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St. Joseph, Missouri: Rev. Emerson Taylor Abbott, October, 1897

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SWEET CLOVER NUMBER.

VOL. 8.

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NO. 10.

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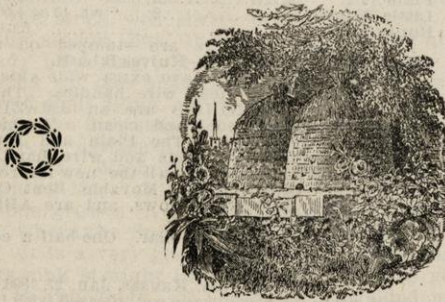
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devoted to Farm Bee
Minor Interests of Up-
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THE BUSY BEE.



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EMERSON TAYLOR ABBOTT,
EDITOR AND PROPRIETOR,

ST. JOSEPH, MO.

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☞ Fifteen years for a dollar. One-half a cent a month.



Cuba, Kansas, Jan. 27, 1896.

Dear Sir?—I have used the Conqueror 15 years. I was always well pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the four inch "Smoker Engine" too large. Yours,

W. H. EAGERTY.

Corning, Cal., July 14th, 1896.

I have used Bingham Smokers ever since they came out. Working from three to seven hundred colonies twelve months in the year. I ought to know what is required in a smoker. The Doctor 3½ inch just received fills the bill. Respectfully,

O. W. OSBORN.

With a Bingham Smoker that will hold a quart of sound maple wood the bee-keepers' trials are all over for a long time. Who ever heard of a Bingham Smoker that was too large or did not give perfect satisfaction. The world's most scientific and largest comb honey producers of Bingham Smokers and Knives. The same is true of the world's largest producers of extracted honey. Before buying a smoker or knife hunt up its record and pedigree.

Please mention The Busy Bee.

T. F. BINGHAM, Farwell, Mich.

THE BUSY BEE.

Published Monthly.

Vol. 8, No. 10.

ST. JOSEPH, MO.

OCTOBER, 1897

If We Only Understood.

Could we but draw back the curtains
That surround each other's lives,
See the naked heart and spirit;

Know what spur the action gives,
Often we should find it better,
Purer, than we judge we should;
We would love each other better
If we only understood.

Ah! we judge each other harshly
Knowing not of life's hidden force;
Knowing not the fount of action

Is less turbid at its source;
Seeing not, amid the evil
All the golden grains of good;
Oh! we'd love each other better
If we only understood.

—Author Not Known.

Sweet Clover.

Melilot, or sweet clover, (*Melilotus Alba*) is one of the very best honey plants that grow in America. It is not a good hay clover, being too coarse for a good forage, but it is one of the very best forage plants because it grows so rank and the stock will thrive on it early in the season, but it does not stand steady pasturing. It is a biennial, growing up one year, blooming the next, and then dying. If it is protected during the first season's growth, it will make an extraordinary growth the second year. We have often seen it knee-high by May 1st, and owing to its precocious growth, it is well liked in Canada, where the Springs are very backward. It is a very good fertilizer, as its roots sink straight into the soil and reach to the depth of eighteen inches or more. Its advantages to the bee-keeper are very marked, for it grows in barren soil and in waste places where it seems to thrive about as well as in cultivated land. It has been considered by many as a noxious weed, owing to its propagating without attention, but the facts are that it does not annoy, because it is easily kept down by pasturing, and it cannot reproduce itself in cultivated fields,

since it takes two years to come to seed.

Sweet clover produces honey of the very best quality, second to none and it has the quality of blooming during the summer after white clover has stopped, and at a season when there is but little other bloom. Drouth does not seem to injure it, and even where it is pastured, it continues to throw out side branches that bloom profusely.

C. P. DADANT.

Hamilton, Ill.

Sweet Clover as a Forage and Honey Plant.

By H. R. Boardman, in Gleanings.

I am surprised that any bee-keeper of experience, who has had a reasonable opportunity of observing, should report sweet clover anything less than a first-class honey-plant; and yet I am aware that there are a few adverse reports coming from very reliable sources.

I am quite sure—yes, I think I know from my own experience and observations with this plant, extending through a period of a dozen years or more—that it is unsurpassed, and equalled only by the noted alfalfa; and these convictions are supported by the opinions of some of the most practical and reliable bee-men of my acquaintance.

The last season was the first for several years when white clover alone yielded me any surplus, and this, too, with the fields white with its bloom in every direction as far as bees could fly; and yet I should not be warranted in claiming that white clover was not a good honey-plant. It has a world-wide reputation that is unimpeachable. If it were no more abundant than its cousin it would hardly have gained this enviable reputation—certainly not in the last few years.

I think it has been generally con-

ceded by practical bee-keepers that it will not pay to plant for honey alone. This conclusion is undoubtedly a safe one. We must, then, look for some other value besides that of honey, in order to recommend sweet clover as a field crop.

I once supposed, as most people do now, that sweet clover was entirely worthless as a forage plant for stock—that nothing would eat it; but I have demonstrated to my own satisfaction that horses, cattle and sheep, will not only learn to eat it, but will thrive upon it, both as pasture and dried as hay, and that hogs are fond of it in the green state. I say, they learn to eat it, because most stock have to acquire a taste for it, not taking readily to it at first. I gave it a fair trial for pasture last summer. My horses and family cow fed upon it almost entirely during the dry part of the season. They became fat and sleek, without the help of grain or other feed. The milk and butter from the cow showed no objectionable flavor. The amount of feed furnished was something surprising. It has a habit of continually throwing out or renewing its foliage and its bloom; also, when cut or fed back, it keeps it constantly fresh. After gaining a growth of four or five feet in height in dense masses in my pasture it was fed down entirely, even the coarse stalks, so that at the close of the season, nothing was left. The seedling was, of course, destroyed; but in my desire to put to a severe test the feed value of the crop, this was lost sight of.

Sweet clover, like the alfalfa, sends its great roots deep down into the hardest, driest soils, thus enabling it to withstand severe drouths as no other plant can. This gives it great value as a fertilizer; and growing as it does upon the hardest, poorest soils, it recommends itself for reclaiming soils too poor for raising other crops. It has a habit of taking possession of vacant lots and roadsides, which has caused some alarm with those unacquainted with its habits, fearing it would spread over the fields and prove a pest. I can assure you it will do no such thing. In all my acquaintance with it I have never seen it spread into cultivated or occupied fields to any extent. I have been very reckless with the seed about my own premises;

and if there had been any danger in this direction I should have found it out long ago.

Some time during the latter part of last summer I made a trip through a part of the state where a severe drouth was prevailing. The cattle and sheep looked gaunt and hungry, and were roaming over pastures that were dry, scorched and dead. Fire had run over the farms here and there, adding still farther to the look of desolation. In places the cows had been turned into the growing corn, the only green forage in sight. I wondered again and again how it was possible for the stock to escape entire starvation. A field of sweet clover, with its dark-green foliage, would have made a refreshing picture amidst this desolation. It would have been more than a picture. It would have supplied a place where it would have been more heartily welcome and appreciated in this trying emergency. I think it will recommend itself and come to be appreciated soon in such times of severe drouth. It makes a slender growth the first year. It is this crop that is the most valuable for hay, and cutting it will not interfere with the second year's growth. The second year it grows coarser; blossoms, seeds and dies, root and branch. If cut for hay in the second year it should be cut just as it is beginning to bloom. A second crop may be cut late in the season. It should be well dried, and it requires good weather to do it in. If cut for seed it may be thrashed and hulled with a machine like red clover, or the seed may be sown without hulling.

Now, don't be induced by the bright picture I have drawn to seed your whole farm to sweet clover, for it would result in an unprofitable failure, I am sure. But if you desire to test its value, do it on a small scale, with an acre or two, and do it thoroughly. I have found it no easy thing to succeed in making it grow as a field crop, and I would advise sparing no pains in getting it started. When once it gets possession of the ground it will stay if allowed to ripen a late crop of seed. Sow with winter wheat or rye in the spring, the same as other clover. Please don't write me for seed. I have none to spare.

