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January 1939

## 3 Brand New Farmalls

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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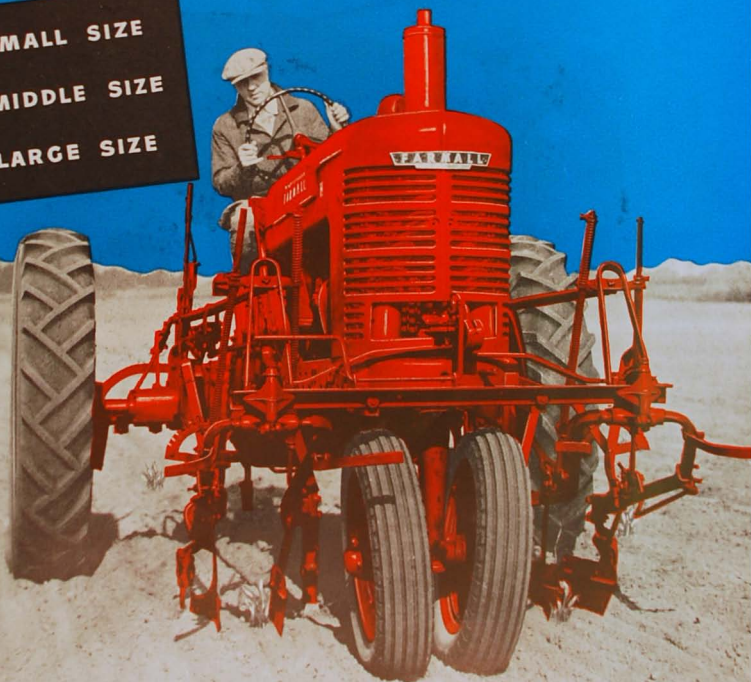
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# 3 BRAND NEW FARMALLS

- A** SMALL SIZE
- H** MIDDLE SIZE
- M** LARGE SIZE



THE NEW *Family* WITH A HALF-MILLION FARMALL ANCESTORS

# FARMALL FARMING

## WITH THESE 2 NEW POWERFUL



The Farmall-H with belt pulley and "Lift-All" pump. It is shown with 9.00-36-in. tires on the rear, 5.50-16-in. on the front. Farmall-H regular wheel equipment is with 51-in. diam., 6-in. rim, steel rear wheels with 4-in. spade lugs, and cast front wheels, 22½-in. diam., 3½-in. rim, with 2-in. high skid rings.

## MCCORMICK-DEERING FARMALL

H

Farmall farming marches on with the smooth-flowing, easy operating, economical power of these new Farmalls. Here are tractors whose quality is assured by the performance of half a million Farmalls in the field. They are the product of the same experienced engineers who built the first successful all-purpose tractor and its direct-connected machines—the same engineers who have kept Farmalls in the lead for seventeen years by constantly building in new values for the users' power dollars. The Farmall system of farming has made farm life easier, and far more profitable, for hundreds of thousands of farmers.

Farmall-H sets a new high for operating convenience, comfort, utility, and performance for all-purpose tractors in its class. Its almost finger-tip control, and its new, large, sponge-rubber upholstered seat make it a pleasure to drive. Its new transmission, with its four ideal working speeds and the "inches per hour" control made possible by the variable governor, gives a perfect gait for every field job. For traveling to and from fields, or on the highway, the rubber-tired Farmall-H has a snappy 16-mile high that is a real time saver. It is the tractor for that large group of farms known as "average."

# MARCHES ON

## ALL-PURPOSE TRACTORS

### McCORMICK-DEERING FARMALL

Farmall-M is like the Farmall-H in easy operation, comfort, and all those other refinements that go to make up a tractor that it is a delight to use. But it's a bigger tractor—a more powerful tractor for the man with larger acreages or who, because of more difficult soil conditions or for other reasons, needs more power. It will pull three 14 or 16-inch bottoms under harder than average soil conditions at good plowing speed. It will pull a 9-foot double disk harrow or other implements of similar draft requirements. It is a tractor that will handle four-row planters and cultivators, three and four-row middle busters and listers, two-row corn pickers. With belt pulley, it will operate the larger threshers, the larger hammer mills, etc. With power take-off attachment, it will haul and operate the mechanisms of the tractor binder, two-row potato

digger, and the Farmall mower. In a word, Farmall-M has what it takes to deliver satisfactory and economical power under any field conditions.

