



HEADS ARTIFICIAL BREEDING CLUB

Executive officers of the East-Princed Artificial Breeding Club, above, are, left to right, FRONT ROW, Jim Harris, Walter Bernard, W. A. MacLennan, Frank Jardine, son Lowther, Arnett Simpson, Howard Wright, and Elmer Waugh. 2ND ROW, Ken MacLean, Hudson

Soil Sampling Need Stressed

Although this is not the best time of year for soil samples to be taken perhaps the following instructions will be helpful this autumn when sampling, accurate information as to the needs of the crops to be grown can be determined.

Results of samples taken to the laboratory at the present time may not be available in time for use this year, for this reason, sampling in the fall of the year after crops have been removed is recommended.

Samples of the soil for testing by rapid chemical methods is an exceedingly important part of the procedure. Single samples or samples not truly representative of the field in question are of little or no value.

Each sample submitted for testing should be a composite of from 10 to 20 samplings well-distributed over the field or area. The number of places from which soil is taken will depend upon the size of the field or area.

SEPARATE SAMPLES
In fields or areas having more than one distinct soil type, or important differences in past treatment or crop growth, separate samples should be taken from each part. Likewise portions of a field which show definitely poorer results than the average should be sampled separately.

When taking the sample, expose a clean face by cutting the

soil vertically to full plow depth using a clean spade or trowel. Then take a thin slice (about 1 inch thick) to the full depth of the exposed face except in the case of permanent pastures and lawns. In these cases a 2 to 3 inch depth is sufficient.

REMOVE STONES

The soil from the various samplings should be thoroughly mixed and the larger stones and coarse roots removed. From the mixed soil take about one pound or a half pint. If the soil is very wet, dry in a clean place at room temperature (not in oven). Pack the soil sample in a clean, non-metallic container.

Each sample should be clearly marked with the number, name of the field or other identifying mark, also the name and address of the sender.

Send the soil samples to the Soil Laboratory, Experimental Station, Charlottetown, Prince Edward Island.

A questionnaire available either from the Provincial Department of Agriculture or from the Experimental Station should be filled out and returned with the soil sample. This is important as recommendations cannot be made without knowing what has been grown in past years, the treatments received by the soil and other similar information.

Barley Losses Can Be Cut In Threshing

All possible precautions against seed injury during threshing operations must be taken, if barley seed is to be subjected to any of the modern methods of loose smut control. Recent experiments at the Plant Pathology Laboratory in Winnipeg have shown that the severity of injury to barley seed from these treatments is related to the amount of mechanical injury done to the seed in threshing. It is cracked or otherwise damaged seed that is killed by the Spergon and water-soak methods of treatment.

MAJOR DISEASE

Loose smut is one of the major diseases of the barley crop. Control is difficult because the fungus causing the disease is carried within the seed. Actually it penetrates into the seed where it survives the winter and then produces the disease in barley plants grown from this infected seed.

Over the years many attempts have been made to develop methods of loose smut control. These methods have mainly been based on the discovery that seed can withstand a higher temperature than the fungus that lies dormant within it. A method of some interest is one that has been employed in India, particularly for killing loose smut in wheat. The Indian farmer simply soaks the seed in water and then spreads it in a thin layer in a packed

Say Proper Use Of Feed Important To Chickens

Experience shows that nearly all samples of feed thought by users to have killed chickens, prove on laboratory examination, to be perfectly harmless.

The first impulse of many poultrymen when serious losses occur in their flocks, is to suspect the feed and submit a sample for examination. This course of action seldom brings a solution, as more frequently the cause is disease. The proper course and the immediate action, is to have a poultry pathologist examine a few affected birds while they are still alive or soon after death.

When feeds are found to be the cause, it is almost always a deficiency in the ration used, rather than harmful ingredients. It is recognized, of course, that diets for poultry are sometimes deficient

in vitamin A or D, riboflavin or managase, which may affect the health of the birds, but such health changes do not occur overnight and an observant poultryman will notice these changes before they reach serious proportions.

In a great many cases the feed is changed when there is an outbreak of disease or some mortality in the flock, and when the condition is corrected, the original feed is blamed, and the new one praised. This is not necessarily true, as in a number of cases the disease has run its course and there could have been the same number of survivors on the original feed. With coccidiosis, for example, the serious cures of the disease runs for about five days.

courtyard to dry in the sun. During the drying process the seed is raised to a temperature that kills the fungus without destroying the seed. It should be mentioned that this method cannot be used effectively in Canada because the temperature of sun-dried seed would not rise high enough to kill the fungus.

