them along with proper food to aid them in getting a new coat of feathers. I don't intend to go into details at this time, as to food, so much is written about the proper laying rations, and they all have their merits or demerits, it would make this subject entirely too long. Nor shall I say what breed to keep. I say keep any breed that is known for its good winter-laying qualities, or for that matter, any breed one desires.

Take the breed that is most attractive to you and one that you will take pride in. Then give it your best attention and care and you won't go amiss. Remember the breed alone will never do it, you must also give your share in being attentive. Learn them, so you will know all their good qualities and their defects. Try to overcome as many of the latter as possible and add to the former. The best of breeds in the hands of those that won't give them the care and attention will not be a success, and again a breed that is little known, in the hands of a practical person that is willing to do his share, will surprise you in the number of eggs received. It is necessary for a hen, if eggs are wanted, to have good warm quarters to sleep in, sufficient and desirable food, good clean air and surroundings, and when such is given failure will not be known. But just one thing more: It is needful that a hen in order to lay must be kept active, must not be overcrowded, and it is only too often that winter quarters contain too many fowls. An active hen is always a laying hen, a hen that puts in most of her time on perches is a poor layer, and one that will help make poultry keeping a failure.

When choosing geese see that the bills and feet are yellow and have few hairs on them. Old birds have a decided red tinge on both. The feet should be pliable when freshly killed, but become dry and stiff if they have been killed for some time. Geese are called green until they are two or three months old.