East Townsend, O., Jan. 7, 1894.

SWEET CLOVER.

HOW IT LOOSENS UP THE SOIL.

By G. J. Yoder.

As is well known, sweet clover is a valuable honey-plant, while some persons regard it as a bad weed; but with eleven years' experience I have learned quite a little about it. In the first place, I sowed it for its honey qualities; but I soon found there was something else of value connected with it. I sowed it on poor heavy soil in the spring of 1882. The following year it was a boon to my bees, yielding abundance of honey. I had sown it near the public road, and many persons going by would stop to see the bees work on it, and express surprise. The roots penetrated deep into the hard subsoil, and make the land loose and friable, and, after the crop is cleared off, it is in fine condition to put to other crops.

We once, just as it was done blooming, turned it under and sowed it to buckwheat, thus getting two crops of bloom in one summer. The following spring we sowed it to oats, getting a fine crop, while at the same time the sweet clover volunteered, making a heavy growth by the 15th of September standing about three feet high. Now was our time to try its qualities for hay, and suiting the action to the thought, the mower was brought out, and in due time we had it in a stack, making about one and one-half tons per acre. It was the sweetest-smelling hay that I have ever seen. In one instance I had to call a doctor one very dark night, and, as we came within a few rods of the haystack, the doctor stopped short and said, "What smells so wonderfully sweet?" On being told it was a stack of sweet-clover hay he was much surprised. It was actually so sweet that, every warm day during the winter, the bees would be flying about it. We fed it all out to our sheep, with corn fodder for a change, and I never had sheep do better. Horses will readily eat it, but cows do not care much for it.

It will grow almost anywhere, even on very rocky hillsides and waste lands; but I prefer to sow it where I

can keep control of it and get a crop of bloom and a crop of seed; then the next spring a crop of some kind, and in the fall a crop of hay, or to wheat in the fall, and in the next fall a crop of hay.

Every other year it reseeds itself; but if put to cultivated crops a few years it can all be killed out. I made a garden spot on a sweet-clover patch where there were millions of seeds, and in two years it was all gone.

With us it grows from four to eight feet high, thus making it almost impossible to get it into a thrasher or huller. We cut it with a self-rake reaper, then make a platform on a sixteen-foot hay-rack, placing it on a skid made of poles, bolted together with cross pieces; then hitch three horses to it, and pull it to the field. With two light poles about eight feet long, and just heavy enough for a man to handle, and two pitchforks, we are ready for business. Now fill your platform, not too full; and if the clover is very dry, a few good strokes will land the seed in the bottom of the platform. Now tumble out the refuse; drive up, put more on, and so on around the field. A little experience will show how it should be done. When all is thrashed off, run it through a huller and you have the Bokhara seed.

It seldom fails to yield enough to keep the bees out of mischief, and keep up brood-rearing; but we seldom get much surplus; for blooming, as it does at a time when very little else is yielding honey, it would take a large area to give us thousands of pounds.

As to off years, we have them too in this as well as in other honey-producing plants; but only once for us in eleven years was there an entire failure; yet it bloomed profusely, but seldom a bee was seen on it, but thousands of large flies, bugs, and what not but bees.—Gleanings, 1894.

Sweet Clover for Stock.

"I have had no experience with sweet clover as a forage after it is cured, but I do know that stock will eat it very readily when green, and it is never seen to get very large along the roadsides where dairies are driven to and from the pastures."—W. G. Larrabee of Vt., in Gleanings, 1894.

Sweet Clover for Forage.

Mr. Wm. Stolley of Grand Island, Nebraska, said in the American Bee Journal in December, 1895:

Treating melilot exclusively as a forage plant, I will say that I have sown 15 pounds of seed to the acre, and secured a good stand. I have sown early in the fall, so as to insure good rooting of the young plants before frost; and I have sown also late in winter, so as to allow the seed to take advantage of the early spring moisture, with the same satisfactory results. Even the stubble of small grain, or a cornfield is good enough for sweet clover without further cultivation, except a slight harrowing, and it will take care of itself in this part of the world. I have frequently scattered the seed indiscriminately on vacant places along public roads, where noxious and worthless weeds were growing, and three years later the sweet clover had run out the weeds entirely. But let me state right here, that sweet clover growing on and alongside of public highways should be cut about June 20, so as to dwarf the growth of the plants. If this is neglected, sweet clover is likely to grow so rank and high as to make it a nuisance in winter, by causing the drifting snow to bank up, thus making the public roads impassable. Many rank weeds, however, generally growing now on public roads, are just as bad as sweet clover. By mowing it the middle of June (not after, if the aim is to make it profitable for the apiarist as a honey producer,) sweet clover will furnish bee-pasturage until frost kills all growing vegetation, and is not objectionable in anyway to anybody if growing on the public highways; on the contrary, it is attractive, its perfume is delicious and it keeps the roads in good condition. In a mild and late autumn I have seen melilot thus treated blooming in December, and bees at work on it here in Nebraska.

Sweet clover is much more succulent and requires considerably more curing than alfalfa. During the first year it should be cut the latter part of June, when it is from 18 to 24 inches high; again the middle or latter part of August, and then it will make a fine

subsequent growth, so as to make excellent pasture for stock clear into winter, and not be injured.

The second year it should be cut but once, in June or not at all, as circumstances may make it advisable. This is my experience here with sweet clover. What it may do, or not do, in other parts of our great country, I will not pretend to say.

Each cutting will give from two to three tons of hay per acre, according to productiveness of soil. If it is not desirable to let it go to seed the second year of its growth, melilot should be plowed up about the beginning of July; a crop of buckwheat may then be grown on the same land to maturity, and winter grain may be sown following the harvesting of the buckwheat the same year.

If melilot is suffered to grow undisturbed the second year to maturity, it makes a tremendous growth on good land, and that is what scaresome farmers. They do not know what to do with it, when it stands in a solid mass 5 to 7 feet high, brush-like, and nearly as hard to cut as wood. It takes a good three-horse team and a No. 1 sulky-plow to put the whole mass of vegetable matter underground and out of sight. But the land itself will be enriched by it. Poor land will gain rapidly in fertility by being worked in this way. The strong and deep penetrating roots of melilot open up the subsoil of the land, by making innumerable channels which permit the mineral salts and moisture deposits below to rise to the surface when needed for plant food, after the roots have decayed, which takes place in a very short time.

Knowing the nature of it, any sensible person will be able to cope with it, and make this excellent plant a source of profit; but "a natural fool" is apt to have a job on hand that will make him "sweat," and he ought to, for that is what he was created for.

Melilot requires considerably more curing than alfalfa, and after being sufficiently cured it should be stacked early in the forenoon or towards evening, so as to prevent the leaves from dropping off. Also a liberal sprinkle of salt should be thrown on every layer of it. This will help greatly to prevent heating in the stack, and will permit its being secured and stacked much sooner than if not so treated.

It is probably in order that I also state that land on which mellilot once matured and ripened its seed, is for a number of years stocked with it; for now many years I am unable to say. Not knowing the nature of this plant, I sowed its seeds all around about my premises—lawn, apiary, and everywhere else, and some of my neighbors predicted later on that the blamed stuff would run me off my farm, since it was getting ahead of everything growing. "Yes," one of them said, "this million clover (he could not remember 'mellilot') is already on its march to town, and grows in the court-house yard, and will eventually drive away the court house 'rats' (county officers)."

Well, years have passed since this storm of indignation against sweet clover and myself was raging, but my apiary, lawn, and the park is in as fine a condition as it ever was, and our "court-house rats" are infesting the old court-house yet.

If mellilot is to be eradicated, it should be allowed to bloom, but before ripening any seed, it should be cut near the ground, and that will kill the plant in all its parts, or "root and branch," as the saying goes.

All that I have to add is, that I have no mellilot or sweet clover seed for sale.

