

*Time is Money***Herefords***Mature Early
Fatten Quickly*Feed them once, and
HEREFORD STEERS
you will always feed.They cost a trifle more,
that's the way with all**GOOD THINGS***Illustrated information
may be had from***Canadian Hereford
Breeders' Assn.**

Ancaster - Ontario

Aberdeen - Angus*A few type young bulls and females to
offer, of choice breeding and individuality.***Shropshire and
Southdown Sheep***Yearling Rams and Ewes for breeding
purposes or fitted for the show ring.**Inspection invited, satisfaction assured.*

Larkin Farms - Queenston, Ont.

**ALLOWAY LODGE
STOCK FARM****Angus—Southdowns—Collies**
Recent addition of Imp. Idealist of Maisemore as
junior herd sire. Yearling rams and ewes,
all of superior merit, priced to sell.
No Collies at present.

ROBT. McEWEN. R. R. 4, London, Ont.

Sunny Acres**Aberdeen - Angus***Present offering—A few young bulls
ready for service.*

G. C. CHANNON, Oakwood, Ontario

Telephone—Oakwood. Railway—Lindsay,
G. T. R. and C. P. R.**Balmedie Aberdeen-Angus***Nine extra good young bulls for sale. Also
females all ages. Show-ring quality.*

THOS. B. BROADFOOT, FERGUS, ONT.

**English Dual-Purpose
Shorthorns***We offer a grand choice of young bulls
and bull calves from imported dams and
sire, bred on the English system for milk
and beef. They will add value to any
herd. The dual characteristics have been
impressed by scientific treatment for con-
tinuous years. Prices moderate.**Always on hand, sows and boars of the
most satisfactory breed of pigs, English
Large Blacks.*

F. W. COCKSHUTT

Lynnore Stock Farm, Brantford, Ont.

**Mardella Dual-Purpose
SHORTHORNS***Eight choice young bulls, 30 females, cows and
heifers. All of good size, type and breeding. Herd
headed by The Duke; dam gave 13,500 lbs. milk,
474 lbs. butterfat. He is one of the greatest living
combinations of beef, milk and Shorthorn charac-
ter. All priced to sell. Write, call or 'phone.*

THOMAS GRAHAM, Port Perry, R.R. 3, Ont.

Shorthorns*Present offering: Six young bulls, Reds
and Roans; also a number of females.
They have size, quality and breeding,
from good milking dams. Prices moder-
ate. Satisfaction guaranteed.*

CHAS. GRAHAM - Port Perry, Ont.

in Great Britain which during the war produced trinitrotoluol for the Ministry of Munitions and produced it on a prodigious scale. It was bombed by German aircraft on several occasions, possibly because work of this character was known to be carried on there."

The Hydraulic Ram.

BY C. H. THOMAS.

Every modern dairy must needs have an adequate and never-failing supply of good, clear water for every-day use. The use of any other appliance except a hydraulic ram means added expense, and therefore greater overhead expense charges. A hydraulic ram needs little or no attention and depends upon the simple rule of running water as its actuating power. Outside of a natural flow, the hydraulic ram is the most economical. It does not need steam or electricity to help it run, but uses the force of gravity. In the installation of the ram there are certain natural laws which have to be followed, or the plant will not prove a success. Here are the three principal factors: The proper amount of water, the proper fall of the feed pipe, and the proper length and size of the feed pipe. This ram which we installed a while ago, under adverse circumstances, is to-day working successfully, having given no trouble. There was an elevation of some 100 feet to be overcome in a distance of about 800 feet. The feed pipe, 3 inches in diameter, was 150 feet long. With this we got about a 7-foot fall from the top of the head-box to the ram, which proved to give sufficient power to the ram to overcome the resistance or weight of the 45-pound back pressure existing in the rise pipe. On this job, or farm, there is a fine spring of fresh, sparkling water in such a position that it could be easily utilized. We put in a ram so we could make use of this supply. The water from this spring is brought about 300 feet through a one-inch pipe by gravity, and enters the ram as shown. There it receives the force of the water from the feed pipe and is forced first into the air chamber, then into the rise pipe, and finally up to the cistern. To the novice, or one not acquainted with this form of water power, a ram may seem like a mysterious piece of machinery, but it is simple enough, as the following will explain. When a column of water in a pipe is suddenly stopped by the closing of the outlet valve in the ram, the momentum of the water opens a valve into the air chamber. A certain amount of water rushes through and at the same instant the water rebounds in the feed pipe, letting the air chamber close and hold what had gone through. The pressure of water taken off, the outlet valve suddenly opens and the water starts down the feed pipe again. The operation is thereby continued, and the ram keeps pumping the water up the long grade to the cistern, with little or no attention being paid to it. Practically the only thing necessary to be renewed is a new gasket. The hydraulic ram is a time and money saver, and of great value to the dairyman on whose farm there is a small stream, and there are very few on which they are not found. The office of the air chamber in the ram is to contain a certain amount of air. This forms a cushion when compressed by the weight in the rise pipe, and exerts a spring-like action on the water, forcing it out at the cistern in a steady stream. A ram derives its name from the fact that it rams or forces part of the water that operates it to a higher level than the source of supply. Since it wastes a considerable portion of the water in securing power to elevate the remainder, there must be good drainage at the place where the ram is located. The ram pit is about 8 feet deep, and wide enough to allow room to work around it. The flow required to operate a ram is from one-half gallon per minute upward, and the ram must be at least 2 feet below and 10 feet away from the source of supply, so as to give the water an opportunity to gain momentum. There are various rules to determine the best position of the ram with relation to the supply and point of delivery. The speed may also be varied to pump a larger proportion of the water when the supply is limited or to pump it faster when there is an abundance. This dairy farm uses a good many gallons of water daily for barn use, and for washing bottles and cooling the milk. The supply is never-failing, and the ram has never given any trouble.

