W. H. Clark, Rice Lake.

In building up a dairy herd, the selection of the sire is the most important factor. Too many of us buy our herd bull just because he is cheap and others simply because he is "registered," giving the matter no other consideration. Both are unwise and unsafe.

Every breeder of high class registered stock has his own problems to solve in securing a sire for his herd. The more successful he is in developing his herd, the more difficult it is for him to secure a sire that will keep up or improve the quality or production of his stock. However, the subject I will deal with is the "pedigree" for the dairy farmer, the man that furnishes our country with milk, cream, butter and cheese and breeds the thousands of dairy cows that are used for that purpose and that go on the market to replenish the herds in the many producing sections.

In buying a dairy sire, we should buy mainly for what there is in the animal or what he is able to do for the improvement of our herd, and not entirely for his appearance. A grade bull may look as well as a well bred registered animal and be absolutely worthless as far as improving the herd is concerned.

For that reason we should by all means buy a proven sire whenever we can find one. In this case it is not so much the pedigree or confirmation of the sire which we should consider, as the production, conformation, general dairy type and uniformity of his daughters which we should judge.

Unfortunately such sires as are obtainable are scarce. For that reason we are often obliged to turn to the young sire and consider his breeding and judge as far as possible his power to reproduce cows of high dairy quality and large production. For this we must look to his pedigree.

Don't be afraid to pay good money for a good pedigree, but with the pedigree buy a good vigorous bull; one with good constitution, good dairy conformation, well grown, thrifty, good sized for age, backed up with a good bunch of high producing ancestry, and you are pretty sure of placing in your herd a bull that will increase production, quality, and be of great value to the breeder. It is understood, however, that the calves must be well fed and developed.

I find in talking with farmers and by sending out pedigrees that not all purchasers know what a good pedigree looks like, or know how to follow out a pedigree. For that reason I refer you to the cut, a sample pedigree.

First you will find the name of the calf or bull, time of birth, description, etc., and directly following the name a bracket ( ); at the top line of the bracket you will find the name of the sire (Big John), at the bottom of the bracket the name of the dam (Bess). After the name Big John you find another bracket, at the top of the line we find "Bill." Bill is the sire of Big John and the grandsire of the calf on the sire's side.

At the bottom line of this bracket we find "Jenny," the dam of Big John and the granddam of the calf on the sire's side.

Now, we will come down to the dam of the calf (Bess). After her name we find a bracket and at the top line we
Calf
Dropped—
3 full sisters with authenticated tests

BIG JOHN
No. 468
Sire of 15 authenticated tested cows

BILL
No. 94
Sire of 25

JENNY
No. 840
Test 590 lbs.

Jenny
Sire of 14

SUE
Test 600 lbs.
Dam of 2

LILY
Test 30 lbs. butter in 7 days

MIKE
Sire of 6

SPOT
Test 460 lbs.

JIM
Sold for $5,000

BETTY
Test 15 lbs. in 7 days

JAMES R.
Sire of 60 tested daughters

MOLLY
Test 390 lbs.
Dam of 3 record cows
find the name "Jake." Jake is the sire of Bess and the grandsire of the calf on the dam’s side.

At the bottom line we find "Sue," the dam of Bess, and the granddam of the calf on the dam’s side. By keeping in mind that the name at the top line of the bracket is always the sire and the bottom line the dam we can follow the breeding of the animal for many generations.

Under each name you will find the registry number, as 468 for Big John, 94 for Bill, 840 for Jenny and so on for each one. Then following each number you will usually find written with red ink the performance or production, if any record of each animal has been kept, and it is this production that makes the animal more or less valuable.

We will notice that every ancestor to the calf is a producer except Jim. This is a good well balanced pedigree. Every sire for four generations is a producer of record cows except one, and every cow a producer not only of butter fat but three of them are producers of record cows as well. This gives strong backing on the dam’s side.

You will also notice that the calf has three full sisters with records. That shows that the particular mating of Big John and Bess was a good one and helps to strengthen our belief that those two “nick” well, and the characteristics of the daughters will likely show up in the offspring of the calf.