It is something worth remembering that when you choose a Farmall you choose a tractor for which you are sure to be able to get the machines you need for direct connection to the tractor to give you the full advantage of all-purpose tractor ownership. No other line has such a long list of field-proved auxiliary machines available. And the machines for Farmalls H and M are of the famous Farmall quick-attachable type—true time savers in every respect. In designing these Farmalls and machines, Harvester engineers have had the advantage of more than thirty-five years of tractor experience.



The Farmall-M, with belt pulley attachment. The tires are 10.00-36-in. rear, 6.00-16-in. front. Regular steel wheel equipment is with 51-in. diameter, 8-in. rim rear wheels, with 4-in. spade lugs, 22½-in. diameter, 4-in. rim front wheels, with 2-in. high skid rings.

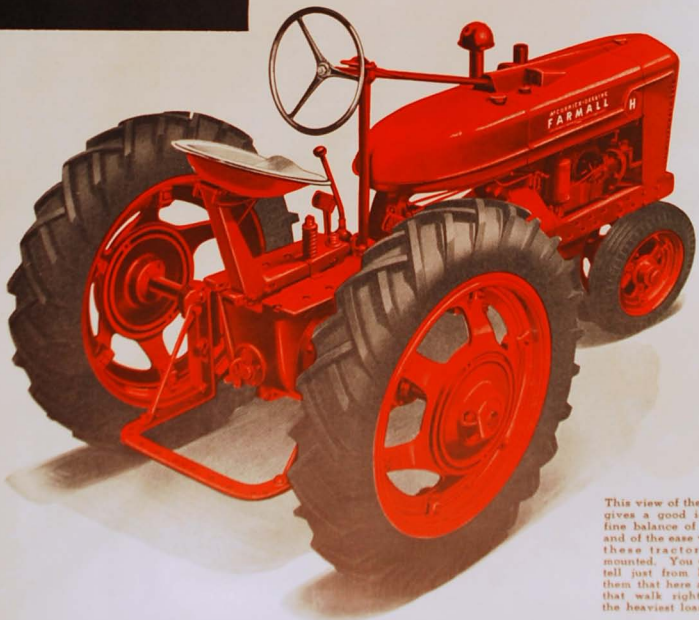


# New High Values IN UTILITY, BALANCE,

**BALANCED  
POWER**

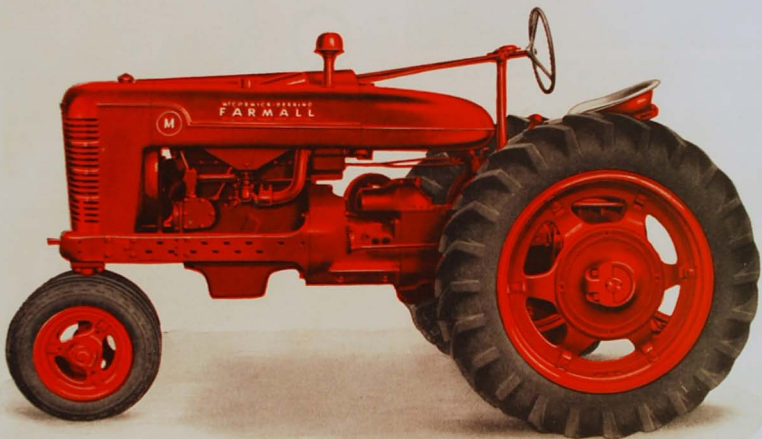
In Farmalls H and M, power and weight are balanced to give maximum pulling ability. That's balanced power. But balance in these tractors includes the manner in which utility, operating economy, riding comfort, the ability to stand up to hard work, and ease of control have been achieved in tractors that are good to look at.

Farmall quality has been maintained throughout. More than thirty ball and roller bearings reduce friction losses to a minimum and assure smooth transmission of the power of the engine to drive wheels, belt pulley, and power take-off. To keep harmful dust and grit out of their vitals, and to keep oil and grease in, nineteen spring-loaded rawhide dust and oil seals have been located at important points. The finest automotive steels have been used in gears, shafts and bearings.



