

partment.

...e or a pin. A small magnifying
...greatly help in examining the
...parts of the flower. The flower
...the seed, which at first is very
...which grows rapidly and ripens
...four weeks after the formation
...ver.

...grain ripens the leaves turn
...with, the stems or straws
...a green or lightish yellow color,
...plumes become dry and harsh.
...seed which was planted we
...ained a well-ripened plant,
...ready to be cut, harvested and
...and will furnish us with straw,
...grain, all of which are useful.

...touched on only a few of the
...connection with the life-history
...eat. The germination of the
...eeding of the plant; the growth
...of the stem, and the head; the
...nt of the flower; the production
...in—are all subjects which are
...esting and worthy of a person's
...tion and study.

...of the importance of the wheat
...large amount of experimental
...been done at the Ontario
...al College in order to glean
...n which may be of value in
...both the yield and the quality
...at in Ontario. The results of
...periments have been published
...which have been distributed
...farmers from time to time.
...of 300 varieties of wheat have
...side by side on the College
...ese varieties possess many
...and may be classified accord-
...time of sowing, as fall and
...ording to the structure of the
...arded and bald; according to
...ition of the grain, as hard and
...nd according to the color of
...as red and white. There are
...fications also, but the ones
...oned are the most common.

...eties of wheat are particu-
...apted for special purposes;
...e production of bread, others
...i, and still others for pastry,
...akfast foods, etc. For mak-
...both the red wheats and the
...s are used; but for the other
...ses the white wheats are used
...ely.

...very best results in crop pro-
...ection of the most desirable
...a field of the best variety
...ould be made. From the
...ned from these plants, none
...lly-developed, well-matured,
...d grains should be used for
...the object of producing grain
...ity to be used for seed in the
...ar.

...asp the meaning of the little
...drops of water,
...e grains of sand
...the mighty ocean
...the pleasant land."

...er realize how it is that little
...heat make up the world's
...of about two and a half
...s, or of Ontario's production
...twenty-five million bushels

...e despise the little grain of
...rather let every one give
...honor is due, and gladly
...its high position in the
...rd.

...ntendent was talking with
...d father whose young son
...elled from school for truancy.
...he said, "that in most cases
...this are the fault of the
...selves." "Sure," admitted
...but not in my case. Why,
...ong ago, after I found that
...did no good, and noticing
...d seemed to have a certain
...t about him, I made him a
..."Son," I said, "I'll make a
...you. Every day that you
...rn your lessons, and help
..."I'll give you a nickel, and
...ou are bad you must pay
...and what do you suppose
...n't, papa; all I've got in the
...ar and fifty cents."

What Fertilizer to Use on Fall Wheat

HOW about using acid phosphate alone? A total of 90 years' experiments at Pennsylvania, Ohio, Indiana and Virginia Experiment Stations shows the following average increases per acre from the use of single element and complete fertilizers.

Material Added	Average acre increase obtained
Ammonia or nitrogen	.36 bus.
Phosphoric acid	5.65 "
Nitrogen and Phosphoric acid	8.64 "
Complete fertilizers	11.13 "

You can get an increase from acid phosphate alone but you can get over double the increase from complete fertilizers.

We have studied the results of long-time experiments, and the practices of hundreds of successful farmers, and here are our recommendations for fertilizers for your wheat this autumn:—

In the cooler, short seasoned parts of Ontario

On sandy soil	On clayey soil	On muck soil
2% ammonia 10-12% phosphoric acid 2% potash 200-250 lbs. per acre.	2% ammonia 10-12% phosphoric acid 2% potash 200-300 lbs. per acre.	1% ammonia 10-12% phosphoric acid 2-4% potash 200-400 lbs. per acre.

In the warmer, long seasoned parts of Ontario

On sandy soil	On clayey soil	On muck soil
2% ammonia 12% phosphoric acid 2-3% potash 300-400 lbs. per acre.	2-3% ammonia 10-12% phosphoric acid 2% potash 200-400 lbs. per acre.	10-12% phosphoric acid 4-6% potash 300-500 lbs. per acre.

If you haven't manured your soil or rotated your crops, use higher analysis fertilizers and more per acre.

Lay your plans for largest returns per acre while wheat prices are high.

Write for free booklet, "Winter Wheat Production"—

The Soil and Crop Improvement Bureau

of the Canadian Fertilizer Association

1111 Temple Building Toronto 33



Another Hired Man for Your Farm

Make a hired man of a Toronto Farm Engine. Use its wonderful power to make your farm a bigger, faster profit-maker.

Toronto Farm Engines give you cheap power. Run all kinds of machinery around the farm. Pump water, run washing machine, cream separator, churn, corn sheller, ensilage cutter, grain elevator, concrete mixer, wood saw.

Toronto Farm Engines cut farm costs—lessen work—save time. Sturdily constructed on simple, scientific lines. Economical of fuel. Give ample power. Require little attention. Run on gasoline or kerosene.