Mr. Stolley said in a previous number of the same Journal, "The hostility of some farmers against sweet clover is abating. It has taken them years to learn that sweet clover is one of our most valuable forage pasturage plants, but they are forced to 'acknowledge the corn' at last.

For years we have had a protracted drouth in this part of the world. Early last spring their actually was nothing to feed to horses and cows, with many a poor man in the city, and a great many farmers found themselves in the same fix. Not a spear of green grass would appear after sweet clover and alfalfa was up 12 to 18 inches high. Such a condition of things was apt to prove the merits and demerits of the plant in question.

Well, to be short about it, I will say that the poor people with their own milch cow, went onto our country roads and got all the nice, green clover they wanted. Not only their cows, but also horses and hogs soon

learned to relish the herb, and it proved to be a veritable blessing to a multitude of people.

We have an old saying, that a farmer will not eat unless he knows what it is. Yes, many of them will refuse the choicest of oysters. So with mellilot clover—I consider it the "oyster" among the forage plants—after a taste for it has been acquired by stock. For bee-keepers it is just "the thing"—at least in this section of our country.

Alfalfa, although excellent in its place, cannot compare with sweet clover here as a honey-producer, since it is always cut just about the time it begins to yield honey in profusion.

Sweet Clover Again Abused.

From the American Bee Journal.

In the Orange Judd Farmer for September 11, we find a short article with the heading, "Sweet Clover a Pest at the North." It is by Prof. L. H. Pammel, whom we had come to think of as a botanist and general agricultural professor that was up to the times on sweet clover, but we must confess when we read the following from his pen, were greatly surprised:

The specimen sent by T. C. Wood, of Coffeen, Ill., is sweet clover, *Mellilotus alba*, also known as *Bohara* clover. This is an introduced weed, biennial and native of Europe. The claim is often made that it is a valuable forage-plant. Prof. Tracy, of the Mississippi Agricultural and Mechanical College, says:

"It will make an excellent growth in the rotten 'limestone' hills which are so barren that they will sustain no other plant, but is almost of no value on the rich clay which contains little lime. It is not generally liked by animals unaccustomed to its use, but it starts into growth very easily in the spring when green forage is scarce, and if stock is turned on it at that time they very soon acquire a taste for it, and eat it through the remainder of the season.

In the north this weed has become extremely abundant throughout many parts of Illinois, Wisconsin, Iowa and Minnesota. Hon. J. H. Smart, of Humboldt, Iowa, says it is one of the worst weeds in his locality. In many other portions of Iowa I have seen this weed

common in streets and door-yards and along railroads. We must regard sweet clover as a weed in the North, but in the South the question is an entirely different one, where forage of all kinds is a great desideratum, but even there I must admit that it is chiefly valuable as a soil renovator. It produces long taproots, which descend very deeply into the soil. The young plants, when turned under with the roots, will leave the soil much richer in available plant food. In the wornout soil in certain portions of the South it is a great blessing. It is to the South what the red clover is to the North.

L. H. PAMMEL.

Certainly the foregoing is a surprise when considered in the light of all the evidence we have published in these columns concerning the value of sweet clover as a forage plant. We hardly thought so usually reliable an agricultural journal as the Orange Judd Farmer would give it space in its columns.

The idea of calling sweet clover a "weed," and then admit that "stock eat it through the remainder of the season." When we were on the farm, our stock never "acquired a taste" for weeds!

Prof. Pammel says, "We must regard sweet clover as a weed in the North." He should have used the personal pronoun "I" instead of "we," for those who know sweet clover best don't "regard it as a weed" at all, so far as we are aware.

We would suggest that Prof. Pammel study up more on sweet clover, before again calling it a "weed" and a "pest." And we hope the Orange Judd Farmer will now correct the errors it has published about sweet clover.

Here is what a late bulletin of the Ohio Experiment station has to say, which will show what progress has been made in Ohio:

"Sweet clover was formerly included among those weeds whose destruction might be enforced under the statute. But this sweet clover, especially the white sort, is rated by many as a valuable forage-plant. In this respect, without discussing its merits, it properly takes rank with white clover and other cultivated forage-plants. A bee-keeper of the State had sown an area to white sweet clover (*Melilotus*

alba) for his bees to work upon. Under the statute, as enforced at that place, the authorities, after notice, entered the premises and cut down the plants. Sweet clover, and other plants of value for cultivation, should not be included among the weeds to be destroyed. There is now the best of opportunity, as well as urgent demand, to put Ohio weed laws into adequate and permanent form. Suggestions as to plants that should be included will be given in the weed bulletin now in preparation."

Gleanings comments on the above as follows:

"It is refreshing to know that our experiment station at least recognizes the mistake it has made; and the bee-keeper who had his sweet clover cut down on his own premises will probably get the value of his crop paid back to him, without question."

Sweet Clover for Hogs and Cows.

The crop, as a honey-plant, is destroyed in this locality in two ways—by mowing and by pasturing. The city authorities here mow it down along the streets. This, of course, they have a legal right to do. But as they do not confine their work to sweet clover alone, we honey-producers have no right to complain. And the farmers are busy also in destroying sweet clover as a honey-plant. They have found out that their cattle will eat it; they therefore turn out their cows to pasture upon it when they are short of feed on their farms. They hire a boy to herd their cows and keep them within proper bounds. The cows will eat the plants even after they come into bloom, and when from 4 to 6 feet high. Some farmers make it a practice to cut it before it comes into bloom and haul it to their hogs. The plant is then so succulent that hogs will eat it readily. Those who have used it in this way regard it of great value for hogs alone. There are some farmers here who contend that it will pay to grow sweet clover as a regular farm crop, especially for hogs and cows. If we have many more dry summers they will be driven to it, for sweet clover is one of the crops that will make a satisfactory growth without regard to dry weather. This year, where the pas-

tures are literally burned up, the sweet clover close by is as fresh and rank in growth as could be desired. I have measured individual plants this year that were over eight feet high, and I have seen acres of it from four to six feet high in beds of gravel where nothing else seems to grow.

M. M. BALDRIDGE.

St. Charles, Ill., Aug. 5.

—Gleanings, 1895.

Yellow and White Sweet Clover.

Of late we are having quite a few inquiries for both kinds of sweet clover—that is, somebody wants a package of the kind producing yellow and also a package of the other kind producing white blossoms. Now, my experience is that the color of the blossom indicates no difference at all in the plant. A great many times I have seen among the sweet clover a single stalk producing yellow flowers instead of white, but I have always regarded this as a sort of sport or accident as it were. If I am wrong I shall be glad to be corrected. So far as I know it is one and the same plant that produces the white or yellow blossom. We find this peculiarity in other plants. In a row of red-pepper plants there will frequently be one producing yellow peppers, and vice versa.—Gleanings, 1897.

Naming Sweet Clover.

Bro. Root:—Permit me to suggest that you do not be in a hurry to change your views as to the classification of sweet clover given by Prof. Gray. There is just as good ground, and I think better, for accepting his classification as that given by Mr. Esenower. You will not need to examine any more "classical" work than the Edinburgh edition, of 1848, of Chambers' Encyclopedia, to find the classification as given by him; for it appears there in almost the same language in which it is given in Gleanings. This is an English classification, and I am at a loss to know why it is so made. The yellow melilot (*M. officinalis*) is so called from its early use in medicine; but as it is the species which runs wild in Europe, and is common everywhere, there is more reason for calling it *M. vulgaris*, or common, as

this is what the Latin, *vulgaris*, means. *M. alba*, as given by Gray, is after the old and long-accepted classification of Lamark, and simply means, as every one knows who has any knowledge of the Latin, white melilot; and as it is not common, except in a few localities in Europe, this seems the most fitting name for this species, in that country at least. There might be some ground for changing the name to *vulgaris* in the United States; but as the species has the special characteristic of a white flower, as well as being common, it would seem a needless change. The name *leucantha*, which is also given in the English classification, is a Greek word which means the same as the Latin *alba*, white; so that this is practically the same classification which Prof. Gray adopted. The tendency to name the species according to the color of the flower is further seen in *M. coerulea*, as this simply means blue melilot. If it had not been for the supposed medicinal qualities of the yellow sweet clover, it would no doubt have been called *M. gilva*, taking the specific name from its color, the same as in the other two species. I am very much inclined to agree with Mr. Jones' idea that "bokhara clover" is the same as *M. alba*, and that the name, "bokhara," has been wrongly applied to it. As I suggested in another article, I think the name bokhara more correctly belongs to a species of alfalfa.