This view of the Farmall-H gives a good idea of the fine balance of H and M, and of the ease with which these tractors can be mounted. You can almost tell just from looking at them that here are tractors that walk right off with the heaviest loads.

COMFORT, POWER AND OPERATING ECONOMY ....

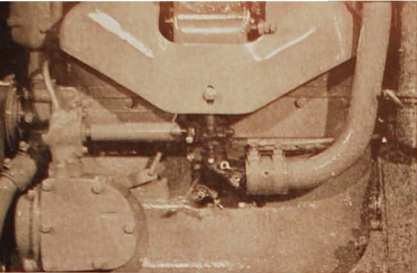


The sleek lines of Farmalls H and M are shown in this view of the left side of the Farmall-M on rubber. The wheel base of both tractors is 90 inches to make possible interchangeability of quick-attachable machines.

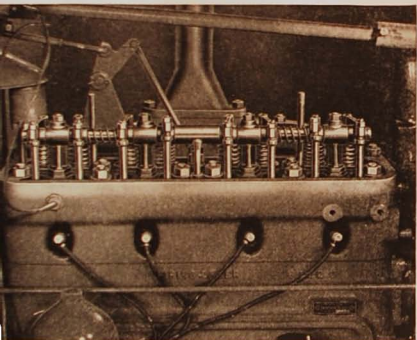
✓ **5 SPEEDS  
FORWARD**  
✓ **A NEW  
16-MILE  
HIGH ON  
RUBBER**

Steel-wheeled Farmall-H and Farmall-M have four ideal working speeds. When equipped with rubber tires there is a fifth speed of  $16\frac{3}{4}$  miles an hour. The working speeds are  $2\frac{5}{8}$ ,  $3\frac{3}{8}$ ,  $4\frac{1}{4}$ , and  $5\frac{1}{8}$ . With the variable governor control and the tractor in low gear, speeds of well under two miles an hour can be obtained for close, careful work in young and delicate crops. In any gear, the governor control gives a choice of speed up to the maximum in that gear with full open throttle when needed—there is no loss of drawbar pull due to slowing down the speed of the engine.

This wide choice of working speeds gives great flexibility of power—adapts the tractor exactly to the job that is being done. And when the tractor is mounted on rubber, as most of them are these days, that high speed of better than 16 miles an hour is a real time saver in getting to and from the fields or hauling a crop to town.



The Farmall engine from the left side showing manifold, manifold shield, heat control, and the location of the carburetor and variable governor.



The right side of the Farmall-M engine with the valve cover removed for inspection. It's easy to adjust the tappets on this engine.



Front of Farmall-M with grille removed to show the adjustable radiator shutter with which Farmalls H and M are equipped. The heat indicator is located in the top of the engine cover where the operator can see it from the seat.

# SMOOTH ECONOMICAL

OUT of the richness of thirty-five years of tractor-building experience, Harvester engineers have powered these new Farmalls with the finest 4-cylinder gasoline-distillate engines ever built. For they know that for smoothness of operation, fuel economy, and the ability to give long years of trouble-free service, the 4-cylinder engine makes the ideal farm tractor power unit.

Here are some of the features of these new engines:

**VALVES IN HEAD**  
**REMOVABLE CYLINDER SLEEVES**  
**TOCCO-HARDENED CRANKSHAFT**  
**PRECISION-TYPE BEARINGS**  
**FORCE-FEED LUBRICATION**  
**FLOTO OIL SCREEN**  
**LARGE AIR, OIL AND FUEL CLEANERS**  
**EXTRA LARGE FLYWHEELS**

Valves in head for easy adjustment and servicing, and more efficient handling of distillate or kerosene. Removable cylinder sleeves for economical replacement when cylinders become worn from long wear, or scored through accident—replacement makes the engine like new.