Write us for booklet about farm engines. At the same time find out about Toronto Grain Grinders and Toronto Saws. Both are farm servants who work for you at low cost and high efficiency. Both save time and cut out waste.

Our booklets on engines, saws and grinders are full of valuable farm information. Write for them. They are free.

ONTARIO WIND ENGINE & PUMP CO., Limited

Atlantic Ave., Toronto

Montreal Winnipeg Regina Calgary

ONTARIO WIND ENGINE & PUMP CO. (LIMITED)
TORONTO

Massey-Harris



The Binder that Never Fails

The Massey-Harris Binder takes all the worry out of Harvesting, for its owner knows that no matter in what shape the grain may be, his "MASSEY-HARRIS" will handle it and get it all. Years of actual work in the field have proven that for heavy crops, or down and tangled grain there's nothing to beat the Massey-Harris Binder. Thousands of farmers now look forward with happy and easy minds to harvest, in contrast to the old-time anxiety that accompanies uncertainty, because with a Massey-Harris Binder they take no chances—it gets all that grows.

Trussed and re-inforced at every supporting point, it is unsurpassed for strength and permanence.

The Reel can be set in seventy different positions, from sweeping the Guards to 31 in. above the Knife, all positions being obtained through one Lever

which is within easy reach of the driver. An Adjustable Reel Brace prevents the Reel from sagging.

The Knotter, so simple, with nothing to get out of order, always ties a perfect knot and ties it tight, with the band in the centre of the grain.

MASSEY-HARRIS CO., Limited

Head Offices—Toronto, Ont.

Branches at

Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton.

Transfer Houses—Vancouver and Kamloops.

Agencies Everywhere

Is Your Thresherman A Grain Saver?

He Is If He Uses The Grain-Saving Stacker

This is the most notable advance made in modern threshing. A device in the hopper returns to the separator the grain that would otherwise go to the stack. Users write us that this improvement saves one to three per cent more grain. Figure what that means to you.

Get the facts from any of the makers of North America's standard threshing machines listed below. Among these are the builders of the leading tractors and farm implements. All of them are prepared to supply threshing machines equipped with the Grain-Saving Stacker. Write to any of these for information.



View looking into hopper showing grain trap near stacker fan; also auger running from beneath trap for returning the saved grain to separator.

Grain Saving Stacker

LIST OF MANUFACTURERS

- Canada
- Robt. Bell Engine & Thresher Co., Ltd., Seaford, Ontario.
 - Dominion Thresher Co., Ltd., New Hamburg, Ontario.
 - Ernst Bros. Co., Ltd., Mt. Forest, Ontario.
 - John Goodison Thresher Co., Ltd., Sarnia, Ontario.
 - Hergott Bros., Ltd., Midway, Ontario.
 - MacDonald Thresher Co., Ltd., Stratford, Ont.
 - Sawyer-Massey Company, Ltd., Hamilton, Ontario.
 - Stewart Sheaf Loader Co., Ltd., Winnipeg, Manitoba.
 - Sussex Mfg. Co., Ltd., Sussex, New Brunswick.
 - Waterloo Mfg. Co., Ltd., Waterloo, Ontario.
 - R. Watt Machine Works, Ltd., Ridgeway, Ontario.
 - George White & Sons Co., Ltd., London, Ontario.
- United States
- Aultman & Taylor Machinery Co., Mansfield, Ohio.
 - Avery Company, Peoria, Illinois.
 - A. B. Baker Company, Swanton, Ohio.
 - Bantling Manufacturing Company, Toledo, Ohio.
 - Batavia Machine Company, Batavia, New York.
 - Buffalo Pitts Company, Buffalo, New York.
 - Cape Mfg. Co., Cape Girardeau, Missouri.
 - A. L. Case Threshing Machine Co., Racine, Wis.
 - Clark Machine Company, St. Johnsville, New York.
 - Ellis-Keystone Agricultural Works, Pottstown, Pennsylvania.
 - Emerson-Brantingham Co., Rockford, Illinois.
 - Farmers Independent Thresher Co., Springfield, Illinois.
 - A. B. Farquhar Co., York, Pennsylvania.
 - Frick Company, Waynesboro, Pennsylvania.
 - Harrison Machine Works, Belleville, Illinois.
 - Huber Mfg. Co., Marion, Ohio.
 - Keck-Gerberman Company, Mt. Vernon, Indiana.
 - Minneapolis Threshing Machine Co., Hopkins, Minnesota.
 - Port Huron Engine & Thresher Co., Port Huron, Michigan.
 - The Russell & Company, Massillon, Ohio.
 - Russell Wind Stackers Company, Indianapolis, Ind.
 - Sawyer-Massey Co., Ltd., (United States Agency), Moline, Illinois.
 - Swayne, Robinson & Co., Richmond, Indiana.
 - The Westinghouse Co., Schenectady, New York.

The Grain-Saving Device Originated with The Indiana Manufacturing Co., Indianapolis, Ind., Who Also Originated the Wind Stackers