M. arborea simply means "tree melilot," and I can well understand why the tree-like form and rank-growing *M. alba* should come to be called "tree clover," when compared with the low-branching and finer-strawed yellow sweet clover.

I think perhaps the other species mentioned by Chambers, which was found mostly on the islands of the Mediterranean Sea, and along the coast, is simply a variety of one of the species named above.

If my position is correct, you are not likely to be able to get seeds of any more species than you now have. My presumption is that we shall be entirely safe to trust to the classification given in the new edition of Gray's Garden and Field Botany, as revised by Prof. Baily. I, for one, am willing to take my chances in agreeing with these two eminent American botan-

nists as against the writer of the article in Chambers' Encyclopedia, or any other so-called "classical" work.

EMERSON T. ABBOTT.

St. Joseph, Mo., Apr. 17.

Gleanings, 1894.

- All About Sweet Clover.

For two years past I have gathered and sent to you the seed of sweet clover, without knowing whether it was of any value to farmers, having taken it mostly from the gravel pits where the soil was removed to a depth of several feet. But noticing some peculiarities about the plant, I have become interested in it. I particularly want to know when and how it should be sown and how much per acre. How should the crop be managed? I have seen it growing on very poor and hard clay land, and where the soil had been removed — places where red clover would not grow. And the question arises with me now, "Would not sweet clover be the proper crop on such lands for fodder, and to restore fertility?" I also noticed that in places where I cut a heavy crop last year it was very small this year; and where I got none last year I cut a heavy crop this year. Why was this? Will it succeed if sown in fall or spring with wheat, like red clover, or should it be sown separate?

HENRY PECK.

East Bethany, N. Y.

Sweet clover can be sown at almost any season of the year, even late in the fall. We are sure this late sowing is all right; for where the railroad runs through our grounds the clover comes up itself every spring from self-sown seed dropped from plants where it grew. It is peculiar, and unlike any other plant in its wonderful habit of growing rank and strong on hard sub-soil, barren hillsides, such as railroad embankments, gravel pits along the highways, etc. In regard to its value for reclaiming barren soils, the Ohio Experiment Station made a test by plowing under a heavy growth of it before putting in wheat. Where no sweet clover was turned under, the yield was about 18 bushels per acre; but on the ground fertilized by turning under the sweet clover, the yield was over 26 bushels per acre, and a corresponding increase in the amount of straw.

One reason why it prepares the land for other crops is because the great roots going down to such a depth act somewhat as underdrains. Its value for cattle, horses and other stock, has now been fully settled; but it must be cut or pastured when the plants are small, say a foot or two high. Of course, stock will eat it after they have become accustomed to it when it is several feet high and in bloom. But its great value is to cut it before the blossom-buds show. The reason it is found in certain places one year and not the next is that it takes two years to perfect blossoms and seed. The old stalks will die, root and branch, after having produced seed. This seed dropped on the ground, produces small plants that must grow one year before they in turn produce seed and blossoms.

Some years ago D. A. Jones of Canada, suggested sowing it in strips ten or fifteen feet wide, seeding alternate strips alternate years. In this way the tall plants will reach over the vacant strip and almost meet together overhead. Then after they die down, the young plants in the other strips will in like manner reach over, getting honey on the same ground every year. Its value for stock is easily shown by the fact that it is never found where horses or cattle are pastured. It makes its prodigious growth only along railroad ground and highways where stock is never turned out. I believe it does not succeed very well sown on wheat in the spring. In fact, I have never seen a real success with it on rich cultivated ground. If others have, I wish they would report.—
Editorial in Gleanings.

A Farmer's Testimony.

It first grew on our land (Schoharie, N. Y.) in spots as the seed was washed on from the creek overflowing the land; then as it grew up, and the land was plowed for corn, it was plainly seen that the corn would be much better than where there was none growing. I considered it then advisable to gather some of the seed as it grew wild, and seed it upon part of a piece of rye in the spring, as you would with ordinary clover.

The result was, in the fall after the rye was off the ground there was a

very rich growth of about two feet high, a solid mat of it that it was almost impossible for a man to walk through. In the spring it was left to grow about to the horses' knees, and in due time for corn-planting, and then was turned under by having a sharp share on the plow to cut the roots well, and a chain attached to the plow to drag under completely the green growth. It was perfectly subdued, and the corn on that four acres of a 12-acre lot was much heavier, and a better, healthier color than on the remaining ground where red clover was seeded and there was, only about six inches growth to turn under.

I would advise all farmers, in preparing ground for a good corn crop, to seed their ground with this clover either with winter grain or spring grain. It will yield much better corn crops, and will enrich their ground more and more each year. There is no danger of the seed lying in the ground and coming up another year, and it quickly dies after turning under. I think it is worth five times the quantity of common clover turned under. It also acts as a subsoiler, as the roots will root deep, and loosen the subsoil. I will gather a good quantity of the seed this year to use for another season. It is the cheapest manure that can be used, and is equal to many more loads of manure to the acre than any farmer puts on his land. The seed should be hulled and cleaned the same as other clover seed is prepared. For hay for cattle it is good cut early before it gets stalky, and two and three crops can be cut from it in that state, and then it dies off.—Country Gentleman.

Sweet Clover in Nebraska.

Sweet Sweet clover is one of the grandest plants in existence, and it flourishes here with almost tropical luxuriance. I have been familiar with the plant from childhood, but had seen none for years until we found it here. It is supposed to have gained a foothold here four years ago from some seed dropped around a camp of emigrants. We protected and fenced the spot, and helped it to spread. We give it no soil preparation nor cultivation, as it needs none. We scatterer it along the roadsides and in grass lands—the rain does the rest. It does not trouble

cultivated fields. It is a resister of outh, and for hay is about equal to alfalfa. Aside from the above it has valuable medicinal properties, some of which I will give you at another time. As to the quality of honey it yields, I am not prepared to speak so positively; but I imagine I shall have to learn to like it. I can tell better later.

Cleome and the Simpson honey-plant are native here, but not *Cleome pungens*. That is an escape from cultivation near Mt. Carmel, Ill., and is not very widely distributed. Ours is *Cleome integrifolia*—just as good as and in some respects better than the former, from the fact that ours yields honey from very early in the morning till 11 and 12 o'clock; and unless it is very hot and dry, the bees work on it until quitting time at night.

Mrs. L. E. R. Lambrigger.
Niobrara, Neb.—Gleanings, 1896.

The Two Kinds of Sweet Clover.

I know of a kind growing on the streets of Beatrice, Neb., that is distinctly a yellow, and does not grow so rank or tall as the white variety, which also grows along the roadside around the same town. This yellow variety is much earlier to bloom, but you can tell one from the other before the bloom starts to open. I am told that this yellow kind was sown by a German bee-keeper several years ago, and it is believed he either brought or had them from Europe for that purpose.

CHAS. J. HARRIS.
Steinauer, Neb.

How to Get Stock to Eat It.

There is sweet clover along the road for four or five miles. No one seems to know how it got there, but I suppose some bee-keeper knows. Papa kept his stock on dry feed till they were nearly starved for something to eat, and would have eaten almost any thing. When they were turned out on sweet clover they smelled of it and gave a snort and ran away for something else. So mamma cut some in a box and put some salt and bran over it, and they ate it all up, and have eaten it ever since.

NORA NEFF.
Bernadotte, Ill.

—All from Gleanings, 1897.

THE BUSY BEE.