HAS FAULTS

For many years the so-called hot-water method of seed treatment has been the chief method of control. It has always been difficult to apply successfully because the temperature of the water during seed treatment

must be exactly right to kill the fungus without injuring the seed. If the temperature is too low there is no disease control, if too high there is much seed injury.

In recent years, water solutions of the chemical Spergon have been found fairly effective for the control of loose smut. Quite recently it has been found possible to control loose smut simply by soaking the seed in water at room temperature for a certain length of time. Both methods, however, tend to kill a certain proportion of the seed.

Grazing Control Helps Pastures

OTTAWA — Controlled grazing of dairy cattle has been found to be an effective means of obtaining the highest productivity from pasture areas available for the dairy herd at the Central Experimental Farm, Ottawa. V.S. Logan of the Central Experimental Farm reports that several systems have been experimentally tested to overcome the problem of seasonal variation in pasture growth and minimize losses from animal activity.

That seasonal variation in pasture growth is great, has been shown by determinations made with common pasture mixtures where up to 80 percent of the annual growth occurred before the end of July. It has been estimated that with the usual free range grazing, approximately 40 percent of available forage may be wasted by contamination with animal droppings, by trampling, and by animals lying down.

The first system of controlled grazing was rotational pasturing and the harvesting of early-season surplus grass for hay or silage. This method of controlled grazing has not been adopted widely in Canada, probably because of the extra fencing and watering facilities required.

STRIP GRAZING
A more recent system of controlled grazing, termed "daily strip grazing", has been tested

at Ottawa and on some Branch Farms. The method consists of confining cows by means of electric fencing to an area that will provide grazing for one day. One electric fence is stretched between two permanent fences along the advance side of the day's grazing area. A second fence is strung behind the cows to protect aftermath recovery. The latter is strung in a manner to provide direct access to the day's grazing through the entrance to the pasture field. A constant water supply is located near this entrance. The advance fencing unit is easily moved at the same time each day. It is sufficient to move the rear fence at weekly intervals. As aftermath recovers sufficiently on the initially grazed area the cows are moved back to begin another cycle. At this time surplus grass from the ungrazed area is harvested for silage or hay.

Experimental evaluation of "daily strip grazing" at Ottawa, has shown that up to 26 per cent higher productivity can be obtained than with the usual free range method.

A study is now in progress to determine the possible value of "mechanical grazing", which consists of machine-cutting the daily grass requirements, and feeding the pasture to cows in the stable or dry lot.

Planning Is Needed For Good Meetings

"Democracy must be defended from within as well as from without—and the strength of that defence will be chiefly in the ability of the citizens to work together, in matters great and small."

Groups are a part of our social structure. We grow up in groups and they supply our needs and influence us. The family, the church, the school, our work and our organizations are examples of these.

There are probably three reasons why we meet in groups, first, because there are certain things which we must decide upon since the decisions which we make affect all of us. Secondly, we meet to learn something and thirdly, because we enjoy relaxing in an informal way, in the company of our neighbours.

VARIOUS OPINIONS
We have all attended meetings—sometimes leaving for home with the thought, "it was a good meeting," and also too many times do we have the thought, "it was a very poor meeting."

A question which enters our minds is "How does a good meeting, the arrangement of the program not "just happen", it takes careful planning and active participation of all interested people.

Meetings should be planned to take into account the members' wants, time and place of meeting, the arrangement of the program and making sure everyone knows his or her job.

THE PROGRAM
The program should be arranged to include the business session, educational part of the program and recreation, with the different items balanced so as not to spend too much time on one subject and not enough on another item.

The business part of the meeting should be brief and to the point. All reports should be summarized and the business should be conducted by means of motions.

Everyone likes to learn something new. The educational part of the meeting is accomplished by a speaker, panel discussion, film, symposium, playlet, or demonstration. Generally, these devices serve to get people thinking about the topic and are most effective if followed by lively discussion, in small groups.

People enjoy relaxing in each others company. Every program should include some form of recreation, in which all can par-

ticipate. This in itself can do much to improve many of our meetings.