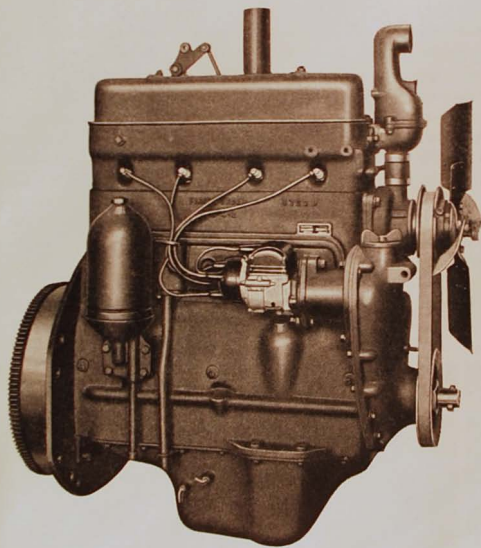
Tocco-hardening—a new electrical process that hardens and tempers the bearing surfaces of the crankshaft and greatly lengthens the life of shaft and bearings.

Precision-type bearings are self-adjusting, making replacement easy. Force feed lubrication, of course, means that oil is forced under pressure to all bearing surfaces. The Floto oil screen causes the supply to the pump to be taken from the top of the crankcase oil, thus supplying the engine with sediment-free oil. The large air cleaner is of the oil type and thoroughly removes dust and grit from the air going to the carburetor. The oil cleaner has a replaceable filtering element which makes it possible to use the oil twice as long without draining. The fuel strainer has a glass sediment bowl. The large flywheels enable these engines to deliver smooth, even power at any governed speed.

These features, plus the highest quality of precision workmanship and most rigid inspection, make Farmall engines the finest to be found in any tractor.

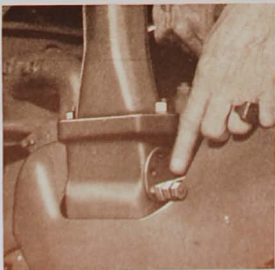
# 4-CYLINDER POWER

ON ANY TRACTOR FUEL

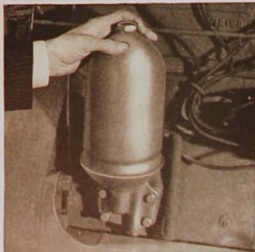


↑  
This is the sturdy 4-cylinder engine with which Farmall-M is equipped. Bore,  $3\frac{3}{8}$  inches; stroke,  $5\frac{1}{4}$ . The Farmall-H engine is similar in design with  $3\frac{1}{2}$ -in. bore,  $4\frac{1}{4}$ -in. stroke. The ring gear on the flywheel is part of the self-starter attachment.

→  
A close-up showing the adjustment for regulating the manifold heat.



The large oil-type air cleaner assures clean air to Farmall-H and M engines. The cap, which the demonstrator is holding in his left hand, prevents chaff and other coarse dirt from getting into the air cleaner.



The oil filter on the Farmall-M is extra large. Farmall oil filters are equipped with replaceable filtering elements. These make it possible to use the oil twice as long without draining and therefore saves the cost of replacing the elements many times over.



# Convenient Controls

## MAKE THESE NEW FARMALLS EASY TO DRIVE

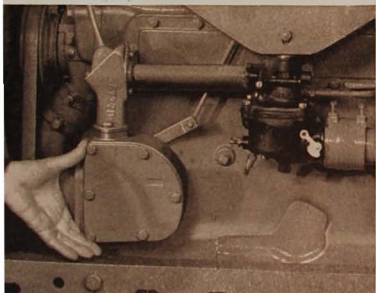
**W**HEN you slip into the large and comfortably cushioned seat of a Farmall-H or a Farmall-M and rest your hands on the large, automobile type steering wheel, right away you feel at home. As your left foot just naturally finds the clutch pedal and you put the tractor into gear you begin to get the feeling that here is a tractor that is as easy to drive as the family car. And as you give it the gas (gasoline, distillate or kerosene), and let in the clutch, you get the thrill which comes with the realization that here, under finger-tip control, is ready, eager power to romp through all your farm power jobs with satisfactory thoroughness, speed and economy.

When you hit rough ground you learn what it means to drive a tractor with irreversible worm steering

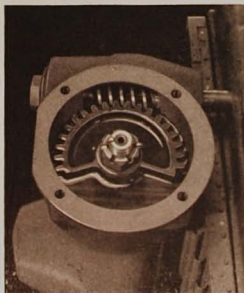
gear. Yet, while none of the shocks occasioned by the front wheels encountering humps or bumps are passed back to your arms, you find the tractor instantly responsive to the lightest touch.

