

AGRICULTURE

Red Clover And Bumble Bees

Red clover is practically self sterile, i. e., for seed production it is necessary that pollen be transferred from one plant to another, whereas pollen transferred from one flower to another on the same plant only results in exceptional cases results in fertilization.

The transmission of pollen on red clover is effected by honey-gathering insects, and these must have a tongue of about mm. length in order to reach the honey at the bottom of the flowers. Several varieties of bumble bees possess such a tongue, and upon these we must depend in the fertilization of red clover.

If bumble bees were to be found abundantly in all localities and at all times, this circumstance would be of comparatively little interest to the clover-seed grower. Such, however, is not the case. As a matter of fact one finds more bumble bees in certain districts than in others, and they are always more numerous during the latter part of the summer than in the beginning of the clover season.

The whole family or hive of bumble bees do not live through winter as do for instance the ordinary honey bees. It is only the young fertilized queens that pass through the winter, all the workers and drones die in the fall.

Dates of queen workers	No. of queens	No. of bees
May 29 to June 6, 67,	0,	0,
June 15 to June 23, 73,	19,	19,
June 29 to July 7, 79,	115,	115,

That the time of the field of clover seed and the occurrence and number of bumble bees have a certain relation to each other has often been stated. The figure for the yield at the Tytofte experiment bears out this statement very plainly. Mr. Lindhardment very plainly states that the yield harvested on an average as follows:

From 3 early red clovers,	176,
" medium red clovers,	250,
" 3 late red clovers,	280,

The practical farmer is, therefore, quite right when he lets his cows pasture on the seed clover in the first part of June, or takes off a hay crop about the 20th of June, before leaving the field for seed. When the clover is ready to blossom again the bumble bee queens have had time to increase the number of their families, and this adds considerably to the certainty of fertilization.

PAUL A. BOVING,
Cereal Husbandry Department,
Macdonald College.

Summer Feeding

This may seem a late hour to introduce the subject of summer feeding, especially if no feed has been provided. On the other hand it may be argued that it is not only a splendid period but also a very opportune season in which to emphasize its importance. July and August are usually counted on as being hot and dry, and it is therefore taken for granted by most farmers that pastures will dry up then and cows go down in milk, but in an ordinary year the situation will not become serious, if it happens to be exceptionally dry in these two months, as it does infrequently happen, the situation does not become serious; and if the grass dries up in early June as it did this year, the farmer's main source of revenue, his milk-return, is severely cut, not only for the time being but for some time to come.

There is a difference of opinion as to whether it pays to feed meal to cows on grass, but there can be no question as to whether it will pay to feed cows something in a year like this when they are in many cases, starving in a field as dry and as bare as the road. There are some herds fortunate enough to enjoy a large run where the grass is shaded and the soil keeps moist at all times. Land in such conditions, however, is rarely profitable, and we have less of it from year to year.

The question is not, should we provide feed for summer or is it necessary, but what is the best way of doing it?—in a year like 1913 many could do without it, but in any year the excess would not be lost.

A grain ration may be employed in case of emergency, but if this is depended on entirely it proves too expensive, although this year on many farms where no other feed is available a little meal may be employed. It may not show an increase in milk but it will do much in retaining the milk flow and in maintaining the cow's important although too often we note only one and expect it without the other.

There are a few things I think which will account for the fact that so many farmers find themselves without summer feed. One is the habit and custom of running a large part of the farm in pasture—one of the most expensive crops a man can grow on good arable land.

The labor connected with summer feeding is another one, and the shortage of food or the difficulty of getting any ahead in another way. The first reason given is one our farmers should get over. We in Canada are not thorough enough. We are too content with the old routine, and expect return with out either thought or labour very often. A man should not have to think or observe very much to discover that if he were to plough up an acre of his old barren pasture and put it into some such crops as corn he would get a return for it, feed enough to supply his twenty cows forty pounds each for the whole month of August. Then in the matter of labor, undoubtedly we must not get lost here, but let me ask, how many farmers are there who if they had a silo half full of corn at their elbow, or an acre or two of peas and oats alongside the pasture, would not delight right now in taking time to feed their cows? I have heard numbers of them say it would indeed be a very pleasant sacrifice.

At Macdonald College many crops suitable for summer feeding have been grown. There are many adapted for this purpose. We have found, however, that when such important considerations as labor and convenience are to be met it pays to reduce the number. If alfalfa is grown, and it should be, it will fit in nicely for silage; in fact this seems to be its forte as a feed. Peas and oats, which anybody can grow in abundance, even this year, will prove an excellent feed. Our practice is to sow them at five or six different dates one week apart.