In general, there are three points to consider in planning a meeting, planning, procedure and participation. If your meeting omits any one of these three, you will hear the members say on their way home, "that was a poor meeting." Why not include all points and have a more active participating membership.

How To Smooth Farm Gullies Into Waterways

Overcoming the inconvenience of gullies in a field is not such a formidable task as it would appear. The farm tractor and one-way disc or plow can be used to shape rather large gullies into smooth water channels that can be seeded to grass.

The one-way disc is probably the most efficient machine for this job. A satisfactory grassed waterway has gradual sloping sides with plenty of gottom width. This permits water to flow gently in a shallow slet thus preventing further soil erosion. Water moving at a rapid rate causes erosion, therefore the waterway must have a smooth grade with no abrupt changes in slope. Sharp curves which cause the channel to overflow must be avoided.

The soil that is moved from the sides into the bottom of the gully should be packed. Running over the fill with tractor and implement as the operation progresses will do a good job of packing.

ROUND EDGES
Gullies with steep banks must have the edges rounded off first. This is done by hitching the tractor to the one-way with about 10 feet of chain. A chain of this length will permit the tractor to operate at a safe distance from the fully. After the edges have been pulled down the chain can be removed and the one-way pulled in the normal manner. Soil farther out from the gully is then worked inward by successive rounds with the one-way. To keep a smooth slope it will be necessary to make several rounds where the gully is wide and deep, and fewer rounds where it is shallow.

Sheep Crossbreeding Produces Good Results

Planned crossbreeding in sheep will result in more lambs per ewe, greater vigor at birth, earlier maturity and a much better fleshed carcass, than achieved through the "grading-up" system commonly used in this country. This increased yield is due to a phenomenon known as "hybrid vigor" or "heterosis".

Corn and poultry breeders have made real use of crossbreeding in Canada and sheep breeders in Great Britain are far ahead of this country in the crossbreeding field. In Canada at the present time, the lambing average at weaning time is less than one lamb per ewe as compared with one and one-half to two lambs per ewe in Britain where crossbreeding is used extensively. If Canadian sheepmen could equal the British average it would make a difference of from \$10 to \$20 dollars in returns from each ewe. This is, of course, a considerable difference in favour of Britain in flock and pasture management.

YIELD AND VITALITY

The "grading-up" system of flock improvement simply means using a ram of the same breed as the ewe flock. For example, breeding a flock of grade Suffolk ewes to a Suffolk ram. Genetically, this is not a very productive practice as it is mainly a form of breed improvement and hybrid vigor gets little chance to express itself. Yields and vitality are comparatively low and lamb losses are usually abnormally high.

Practically all of the Down breeds of sheep have a similar genetic make-up. That is, they are related and when crossed with each other cannot yield better than the average for any on breed. If they are crossed with unrelated breeds, then the great difference in genetic make-up results in full expression of hybrid vigor.

In Canada, a considerable number of sheepmen are adopting the crossbreeding system and in Quebec a well organized program involving several hundred farmers has been in operation since 1950. Quebec has always favoured the Border Leicester breed. This breed alone does not produce a high class market lamb but by introducing North County Cheviots for crossing with Border Leicesters and using Down ram on the hybrid females, an excellent market lamb is now being produced. This "two-cross system" is popular and not difficult to organize.

TWO CROSS SYSTEM
The "two-cross system" gives the several sheep breeds a job to do. One farmer produces Border Leicesters, another North County Cheviots, another hybrid females and others the necessary Down rams. A systematic program is thus developed, something entirely lacking in the "grading-up" system which at best is a rather haphazard method leading to a motley collection of lambs of various sizes and qualities with varying degrees of flesh

ing and finish.

At present some sheep breeders in western Canada are using the "single cross system" on quite a large scale with range ewes. They simply use a number of black-faced rams on the ewe flock, then later a number to a phenomenon known as "hybrid vigor" or "heterosis".

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The Dorset Horn is a specialty breed that is not utilized to the fullest extent in Canada. It has the capacity of breeding at any time of the year and so can be used to produce lambs for special markets but only a very few operators cash in on this possibility. If Dorset ewes were crossed with North County Cheviots or other similar breeds, the female progeny would carry the out of season breeding factor. This could be used most effectively in a commercial way.