Convenient to the right foot are two differential brake pedals. For making short turns to right or left these pedals can be used separately. For equal braking of both rear wheels they can be instantly locked together to operate as one brake. The brakes are external expanding bands acting on forged steel drums on the differential shafts.

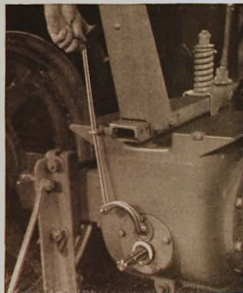
The large illustration at the right shows how conveniently the various controls are located. Note that the ball on the gear shift lever is right under the steering wheel, easy to reach and operate.



The variable governor. It gives a wide range of speeds in any gear, with full open throttle when needed—no loss of pulling ability.

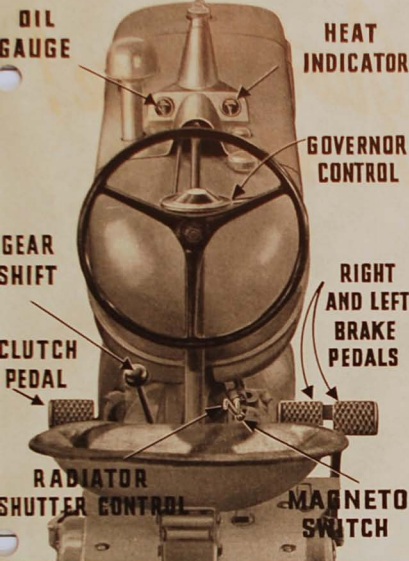


The worm steering gear gives finger-tip control and makes it easy to drive a Farmall all day.



The power take-off attachment and the easy means of control from the tractor seat to throw it into or out of gear.

**IF IT ISN'T A McCORMICK-DEERING, IT**



Also under the steering wheel is the little crank which opens and closes the radiator shutter to keep the engine at most efficient operating temperature. Right where you can't miss seeing them over the steering wheel are the oil gauge and the heat indicator to let you know if you let the crankcase oil get low, or forget to supply water to the cooling system, or in cold weather, that you did or didn't open the radiator shutter after the engine warmed up.

On the steering column is one of the most important controls, the governor control which enables you to adjust the speed of engine, and thereby, the speed of the tractor, to the job that is being done.

Another item which has a connection with convenient operation is the fuel tank capacity. The Farmall-H tank holds 17½ gallons, the M, 22 gallons. For average work, that is more than enough for a full day's run. The capacity of the gasoline starting tank is one gallon.

Other features which enter into the sum total that makes these new Farmalls so easy to use on any farm power job are treated separately on other pages of this catalog—the quick-attachable drawbar, the number of quick-attachable machines available and the ease with which they can be attached or detached, the manner of changing wheel treads for different crops, and the new "Lift-All" attachment. Read all about them.

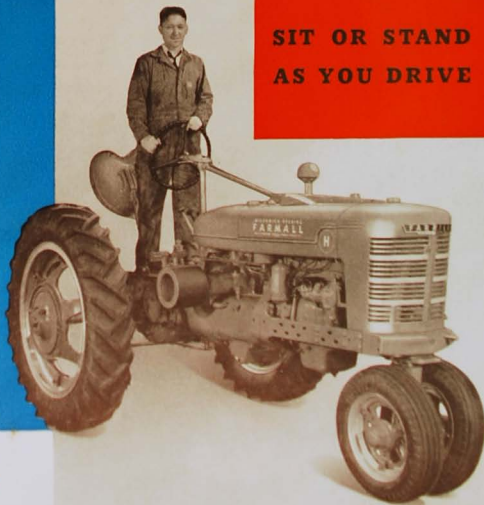


This view over the Farmall seat shows what the operator sees and can easily reach from the seat. Not shown, but also within reach, is the power take-off control. Men who have operated Farmalls H and M are enthusiastic about how easy these Farmalls are to handle.



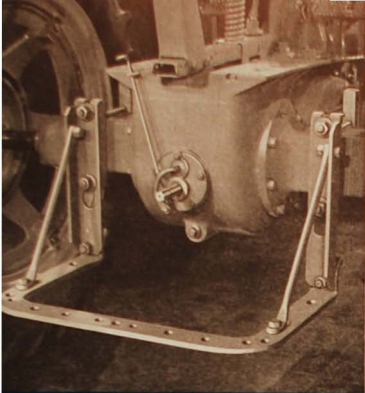
When the operator of a Farmall gets tired of sitting, he can tilt the seat up out of the way to give him comfortable standing room. A commodious platform gives him plenty of foot room.