A Monthly Journal Devoted to Farm Bee Keeping and Other Minor Interests of Progressive Agriculture.

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Sweet Clover.

I have devoted almost the entire space of this number of the Busy Bee to this valuable honey and forage plant, for I am sure that the information will prove very valuable to many of our readers. I have been acquainted with this plant for at least fifteen years, and I am quite sure that we are just beginning to realize its value. A number of the states which had it classed as a "noxious weed" and had laws against permitting it to grow,

have lately repealed these laws. Prominent among them is Ohio and Wisconsin. I feel quite sure that some progress along the line of a fuller recognition of the value of this plant has been made in the state of Missouri during the last few years, and I trust the time is not far distant when our experimental station will be prepared to recommend it to the farmers. The reader will notice that I have given some testimony against the plant, as I want to be entirely fair, and have no "ax to grind" in the matter. It will be noticed, however, that all who claim to have given the plant a thorough trial speak very highly of it both as a forage and a honey plant, and there can be no question but it is the equal of red clover as a soil renovator.

We shall have more to say about it in future numbers of the Busy Bee, and I invite the reader to give his experience with it, whether he may be for or against it.

It may be seen that our knowledge of this plant has increased very rapidly by comparing what A. I. Root said about it in *Gleanings*, in July, '92, with the statements which are found in the same paper at the present time. Here is the '92 editorial.

Sweet clover is not a success with us for fodder or feed at all, although stock will eat it to some extent if cut at just the right time. Neither does it succeed with us under cultivation nearly as well as it does on barren hill-sides and roadsides. It would yield an immense quantity of hay, or a sort of hay, if we could get a good stand and have it cut exactly the right time. I am quite certain it would be very valuable as a soiling plant if we could secure a good stand of it as we do of clover.

Sweet clover has been tested by the Massachusetts Station, and we clip the following from the "Annual Report" for 1894:

Bokhara clover (*Melilotus alba*), five rows. This crop remained in the ground from last year. It started into growth early and on May 28, about twelve feet from the north end of each of the rows was cut for feeding, being about thirty inches high. June 7, another portion was cut for feeding, being thirty-six inches in height. June 18 the plants were coming into bloom at forty-five inches in height. June 22 the remaining portion was cut and fed out, being five feet in height. Analysis of the crop collected at different dates gave the following results:

	Per Cent.		
	May 28	June 7	June 22
Moisture at 100° C....	87.43	80.99	75.86
Dry matter	12.51	19.01	24.14
Totals	100.00	100.00	100.00
Analysis of Dry Matter.			
Crude ash	11.67	10.21	7.71
Crude fibre	24.43	29.98	33.98
Crude fat	3.51	2.76	2.88
Crude protein	23.37	18.62	17.18
Nitrogen-free extract matter	37.02	38.43	38.24
Totals	100.00	100.00	100.00

This crop furnishes a liberal amount of fodder the first and second years. It should be cut before the plant reaches blooming, to preserve its succulent character. When advanced beyond that stage of growth it becomes coarse and is rejected by cattle.

It will be seen from the above that sweet clover compares favorably with other clovers as a forage plant. A bulletin of the Arkansas station says: "Melilotus alba yields well and makes good hay if cut before it gets hard." Again, "Melilotus does well for hay." It also mentions it in connection with other clovers, and says of them that they would no doubt make good pastures. On page 178 of the same bulletin, No. 36, I find:

"Melilotus Aloa, commonly called Bokhara clover—This plant makes seed the second year, then dies and its roots, which have penetrated deeply into the soil, rapidly decay. It has succeeded with us on sandy loam soil of moderate fertility, and on clay loams of like fertility, though lime soil is best suited to it. When sown on rich bottom lands it grows luxuriantly and makes several cuttings of hay. It should be cut for hay before the stems

grow hard and woody. Its deep roots enable it to resist drouth. It is a most important renovating crop, especially for lime soils. The plant resembles alfalfa, though much coarser. It comes readily from seed, which are sown at the rate of 15 pounds per acre."

A Visit to Two Large Factories.

On my return from Buffalo I spent part of a day visiting the A. I. Root Company of Medina, Ohio. This company publishes *Gleanings in Bee Culture*, and is probably the largest institution devoted to the sale and manufacturing of all sorts of apicultural supplies in the world.

To say that I enjoyed my visit very much would be putting it mildly. It does one good to visit an institution where a large number of people are employed, and see so little friction in the management of the business.

Everybody seemed good natured, contented and happy, even the bees showed no disposition to be cross, but perhaps this is due to the intelligent way they are handled. To be frank, I am inclined to think that the handling had much to do with the air of contentment which was found on every hand. I would be glad to tell my readers all about what I saw, if I had the space, but will content myself with saying if ever you have a chance, go and see the A. I. Root establishment. You will be well repaid for your trouble. If you are interested in up-to-date gardening some of friend Root's experiments will be a revelation to you.

From here I went to Watertown, Wis., and spent a few days enjoying the hospitality of the G. B. Lewis Co., of that place. This firm probably makes more hives, sections and shipping cases than any other factory. Their goods like gold dollars, pass current wherever their value is known. Their factory is a regular hive of industry,

filled with humming spindles and buzzing saws. Their hospitality is like their goods, first class in every respect.

On my way hove I called on G. W. York of the old and ever reliable American Bee Journal, and found him just as busy as a bee, gathering sweet and good things for the many readers of his most excellent paper. When I reached my home again, the world seemed larger and better than it did before I left, and I felt like taking up my own work with renewed energy and courage. It does one good to get away from the daily routine of his life, and breathe the free atmosphere of the world at large. It makes him feel that while some men are bad, most men mean well, and try the best they can to do what they believe to be right.

Borrowing Without Credit.

It is simply surprising how much of this is done by the agricultural papers. I have before me one of the oldest agricultural papers published in the state of Missouri, and about all of its apiary department is made up of one of my own articles, which the editor of said paper has appropriated without so much as saying, "by your leave." I think it is about time that the bee journals begin to make war on this practice of stealing the fruits of other people's labors. A journal is purely a private enterprise, and I can not see why the editor of a paper has any more right to appropriate the fruits of a man's mental labor and sell it to his subscribers for personal gain, than he would have to take a neighbor's corn or oats and sell it. If one is filching, the other is equally so, morally speaking. When an editor of an agricultural paper wants material on some special subject like bee-keeping, he, of course, is wise to go to those who have had some experience along

that line for his materia. and he should be willing to pay at least the very small pittance of a proper credit, if he feels that under the circumstances he is not able to pay anything more. Credit can be given with but little outlay of time or money, and I hope the editors of the other bee journals will insist on having it. The writer has spoken of this several times and the Busy Bee has about made up its mind to give some of the agricultural papers some free advertising, if this business is not stopped.

Poultry Notes.

Pure Bred Poultry on the Farm.

Fowls have been neglected so long on farms that it is a difficult matter to change this indifference for interest. We can hardly blame them for not taking any great amount of interest in what is known as the farmers hens. They are certainly not picturesque, and with the exception of the varied and oftentimes beautiful plumage of the males, are not attractive to look at. Their useful qualities should not, as a rule, endear them to the farmer, for they are decidedly at a low ebb in this particular. Yet it is a very hard task to convince our farmer friends that their flocks can be improved. To them, the neglected hen will always remain the only animal on the farm to suffer this neglect, and if they are persuaded to improve the quality we fear the same neglect will continue.

The first step which some of them have been induced to take in the way of improvement, is by buying a thoroughbred male of some known egg-producing variety (for eggs are the height of the farmer's poultry ambition), and crossing him with their common dunghills. This has often given them most excellent results, a decided increase in eggs and a better type of market fowl.