By the term “record cows” we mean a cow that has made by semi-official or authenticated test 360 pounds or more of butter fat in a year or, if under five years of age, the equivalent of that standard. Take 250.5 pounds for a heifer exactly two years old and add one-tenth of a pound a day for every day over two years. This would bring the standard up to 360 pounds of fat at five years of age. These tests are called Advance Registry or Register of Merit tests, as the different breed associations term them.

In selecting the sire, get one especially well backed with tests on the dam’s side, not on the reputation of a big test of some relative or an animal back three or four generations, but the dam should be a good one, as Bess is (560 pounds), and the granddam Sue (600 pounds) and Molly the great-granddam (390 pounds) of fat in a year, adding to that the fact that all three of the cows are producers of record daughters.

Insist on the dam being a good cow, then get just as much backing behind that as possible.

Now we will go to the sire’s side of the pedigree. We want a well balanced pedigree. We find the sire of the calf (Big John) has fifteen authenticated tested daughters to his credit. Where space is sufficient, they are usually listed, giving the production of each, so we may judge not only by the number of tested daughters, but the quality of them.

Now, we find the sire of Big John (Bill) a good one (25 tested daughters) and his dam Jenny a good cow (590 pounds). So on through the pedigree we find producers. Lilly the dam of Bill has a seven-day record of 30 pounds of butter. This short time test, while it is some indication of the capability of a cow, is not nearly as reliable a test of the capacity of the cow as a long time or year test.

Oftentimes we find large sums of money recorded for the sale of certain animals, as with Jim in this pedigree. To be sure $8,000 is a large sum of money, but don’t think that because an animal sold for a big price that all his stock are going to be exceptionally valuable. If this large sum of money was paid for show quality, it will be of little value to the dairyman. If it
was paid for the producing quality of a cow or bull, it does add value to the pedigree.

It is production we should breed and feed for. It is production we sell on the open market. Of course we must look to constitution and conformation, but if we breed for production, selecting sires of good constitution from lines of producing families or backed by a good bunch of producing ancestry, dairy conformation or type must come.

You may not get animals that would suit the most critical in the show ring, but while you may get some of that kind, you will get large, strong, dairy cattle, capable of large production if properly fed, and with proper selection will have a very profitable herd, one that will be a source of satisfaction and pleasure and bring the means of obtaining the conveniences of the home and surroundings that make farm life less the burden and life worth living.

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POINTERS ON CONTROL OF INSECTS.

J. G. Sanders, State Entomologist, Madison.

Nearly every agricultural crop or product manufactured therefrom is attacked at some stage by insects, which levy a tax of varying proportions unless active measures for control are applied. These losses are so great at times that the most careless people are suddenly awakened to the situation and call for help. The wise grower or producer will learn the best methods by careful study of these problems and will apply timely controls.

Successful methods for the control of insect pests are based on the knowledge of at least two fundamental factors—feeding habits and life history.

The life history of insects is subject to great alteration and diversity resulting from several factors, namely, climate, temperature, the seasonal growth and rotation of food plants, the presence of parasites or other enemies of insects, and sanitation.

Insect Characteristics

It must be remembered that insects are invertebrate animals, differing widely in structure and functions from higher animals. They breathe by means of pores situated along the sides of the various segments of the body. From these pores tiny air passages lead to all parts of the body, and there is no blood which carries oxygen as is found in the higher animals. Consequently, poisonous gases or oily substances act very quickly upon insects.

Insects pass through several different stages which are frequently so different in appearance that they are not recognized as a stage of an insect. Typical insects have four distinct stages—egg, larva, chrysalis and adult. In some insects the chrysalis stage is lacking, and there is a direct change through several stages from the youngest larva to the adult without a complete metamorphosis. As a rule, the larval stage is the most destructive, this being the stage in which the insect is growing. An insect never grows or becomes larger after once reaching a matured adult condition.

Control Methods

Two great classes may be defined under insect control, namely, preventive and remedial. Under the preven-