**SIT OR STAND  
AS YOU DRIVE**



**ISN'T A FARMALL**

# Just a minute!



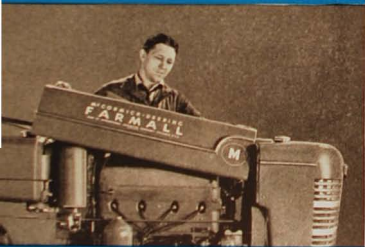
The quick-attachable drawbar with which Farmalls H and M are equipped. It can be removed or put back in less than a minute. The same principle is employed in Farmall direct-connected machines which attach to the rear of the tractor.

## TO REMOVE OR REPLACE THE QUICK-ATTACHABLE DRAWBAR

Four nuts to loosen, and off comes the quick-attachable drawbar! It can actually be done in forty-five seconds, off or on. And when it's on, and the four nuts tight, it's there to stay until the nuts are again loosened by the operator—a solid, integral part of the tractor.

This same quick-attachable feature is embodied in all the direct-connected Farmall-H and Farmall-M machines that attach to the rear of the tractors, and in the rear sections of machines that attach both front and rear. A long speed wrench is supplied which enables the operator to reach the nuts when standing behind machines. The average time for attaching or detaching machines is about five minutes. The mower attaches in less than two minutes, cultivators in six to eight.

Like the drawbar, when these machines are on the tractor they are on to stay—solid, sturdy, efficient machines built to do good work and stay in adjustment under all reasonable conditions.



The smooth Farmall lines have been obtained with no loss of accessibility. Simple hand latches enable the operator to remove the engine cover in a jiffy.

## TO REMOVE OR REPLACE ENGINE COVER OR RADIATOR GRILLE

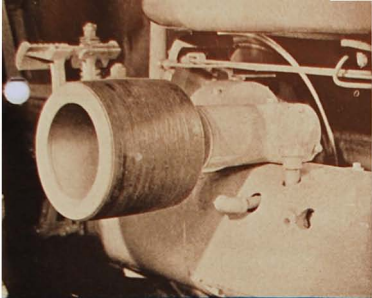
Everybody who has seen them agrees that these new Farmalls are good to look at. However, their sleek, modern lines were worked out at no sacrifice of utility or accessibility. As shown on this page, it's easy to remove the engine cover and radiator grille. Even greater facility of attaching and detaching machines has been obtained. Farmalls have always led in this respect, as they have in the number and adaptability of direct-attaching machines. That, by the way, is something worth remembering when in the market for an all-purpose tractor.



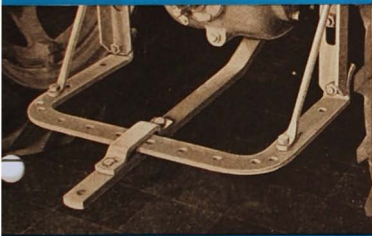
By applying a screw driver or a small coin to four grommets, the radiator grille is likewise easy to remove and replace.



# Farmall Accessories



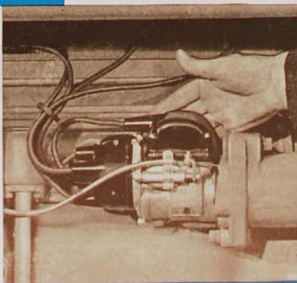
Belt pulley attachments for Farmalls H and M are available at a small additional cost.



The swinging drawbar is a desirable attachment when pulling trailing implements and when shorter turns are required than can be obtained with the regular drawbar.



Provision is made in the Farmall-H and M grilles for attaching this cultivator shifter lever for using Farmall shifting gang cultivators.



The lat, hot spark supplied by this IHC magneto is one of the reasons why these Farmalls are so easy to start.



This muffler attachment reduces the steady purr of the Farmall engine practically to a murmur.