But the benefits of the first season have not been appreciated, and the crossing has not been renewed, and the result is back they go to common dunghills, and the thoroughbred male is lost

in the mixture of the succeeding seasons. The common excuse is lack of time to "bother with the hens." Of course, those offering such an excuse and showing so much indifference are almost hopeless, and perhaps it were better to pass them by; yet as the constant dropping wears away the stone, we are convinced that many a farmer's stock of today is a great improvement on those of ten years ago. The vast strides made in general poultry culture have been the means of distributing a better quality of fowl throughout the country, and the farmer has perhaps unintentionally collected a better laying flock.

Can we not go a step farther and induce them to adopt thoroughbreds entirely? Let us show where they are superior. In the first place, it stands to reason that any strain of fowls carefully bred and with, we will say, the object of egg-production as most important, can be brought to a higher degree of excellence in this particular than the common everyday dunghill. Now, can the farmer understand this reason? With him "seeing is believing;" therefore let him buy a small flock of ten thoroughbred Plymouth Rocks, the culls of some first-class breeder, which can be had at this season at reasonable figure. Let him run them side-by-side with his dunghills and judge for himself. Of course, we expect they will be as much neglected as his commos flock, but still a neglected thoroughbred will do better than a neglected dunghill.

In the second place, he will have a better carcass to offer in market, and he will raise a better and healthier lot of chickens. And last, but by no means least, he can offer settings at a price above the market quotations for fresh eggs and at the season when the latter are at the cheapest price. Are not these reasons sufficient? Is there not more chance for profit in such a fowl than in the scrubs and runts he is accustomed to? And bear in mind, my farmer friend, that, except for the original cost of your thoroughbreds, their care and feed will be no more than on your dunghills.—Country, Gentleman.

Honey for Sale.

Parties who want a fine quality of clover honey, either comb or extracted, can procure the same by addressing the undersigned, stating how much they want, and kind, when prices will be quoted, which will suit the times.

EMERSON T. ABBOTT,
St. Joseph, Mo.

Letters from the Field

A Bee Keepers' Combination.

Ambrose L. Riley.

Brother Bee Keepers, has the fact ever come into your heads that bee supplies will be higher next year than they have for years previous. Since the passage of the Dingley Bill lumber has advanced very rapidly in price, especially in our neighborhood. Then if the manufacturers are compelled to pay more for the material that is used in making hives, sections, etc., is it not necessary, that they should advance their prices so as to meet their requirements? If this be true, then, what are we bee keepers going to do? So far as I know, honey has not advanced one cent in price—if anything it is on the decline; beeswax has about kept its uniform price and bees and queens the same. To me, the outlook for next year is not very encouraging. The drought has come and cut off all our hopes for any fall honey, and we know nothing of the future. We know not as to how our bees will go through the winter, and how strong they will be in the spring, and how early the season will open, etc. To my mind there is only two things to be done. We have either to use a cheaper class of goods than we have been using, or form a combination to raise, and maintain a higher price for our products. As to myself, I prefer the latter. It seems to me, that there ought to be some beekeeper in our midst, intelligent enough to devise a system by which we might form a combination. Of course, I am well aware that beekeepers as a general rule, have not the boodle that the "kiestmen" have, but they have a good excuse, and that is they have never been favored by any laws of the legislatures or congress. I am of the opinion, that if we don't do something towards this matter our incomes will be cut short. I would like to hear from

other bee keepers and also from manufacturers of bee supplies on this subject.

Bolckow, Mo.

I do not think the price of hives or sections will be materially advanced during the coming season, but they will no doubt follow lumber, if it continues to advance. I fear, however, that a combination of the kind hinted at by Mr. Riley would not overcome the difficulty. If the price of honey is materially advanced it will have to be by the operations of the law of supply and demand. I am opposed to all trusts, the purpose of which is to unnaturally force up the price of any commodity, and a honey trust of that kind would be as bad as any other. I do think, however, that the honey producers should get better prices for their products and I think by proper co-operation this can be brought about. There is much to do by way of developing markets, diverting the honey which is thrown on the market into proper channels, creation of new demands for our products, and last but not least, in the suppression of frauds, which destroy the demand for pure honey. I think, too, that we now have just the society to do all of this work, the United States Bee-Keepers Union, and everyone who wants to help the honest producer should send a dollar to Gen. Manager Secor, of Forest City, Iowa, at once.—Editor.

Friend Abbott: Complying with your request, regarding "Sweet Clover," I will say: that the results obtained in the years of 1896 and '97, have fully verified the correctness of what I wrote about this most excellent and reliable honey plant in 1895 (American Bee Journal 1895, No. 51; page 805 and 806.)

If it had not been for "Sweet Clover" the honey crop in 1897 would have been a total failure with me.

As it is, sweet clover alone, has given me at least 1500 pounds of surplus extracted honey of most excellent quality, gathered by 26 colonies, of which only 15 colonies were in proper condition to take advantage of the flow of nectar, when it came.

The month of September has been an exceedingly dry month with us; only 1 1-2 inches of rain on September 9th and 10th, so, that with the exception of

sweet clover, all honey yielding plants dried up. But sweet clover cut in the last days of June, and forepart of July is blooming right along, and the bees are at work on it.

So it is with my sweet clover pasture compared with other pasture land.

I have a few acres of sweet clover, set aside for late pasturing of our milch cows.

This land was self-seeded by sweet clover in the fall of 1896. It was plowed late in the fall, and left in that shape and condition during the winter of 1896 and '97.

Last spring the land was well harrowed and thus properly leveled down after the seed had well started to grow.

The latter part of June we cut a heavy crop of fodder on it, and now we are about ready to turn our milch cows and a few horses on to this land.

We know by experience, that it will hold out until all stock is housed, and winter has set in for good.

My cattle as well as horses eat it, since they have got used to it, from the very start on. They relish it, and the cows gain in milk at once, when turned out to it.

Sweet clover never floats cattle like subject since I said nearly all I can is fully as well relished by them as is alfalfa.

I will not enlarge further upon this subject since I said nearly all I can say about sweet clover, in my article alluded to in the foregoing.

With kind regards, yours truly.

WM. STOLLEY.

Grand Island, Neb., Sept. 29, '97.

The article referred to by Mr. S., will be found in another column.—Editor.

Cows Relish the Sweet Clover.

We are having a severe drouth in this part of the country. Vegetation is all dried up. The only green thing here now is the sweet clover, of which there is a good growth from last year's seed, along the public roads. It is the only feed we have for our two Jersey milch cows, and they relish it very much. So much for the sweet clover.

JOHN S. SLEETH.

Livingston, Co., Ill., Sept. 18.

—American Bee Journal, 1897.

Home Department.

Conducted by Emma Ingoldsby Abbott.

This page is open to all lady readers of the Busy Bee. Any woman who has found anything helpful in her work is invited to give others the benefit of it through these columns.

Where Mother Is.

In the crimson and gold of the setting sun
The white little lambs o'er the meadows run;
And the birds wing their way to the sweet home-nest.
Where is waiting the one that loves them best.

There's a voice in the breeze that goes wandering by,
And a whisper that falls from the deepening sky;
Oh, the mother-heart calls to each weary rover.
And where mother is, home is, the wide world over!

'Tis the song of the brook on its silvery way.
The crickets have chirped it with darkening day;
And the first pearly star in the azure dome
Seems to whisper a message sweet of home.

In the bud and the leaf and the slumbering flower
There's a thought of the peace of the rest-giving hour,
When the mother-heart calls to each weary rover.
And where mother is, home is, the wide world over!

Now the brown bees have ended their daylong quest,
The butterflies folded their wings to rest,
And the twinkle of lights in the cottage pane
Tells of joy that has blest the hearth again.

And I read in the eyes of the little ones
In the shouts of delight, and the pattering feet,
Oh, the mother-heart calls to each weary rover
And where mother is, home is, the wide world over!

—George Cooper in S. S. Times.

Sweet clover leaves and blossoms dried and placed in small bags, make an excellent perfume to place between layers of linen or clothing that is

stored away in drawers or chests. They will prevent the musty odor that these are liable to get when packed away from the air.

Hostess and Guest.

To be a perfect hostess is a desideratum for every woman, and to be a desirable guest should be the ambition of all who are placed in that position.

