

twice daily, so long as required. A little, say half a teaspoonful, of nitrate or chlorate of potassium should be given in drinking water and, if the patient be constipated, a little raw linseed, or castor oil should be given. If prostration be very marked, a stimulant,

as a tablespoonful of whiskey in a little cold water should be given every few hours. Any fluids given by the mouth must be very carefully administered, as, on account of the difficulty in swallowing, if they be given too rapidly some will pass down the windpipe and

produce fatal complications. It must not be forgotten that the patient must be kept in a warm, dry building, well ventilated and if the weather be cold the body should be clothed. WHIPP.

Breeding Shorthorns to Intensify Milk Production.

A panoramic view of the Shorthorn industry on the American continent discloses a turning point. The jingle of the range, while yet clamorous, is gradually diminishing, and the call to breed in sympathy with smaller holdings is ever increasing in its dimensions. Breeders have entered the dual-purpose enterprise recognizing a future in this strain. A few breeders in the eastern states, there are, who stood by the helm through adversity, and made milk records with Shorthorns long before the dual-purpose call was heeded by breeders at large. At first their endeavors passed almost unnoticed until the beef Shorthorn had become so beefy that the farmers on moderate sized farms revolted, some going into dairying and the remainder forming the inevitable support that has meant smoother sailing for these few breeders, who first directed their attention towards breeding for the dual-purpose qualities.

Among these was one Chas. Otis, a banker in Cleveland, Ohio, and a breeder of dual-purpose Shorthorns on his 500-acre farm, 18 miles out along the Lake Erie shore at Willowby, Ohio. While his father was a big steel manufacturer and himself now a banker well known in Cleveland, he has ever been interested in agriculture, the first nucleus of which was instilled into him when spending four years of his early life on a Colorado ranch. To the question, "Why did you start dual-purpose Shorthorn breeding?" he stated quite modestly, "Simply because after analysing the situation I felt I could contribute something to agriculture and yet make it in the end a paying proposition."

Those who know him state that he will stop discussing stocks and bonds with the least excuse to talk Shorthorns. There, on his farm, most beautifully located, and through which runs quite a large coulee bottomed with nutritious blue grass, he has had at one time as many as 128 head of pure-bred Shorthorns of dual-purpose breeding. They are not simply a collection of fairly good milking Shorthorns brought together within the past few years, but Shorthorns with consistent dual-purpose breeding for perhaps 30 or 40 years. They are direct descendants of the Innis & May and afterwards of May & Otis constructive endeavors. Two years ago the latter firm dissolved partnership and now Chas. Otis in Ohio and L. D. May in Pennsylvania are carrying on breeding operations from the foundation constructed in pioneer days. In the blood lines of the Otis herd is found one of the pioneer dual-purpose Shorthorn bulls, Joe Johnson, which individual to-day has over 75 descendants with records above 8,000 pounds in a year, and 27 with records over 10,000 pounds. His sire had a great reputation as a getter of heavy milkers. One of Joe Johnson's choicest granddaughters was Margaretta Clay which produced for eight years an average of 8,426 pounds. She was mated with the imported Duke Buttercup which combination gave Cyrus Clay, in 1895. Duke Buttercup was a great sire of record cows, having to his credit 10 daughters with records from 7,800 pounds to 10,000 pounds. This Cyrus Clay and another great son, General Clay, out of the 13,232-pound Mamie Clay, form the breeding which permeates and fairly saturates the present Otis herd at Willowby. It was the pioneer work of Innis, May and Otis which developed the milking propensities. These breeders were pioneers in keeping records, and owing to the difficulty of obtaining good outside blood bred in production, a great deal of line and in-breeding was performed. Some of the stock approached more nearly to the dairy type in their search for records, but now a saner view is evident and only moderate production is sought with retention of fair beef proclivities.

The foregoing serves to clarify the situation convincingly that the blood lines in the Otis herd are not miscellaneous but definite, that it is not a collection as the true meaning of the word indicates, but rather the result of constructive work to make it truly dual-purpose.

The herd header, Knight of the Glen, by General Clay, is a seven-year-old, and a half-brother to the world's record Shorthorn cow, Rose of Glenside, 18,075 pounds of milk, 735 pounds of butter. A side view shows dairy conformation. This is evident, particularly at his hind quarter and accentuated by his only moderate fleshing. A back view shows up more of the dual-purpose type, a moderately broad shoulder and square quarters. The impression given was that he leans to the dairy order which type is quite contrary to that which many Shorthorn breeders advocate. On mentioning this fact, Mr. Otis replied, "I think the best results are obtained by a bull inheriting milking strains being used on cows of good conformation. My experience has been that Shorthorns will inherit conformation more from the dam than the sire, but the sire must have had a good milking dam to produce milking heifers."