Best of all, we depend upon silage. A few extra acres of corn will put up without hardship with the rest and will help splendidly for the next summer's feed. It will be available with the least labor and trouble and will compare well with any other feed. An allowance of silage with a little meal to plough up an acre of his old barren pasture and put it into some such crops as corn he would get a return for it, feed enough to supply his twenty cows forty pounds each for the whole month of August. Then

Weaning Young Pigs

Weaning time is perhaps the most critical period with the young pig. At no other time is the digestive system so apt to be upset and the pig started on the road to unthriftiness. On the other hand the pig that has been changed successfully from its mother's milk to hard feeding suffers no check in growth. Its appetite is keen and it grows rapidly. Many farmers complain of unthrifty pigs and if they look carefully into the matter they will find that in many cases the trouble began at weaning time. Too much care cannot be exercised at this period.

As the pigs reach the age of four weeks they usually begin to feed out of their mother's trough. We frequently see litters that up to a week or two seem to lack vigor, some not growing as well as others. What is the trouble? Simply this: the food they are eating out of their mother's trough although proper for her was too strong for the litter, and their systems were not able to digest it properly. It is of the utmost importance that young pigs be encouraged to eat as early as possible but they must receive suitable food, not of a highly concentrated nature, but rather those foods that are apt to be kept and the pig started on the road to unthriftiness. Watch the pigs closely each day and gradually increase the amount of food as their appetites become larger, and provide that should be kept clean and sweet, food left over at feeding time should be removed and the trough washed out. It must also be seen to that sufficient exercise is given. Litters of sows that are housed and well fed often become over fat and one or several of the litter are liable to the disease known as "thumps" which is fatal unless promptly treated. Prevention is much easier than cure. The sow is turned out on pasture where the litter as well as the sows is forced to take sufficient exercise.

When six weeks old the pigs are ready to wean. They have learned to eat for themselves and may now be removed from their mother. After weaning the pigs should be more fed but care must be exercised. It is wiser to underfeed than overfeed at this

Pasturing Hogs

Of the many forage plants, alfalfa is one of the most satisfactory for hogs since it can be made a permanent pasture and is rich in protein, making an excellent combination with corn or other grain. The leaves are tender and the stem small, which make it easily masticated and it is very much relished. At Indian Head, on the farm of Mr. W. D. Lang, one of the farmers who is doing illustration work for the Commission of Conservation in Saskatchewan, some interesting results have been obtained. On less than one acre of alfalfa 55 hogs were pastured during the summer of 1912 for varying periods, 25 hogs, several sows and one boar being pastured for four months, while the others were on for a shorter time. While on the pasture the only grain fed was one-half ton of shorts mixed thinly with water. About 500 bushels of barley and a little oats were suggested by the sanitary officer F. C. N. in "Conservation" for July.

Supplementary Feeds In Summer

Summer weather very often means short and dry pastures, with a consequent decrease in milk yield. This is more especially true where no system of permanent pasture is practised. Permanent pastures usually possess greater drought-resisting qualities than do the temporary pastures in use on many of our dairy farms. Even with the best of pastures there will be more or less shortage of succulent feeds, during the late summer months. The business farmer, the dairyman who plans his work for the entire season instead of week by week, will then have means of supplementing his pastures with other succulent feeds. He knows that if the milk flow is once allowed to lessen he will be unable to again increase it at a later time.

Succulent crops are a favorite method of supplementing pastures with many dairymen, and their desirability must depend largely upon local conditions. The chief objection is the labor and the time involved in preparing and handling them each day, and the more or less difficulty in providing a succession of crops at the necessary times throughout the season. Under other conditions the summer silo is best; it will utilize and benefit any conditions. It affords the least laborious and least expensive means of storing and handling succulent feeds. This method is best when the weather is not too hot, or during the rush of summer work. Cattle will consume silage even when on pasture with relish and benefit. A dairyman recently made the statement that through the use of silage in the summer he had produced twenty-four percent more milk of the same herd. In certain sections of the country canary refuse is used as a milk was tainted and that it was im-

ROYAL WARRANT



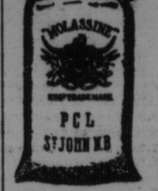
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possible to eliminate the taints in making the milk into cheese. In milk intended for city milk supply the taints were equally objectionable; in butter, making they could be overcome to some extent; although first-class butter can never be made from tainted milk. At the same time they found that there was little or no trouble from tainted milk when such green feeds were fed the cows some time before milking. Time was thus afforded the cows to eliminate the undesirable taints. Feeding such feeds just after milking is perhaps the best time. In the experiments less tainted milk resulted when green corn was fed than with any other feed, and the slight taints were readily eliminated before the cheese was finished. From this work we see that certain silage crops should not be fed just before milking, if clean sweet flavored milk is to be produced.

In feeding silage we know that we must be careful to feed off enough each day to prevent spoiling. This is more marked in the summer time, as any fermentation goes on more rapidly then. Nothing will impart undesirable taints and flavors to milk more quickly than this spoiled silage.

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Offer



THIS WOMAN HAD MUCH PAIN WHEN STANDING

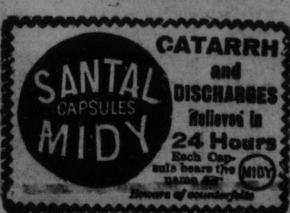
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