She who can make her guest feel truly welcome is no more to be commended than the guest who makes his or her stay so agreeable that the going away brings regret instead of a sense of relief.

In attempting to entertain your guests avoid fussiness and overstraining for effect. No one who is worthy of your friendship likes to cause you extra work or worry over what he shall eat or how he shall be amused. Better give him plain, everyday fare and a cheerful countenance, than a table loaded with dainties—which will only give him dyspepsia—and a fretful or anxious-looking hostess who has tired herself out preparing them.

When you are the guest, make yourself part of the family and give them to understand that you do not expect them to neglect their necessary work to wait on and entertain you. Do not try to convert your hostess to your notions of housekeeping, but be ready for any suggestion that may be helpful to you. Try to give pleasure as well as to receive it, and if you want to visit that family again, you will be assured of a hearty welcome.

A Plea for Honey.

Many a weary house-mother exerts herself to put up rows on rows of jellies, jams and canned fruit, often in the extreme heat, when the same amount of time, more healthfully spent out-of-doors, would supply her family with a like quantity of sweets quite as wholesome and palatable to the average household. Of course a variety is desirable, and I would not do away with the time-honored preserve closet, but its dainties might well be diminished in quantity and supplemented with those which require no manipulation. Especially where there are children it is desirable to have a supply of natural sweets—honey and maple syrup—as it is noticeable that a child can eat much more freely of these than of candy or jams without ill effects.—County Gentleman.

Peculiarities of Foods.

Dr. Sophie Lepper, the English food specialist, says in speaking of the various foods, that

Blanched almonds give the higher nerve or brain and muscle food; no heat, no waste.

Walnuts give nerve or brain food, muscle, heat and waste.

Green water grapes are blood purifiers (but of little food value); reject pips and skins.

Blue grapes are feeding and blood purifying, too rich for those who suffer from the liver.

Tomatoes, higher nerve or brain food and waste, no heat. They are thinning and stimulating. Do not swallow skins.

Juicy fruits give more or less the higher nerve or brain, and some few muscle food and waste; no heat.

Apples supply the higher nerve and muscle food, but do not give stay.

Prunes afford the highest nerve or brain food, supply heat and waste, but are not muscle food. They should be avoided by those who suffer from the liver.

Oranges are refreshing and feeding, but not good for the liver, if out of order.

Green figs are excellent food.

Dried figs contain nerve and muscle food, heat and waste, but are bad for the liver.

All stone fruits are considered to be injurious to those who suffer from the liver, and should be used cautiously.

Lemons and tomatoes should not be used daily in cold weather; they have a thinning and cooling effect.

Raisins are stimulating in proportion to their quality.—Selected.

SOMETHING ABOUT FLOWERS.

Why do not farmers, gardeners and others, who have homes of their own, have prettier lawns, more flowers, shrubs, etc., is a question that has puzzled me for some time. On inquiry of different ones concerning the matter, I have invariably received the answer that they did not understand the culture of flowers, or that they had no time. These to me seemed silly answers. To the first I would say, that one who can grow vegetables and fruits can grow flowers. The time spent worrying over past failures will grow enough flowers to completely re-transform the appearance of your home and prove a pleasant, restful and profitable deviation from other labor.

Few farmers seem to appreciate the fact that by beautifying the grounds immediately surrounding the house they are increasing the value of their property, but it is a fact, nevertheless; and

if that were not true there would still be good reasons why there should be flowers grown in plenty.

The culture of flowers naturally creates an artistic taste, and it is quite natural to children to watch each year and try to get the colors to harmonize better. This brings about some study, which is good and wholesome for both old and young, and what at first seemed like hard work, turns out to be real pleasure. But how to bring this about, is asked. First, there should be a lawn, not necessarily a large one, but a pretty one, and while it is too late to plant flowers and shrubs, it is not too late to be getting the grounds surrounding the house leveled up for next year.

As a good thick sod is necessary to a good lawn, I would recommend that timothy grass be sown first; then in the spring sow again with lawn grass, and with the use of the lawn mower this will soon make a smooth, velvety lawn that will neither freeze or burn out easily, and is also the least likely to be overrun with weeds and dandelions.

Everyone should have a hotbed, for in it, with little or no expense, flowers can be started early enough to have bloom four months of the year, and whether flowers are grown or not, it facilitates early gardening of all kinds.—Montana Fruit-Grower.

No occupation is better calculated to call forth the learning of the man of science than that of agriculture, and none in which a man can engage with more honor, or to which more honor should be attached. Good farming is the mainspring of national progress. The farmer who calls to his aid the light of modern science and doubles his crop per acre, is justly entitled to more praise than he who builds cities. When the first assembly of agriculturists of France was held, its first president said: "Agriculture is the noblest of professions; stable as the earth, which is its base; sure as the sun, which lightens; free as the air, which gives it life; it ripens reason, fortifies the character and elevates the soul toward the Creator by the continual spectacle of the miracles of creation. Agriculture is seated upon the granite upon which the state reposes." All honor, then, to agriculture as a science, as an art, and as the mainstay of the nation.—Exchange.

The publisher of the Busy Bee will pay the highest market price for beeswax, in cash, at all times. If you have any to sell, whether the quantity be large or small, write him for prices, stating how much you have and of what quality, dark or yellow, clean or otherwise.

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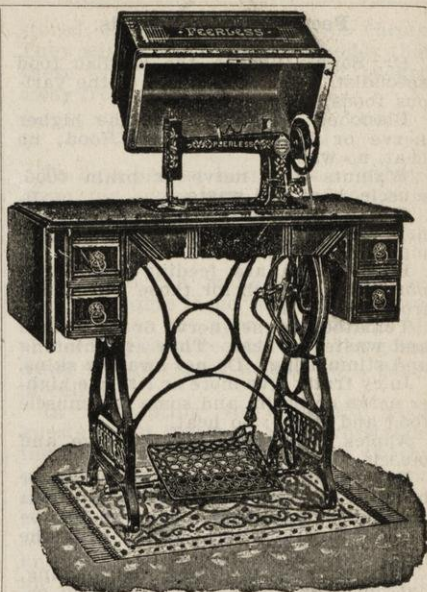
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THE PEERLESS MACHINE.

The handsomest and finest proportioned sewing machine now manufactured. A strictly high grade machine, with all modern improvements; light running and noiseless. All the desirable features found in other modern machines will be found in the Peerless.

This machine is in every respect the equal of machines sold by agents at from \$50 to \$65. Why pay such prices when you can get a first-class machine direct from the factory for about one-third what agents will charge?

All of the usual attachments will be found with the Peerless, and in addition a box of extra fine nickel plated attachments. It is warranted by the manufacturers for ten years.

Price, for a five-drawer, finely finished machine shipped direct from the factory in Chicago, only \$18.00, including The Busy Bee for one year. This is lower than the machine can be had in any other way, and it will not be furnished except in connection with The Busy Bee for one year.

The machine will be given free to any one sending a club of 60 new subscribers for one year, with \$30 to pay for the same.

LANGSTROTHON THE HONEY BEE

This is one of the best bee-books in existence. It is well bound in cloth, printed on fine paper, and contains about 550 pages. It is filled with useful and practical information, and is finely illustrated. It has been thoroughly revised by those noted and successful apiarists, Charles Dadant & Son, and formerly sold for \$2.00. The price now is only \$1.25. It

will be sent, **postpaid**, with The Busy Bee for one year, for \$1.40, or it will be given free to anyone sending in a club of four new subscribers for one year, with \$2.00 to pay for the same. Here is a chance to get a bee book for a very little effort. To the first one from any city in the United States sending in a club of four new subscribers for a copy of Langstroth with \$2.00, I will give an extra copy of the paper free for one year, in addition to the book. Here is a chance to get your own paper free, if you will only get a move on you, and be the first one from your place to respond. I will send the extra paper to the party whose letter I happen to open first, should more than one come in the same day. Do not delay if you want to be first.