For Dependable Breeding Cattle**FIFTY
HEAD**ATTEND THE
**CURRY, BOWES &
BOWES SALE**

OF

**FORTY-FIVE
FEMALES**

Scotch and Scotch-Topped

SHORTHORNS*At the Markdale House Stables***Markdale, Ontario, Thursday, October 7th**

We have catalogued for this sale 45 head of breeding females, all of breeding age and all dependable breeding cattle. They are just the sort that will make money for their purchasers as none are in high fit and all are bred and guaranteed in calf to great sires. If these breeding cows, which all carry pedigrees equal to the best and in calf to the Country's best sires, do not make money for their purchasers there is certainly very little use of carrying on with good cattle. The families are Crimson Flowers, Marr Floras, Village Girls, Marr Stamford, Miss Ramsden, Matchless, etc. The bulls to which they are bred include Excelsior, that great son of Gainford Marquis; Brown-dale Reward, one of the best breeding sons of the famous Brown-dale; a Nonpareil bull by Ben Wyvies and others. The young bulls catalogued are also youngsters that will grade well up above the average.

*If you want breeding cattle attend this sale.***CURRY, BOWES & BOWES***For Catalogues Address*

FRED J. CURRY

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MARKDALE, ONT.

Auctioneers: ROBSON, PATTERSON, CARRUTHERS, WALDEN.

The Salem Herd of Scotch Shorthorns

HERD HEADED BY GAINFORD MARQUIS, CANADA'S PREMIER SIRE

*Write us about the get of Gainford Marquis. They have won more
at Toronto and other large exhibitions than those of any other
sire. We still have a few sons to offer, as well
as females bred to Canada's greatest sire.*

J. A. WATT,

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Elora, Ontario

**IMPORTED AND CANADIAN BRED
SCOTCH SHORTHORNS**

We now have a number of 8 and 10 months old calves from imported cows, several of which are imported-in-dam. Write us also for bred-heifers. We have a choice lot bred to one or the other of our three imported herd sires. Prices right and inspection invited.

J. A. & H. M. PETTIT

(Burlington Station)

FREEMAN, ONT.

Glenburn Farms Shorthorns

Over fifty head of Imported Scotch bred and Canadian bred Shorthorns. Herd headed by Rex Augustus—128232—. Breeding cows, heifers and young bulls for sale. One fine Canadian bred 14-months-old bull, Sittyton Chief—138011— Dam, Emeline—83239— Sire, Sittyton Sultan Dale—108651—. Prices reasonable.

GLENBURN FARMS

H. H. POWERS, Manager

45 minutes from Toronto by
rail or motor.

UNIONVILLE, ONT.

Col. F. H. DEACON, Proprietor

*Eighty-three years without change we have been breeding***SCOTCH SHORTHORNS**

My herd is stronger than ever, and I have cows with calves at foot, heifers in calf, younger heifers, young bulls fit for service soon, for sale in any number at reasonable prices. Augusta Sultan—93092—, one of the greatest living sires, at head of herd. Write me, and, if possible, come and see me, it is worth while. Post Office, Telephone, Telegraph and Station is Stouffville, Ont. I pay the freight.

ROBERT MILLER

STOUFFVILLE, ONTARIO

Reyburn Milking Shorthorns

Herd headed by Victor 3rd, Imp., Grand Champion at Erie Show and Congress. Herd average over 9,500 lbs. milk per cow. Choice cows, heifers and herd-heading sires for sale.

R. R. WHEATON

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THORNDAL, ONTARIO

*Long-distance 'phone and telegraph.***Dual-Purpose Shorthorns***Bulls from 3 to 7 months old for sale, also several cows. Inspection of herd solicited.*

WELLDWOOD FARM, Farmer's Advocate

LONDON, ONTARIO

MILKING SHORTHORNS*Young stock for sale, from Record of Performance cows, by imported sires.*

G. L. SMITH, Credit Grange Farm

MEADOWVALE, ONTARIO

Puslinch Plains Shorthorns—Bulls for Sale—Royal Signet—134979—, red; born Oct 7th, 1919. Sire, Royal Ramsden—128067—. Dam, Roan Lady 50th—143772—. Price \$300. Goldale—138966—, roan; born Dec. 15th, 1919. Sire, Brown-dale Reserve—116615—. Dam, Roan Bessie 11th—140322—. Price \$200.

A. G. AULD, R. 2, Guelph, Ont.