Iron Injections Speed Growth Of Young Pigs

A recent experiment conducted by veterinary medical scientists in the United States shows that the growth rate of newborn pigs can be increased by injections of iron. The Canadian Veterinary Medical Association says the study showed pigs which received the injections before they were a week old weighed about three pounds more when they were weaned at eight weeks, than pigs which did not receive the iron. The iron was injected intra-muscularly in the form of iron dextran. The Association says there were no harmful effects from the injections.

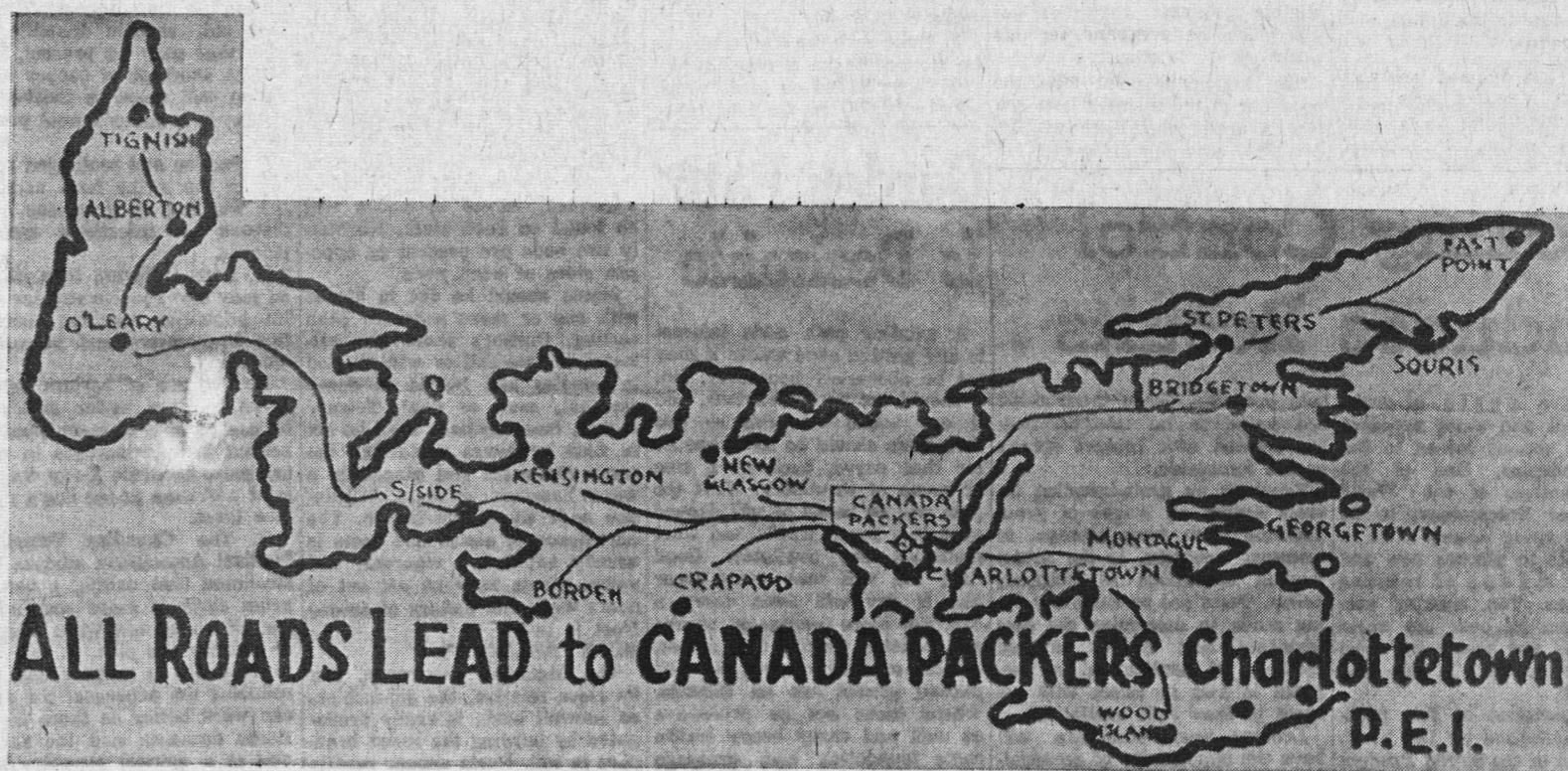
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