The St. Joseph Weekly Herald and The Busy Bee will both be sent for one year for the price of The Herald, \$1.00. The Herald is a family weekly paper, giving all the news of the day and in addition it has a number of special departments which cannot fail to prove interesting and helpful to every member of the family. It is Republican in politics, but this subject is not pressed to the exclusion of others. If you want to see a sample copy, address Weekly Herald, St. Joseph, Mo.

I will pay liberal cash commissions to anyone who will act as agent for The Busy Bee. Write for terms and sample copies.

60-Pound Square Tin Cans.

One box of 2 cans, 75 cents; 1 can, boxed singly, 45 cents. Write for prices on larger quantities.

BOOKS.—We can furnish you any book printed and will take your subscription for any paper published. Address The Busy Bee, St. Joseph, Mo.

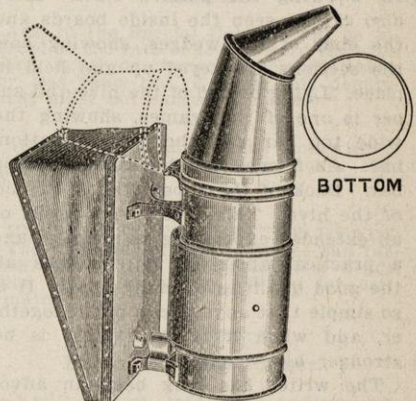
I can also indorse, from personal observation, what your contributor, Mr. Boardman, says of sweet clover. It is all a popular mistake that stock will not eat it, and I believe that, where alfalfa will not succeed, sweet clover is a valuable addition to farm crops. Stock have also to learn to eat alfalfa before they will take to it readily. I raised a patch about 15 years ago, and turned the family horse on it. He did not touch it, but ate the grass and weeds; but in the fall, when light frosts killed the grass and weeds, he grazed the alfalfa; and ever after, if he was put on that patch, he took the alfalfa first. It is also true that alsike clover will do well on sod. I have a good catch of alsike on Wild Creek bottom land, sown the last of August.—Wm-Dalton, St. George, Kan., in Gleanings, 1894.

Honey Jars.



1 lb., per gross, flint glass, \$4.75; 2 lb., per gross, with corks, \$6.25; 1-2 lb., per gross, with corks, \$3.65; dime jars, with corks, per gross, \$2.75; 5 oz. jars, 30 cents per dozen; 1-2 lb. 40 cents per dozen; 1 lb. 50 cents per dozen.

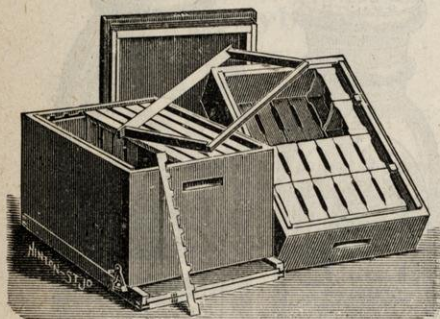
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A very good smoker for the money. Price, 86 cents each; by mail, 25 cents extra.

The "St. Joe" Hive.

LATEST.



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The most practical and the very best hive out.

Has all the good qualities of the famous Dovetailed Hive, and is far superior to it.

The illustration will give a clear idea of all its parts. In front one of the metal spacers leans against the hive. Inside of the hive, at the back end, where the three frames are removed, is shown the metal spacer in place. Standing beside the body of the hive is a super with one of the sections removed, showing the pattern slats. Here also can be seen the inside boards and the ends of the wedges, showing how the sections are keyed up and held in place. Lying on top of the hive and super is one of the frames, showing the wide top bar and the narrow bottom bar. All frames now have a heavy top bar. Back of the super stands the lid of the hive. This hive is the result of an extended experience as a dealer and a practical apiarist. It combines all the good qualities of many hives. It is so simple that anyone can put it together, and when it is done there is no stronger hive made.

The writer has long been an advocate of "fixed distances," and has used a hive with a frame spacer in it for years. There is a great rage now for spacing frames by the so-called Hoff-

man method. I have not found this practical in a hive for general use. Some may be able to handle these frames and not kill the bees, but the writer, after repeated trials, gave up the idea of such a frame years ago. For the ordinary farmer they would be about equivalent to none in a year's time, as they would be all stuck together with propolis.

The "St. Joe" accomplishes the end desired with none of these bad features. It is made of seven-eighths lumber, of good quality, and has no portico, as you will see, for the spiders to spin webs in. The bottom is formed of a thick frame, grooved, so that three-eighths lumber is fastened into the groove, which, being ship-lapped, makes as good a bottom as if seven-eighths thick. It is a loose bottom, with bee space, and is very light and strong.

The frames have a top-bar that is 18 3-4 inches long. It is heavy and is 11-8 inches wide, leaving 1-4 inch bee space between the frames. The bottom bar is one-half inch wide and 17 1-4 inches long. The end bar is seven-eighths of an inch wide, and 8 3-4 inches long. It can be nailed each way, making a very strong frame and a very good one.

This frame fits the Improved Langstroth Simplicity Hive. The frames rest in metal frame spacers, which hold every frame in its place. The spacers fit in saw kerfs which are cut in the wooden rabbets in the ends of the body of the hive. All you have to do is to drive them down to their places and they will remain there without nailing or further trouble. Bees cannot stick the frames fast, and the construction is such that they will not build burr combs. The frames are spaced with the metal spacer at the bottom of the hive, so they are always in place. The hive can be shipped across the continent without killing bees.

The supers are made with the slats in the bottom cut the same shape as the sections, thoroughly protecting them. The sections are held in place by an end and side board that fit inside the super. There is a bee space in all

of the slats of the super, so that the bees will finish the outside sections, and also one between the supers.

The hive should be seen to be appreciated.

PRICES—Sample hive, made up with sections and starters, no paint, \$1.50.

Five or more, no sections, starters or paint, \$1.25.

Add 25 cents for two coats of good paint.

For sections and starters add 25 cents

Full sheets of foundation in the brood chamber, 90 cents per hive of 8 frames.

Five hives in the flat, cut ready to nail, no sections or starters, \$5.00.

Ten hives in the flat, \$9.50. Extra supers in the flat, 20 cents; made up, 25 cents.

Plain hooks and eyes to fasten on the bottom, 5 cents per hive. For ten hives, 25 cents. Sections for five hives, 50 cents.

All prices for hives include one super only.

I guarantee this hive to be first class in every respect.

***Globe Bee-Veil.**



Five cross-bars are riveted in the center at the top. These bend down and button to studs on a neck-band. The bars are best of light spring steel. The neck band is hard spring brass. The

netting is white, with face-piece of black to see through.

It is easily put together, and folds compactly in a case 1x6x7 inches—the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to anyone whom flies, both-er, mosquitoes bite, or bees sting.

Price, \$1.00; extra nets, 50c; will club with The Busy Bee for \$1.15. Cotton, tulle veils, plain, 50 cents; silk front, 60 cents.

Shipping Crates.



Single Tier Crates, of the latest non-drip pattern, at the following prices:

To hold 24 sections, 4 1-4x4 1-4, in the flat, with glass, in lot of 5, 17 1-2 cents each; in lots of 10, 16 1-2 cents each; in lots of 20, 15 1-2 cents each; in lots of 40, 14 1-2 cents each; 50 or more, 12 1-2 cents each.

These are crated in lots of 25, and to get the benefit of the 50 price, they must be ordered in full crates.

Twelve pound crates will be 2 cents per crate less. Most prefer the single tier 24 pound crate.



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Ads. in the Special Column will be inserted at the rate of 1c per word for each word, figure or character. No ad. taken for less than 15c. Ads. in this department must not exceed five lines.

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It will do first class work, and as much of it as a machine costing more. The sections are square made on this machine and it cannot get out of order. Price \$1.00.

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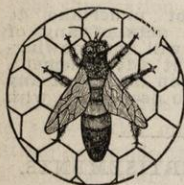
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