The young bulls, most of which were quite large, strong-boned and good-framed youngsters were grown on skimmed milk. In them the dairy type was not evident, but rather a leaning to the beef conformation. In the field were the breeding cows and heifers, some of these near the barn and others in the coulee pasture. The cows are large, deep-hearted types, but on the whole with much more variation than observed on the late J. J. Hill's farm at St. Paul. Some of them showed in a fairly good degree of fleshing, while others were

very much of the dairy order. There, grazing was the product of many years of consistent endeavor, 60 cows all with records over 8,000 pounds per year, and many of them with notable achievements to their credit. Invariably the cows much over 10,000 pounds were not what could be called dual-purpose in type, as they were in thinner condition, had sharper shoulders, more slender in the neck and were wedge shaped to quite a degree. Mr. Otis now realizes that records can be carried too far and is breeding for the 7,000 to 10,000 pound cow that has a large frame and is more compact, yet of that indescribable matronly type. The cow, Jewel, as shown in the photograph, very much approaches the type he is seeking to breed to. She is a large, deep-bodied individual and always in good fleshing order, yet her milk record is 10,887 and during the



Part of the Otis Herd on Blue Grass.

year she made her record she would have made good beef at any stage of her milking period. Another cow which is very much Jewel's equal is Braemar Beauty, a Canadian cow bred by James Brown, Norval, Ont., with a record over 9,000 pounds. There are many others of this type, some of which will be shown at the Chicago International this year.

After viewing the whole herd in this establishment, one of the best on the American continent and one when in partnership with L. D. May in 1913 and 1914 won eight grand championships, 25 firsts and 10 second prizes at Vermont, Syracuse and the National Dairy Show, the various difficulties in breeding, and the future of the dual-purpose breed were discussed. The answers to the following questions are from one who has had a wide experience with Shorthorns. "Do

heifers judiciously with a bull of the same family not near enough related to in-breed." "What work have you done to show that dual-purpose cows will produce good steers?" "We have to-day a bull calf out of a 11,000 pound cow which we have steered and are rearing for a show steer. He weighs over 500 pounds at five months old, which is as good as the beef breeders can do. We have also an excellent grade steer out of a grade dual-purpose cow to demonstrate the beef qualities of our bull as well as the milking propensities." "What is the difficulty met with in dual-purpose Shorthorn breeding?" "The difficulty is with the breeder being able to combine the milk qualities judiciously with the beef qualities, not fostering one too much to the detriment of the other."

After strolling throughout every nook and corner of his establishment, and discussing many phases of the subject not here given, the general impression is that there are many true dual-purpose types in the herd, but there are many not dual-purpose, also that there are many cows and heifers that are in fairly close sympathy with the ideal of the writer, with large capacity, deep-hearted and inclined towards beef conformation, and there are cows that appear too strenuously bred for milk production. Looking back into the pedigrees with generations of breeding for milk one finds the great producers intelligently line bred. There are also cows without these ancestral production blood lines. If a visitor should pick out the cows in the herd so line bred it would be found that they are those leaning

towards the dairy type and which have approached more nearly the dairy Shorthorn not only in type, but in heavy production. Those of great dual-purpose appearance invariably are not backed so much by this Clay strain, the production of many generations. They quite often have an introduction of it but are not so intensely bred. The summary of this evidence is that too much emphasis was laid on production in the earlier breeding operations as a result of which the type changed in sympathy. The demand of the American public no doubt encouraged this tendency since the call was for larger milk yields without sufficient emphasis being given to the maintenance of a fairly good meat carcass. But now the fault is being rectified, the association of more of the beef type encouraged, and contentment with lower yields is being realized as necessary. Even yet the

American farmers seeking the dual-purpose cow are clamoring for records. They invariably ask, "What production has she got, what is the production of her dam and is her sire bred for production?" without giving heed to the more sane inquiry as to beef as well as her breeding for milk. Let not the Canadian farmers make this same mistake of seeking for more milk and more milk, and so sacrifice the beefing ability of the herd. Stockmen might as well from the first realize that more than milk is needed, that if the intention is to put steers on the market it must be something better than a dairy steer, and that a fair beefing tendency of every dual-purpose animal in the herd is desirable.

By the courtesy of Mr. Otis the opportunity was given to see the result of generations of line breeding or almost in-breeding without the introduction of new

blood. These few animals bred intensely in milk production with the blood concentrated and re-concentrated had not been ostracized from the farm, but clearly indicated that intensifying can be carried too far. They were constitutionless, sway-back, scrawny cows that one would call ideal scrubs. The thought permeates one that if such was the result of in-breeding, no wonder breeders throughout the world recognized that a herd, if line bred, needs an infusion of new blood from time to time in order to avoid possible disaster. While all the great breeders in founding breeds through pioneer days were staunch advocates, and in practice supported the idea of in-breeding, yet it was found necessary to incorporate new blood from time to time. This case of in-breeding on the Otis establishment is not to his discredit, but rather the living example of a few mistakes made



Jewel, 10,887-lb. Cow, First Prize for Cows in Milk at the International, 1911

She is regarded as one of the best specimens in the herd, and combines both easy-keeping qualities and milk production.

you prefer the bull and cows uniform in conformation, being moderately between the beef and dairy type?" "It is hard to breed a uniform type, our ancestors have been at it before us for generations and the idea is that it is easier to get desired results with bulls leaning to the dairy type on big-framed, heavily-boned cows, neither of them being the opposite extremes." "Under what conditions is the dual-purpose suitable?" "Practically in all conditions, but more so when farmers have considerable roughage to feed and turn into milk and meat, no other breed will pay more money under these circumstances." "What brief advice would you give a beginner in the business?" "Don't expect to breed up a first-class herd in a year, but when you have found a bull that seems to suit your herd keep him and his heifers and use him for all he is worth. Don't let money tempt the heifers away from you, then mate his