FARMALLS H and M are regularly equipped to go out and do any of your ordinary drawbar work. Not all accessories are wanted by all purchasers of farm power, and no one wants to pay for equipment he does not need. For that reason, some of the accessories and special equipment are listed separately. Among this extra equipment are the belt pulley, the power take-off, lighting equipment, self-starter, and muffler attachment.

Other special equipment available includes swinging drawbar, an adjustable, wide front axle attachment (57 to 81 in. by 4-in. intervals), a single front wheel for working in narrow-spaced row crops, variable tread front wheels that can be set wide to run on lister ridges, 96-inch tread rear axle attachment (gives treads from 44 on the H or 52 on the M, up to 96 inches), weights in various combinations for pneumatic-tired front and rear wheels, special lugs for steel wheels. Special pistons can be supplied for tractors that are to be used in 5,000 and 8,000-foot altitudes.

Pneumatic tires available for Farmall-H are 5.50-16 front, and 8.25, 9.00 or 10.00-36 rear; for Farmall-M, 6.00-16 front, and 9.00, 10.00 or 11.25-36 rear.

A Farmall never gets tired. In rush seasons, when equipped with lights, it can be operated twenty-four hours a day.



# KEEP OUT AHEAD

WITH YOUR CHOICE OF THESE NEW FARMALLS

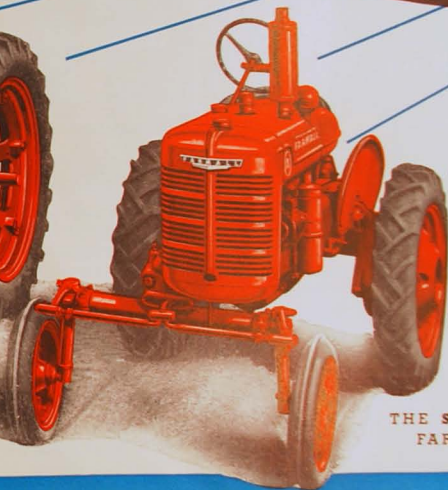
17 YEARS OF  
ALL-PURPOSE TRACTOR  
EXPERIENCE



THE BIG SIZE  
FARMALL-M



THE MIDDLE SIZE  
FARMALL-H



THE SMALL SIZE  
FARMALL-A

## FARMALL

## M

The tractor for farms of large acreage, or smaller farms where power requirements are heavier because of unusually stubborn soil or for other reasons. Also an ideal tractor for the man who likes to get in a lot of custom work, especially plowing and threshing. It handles the four-row cultivator anywhere, and has plenty of power for two-row potato diggers and two-row corn pickers where the going is tough.

## FARMALL

## H

Farmall-H fits that large group of farms in the "average size" group. It will pull two 14-inch bottoms under harder than average working conditions at better than four miles an hour. It is wonderfully economical in the use of fuel and is therefore a **11-1** cultivating tractor. It is especially suited to extra large farms where a number of tractors are required to keep different kinds of work going at the same time.

## FARMALL

## A

Farmall-A is the new size, **multi-visioned** tractor in the Farmall family. It is the tractor for farms that need the equivalent of two to four horses. It pulls a 16-inch bottom in average soil at  $4\frac{1}{4}$  miles an hour—5 to 7 acres a day. Machines available for direct attachment include the 16-inch plow, middle buster, corn and cotton planters, vegetable planter, a one-row cultivator for corn, cotton and similarly spaced crops, and a mower. Ask for catalog.

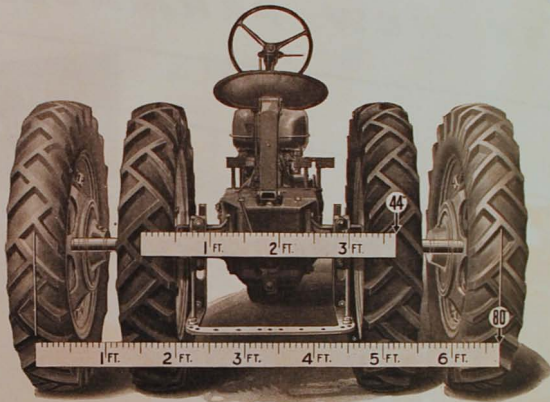
# ADJUSTABLE REAR WHEEL TREADS

44 TO 80 INCHES

ON FARMALL **H**

52 TO 88 INCHES

ON FARMALL **M**



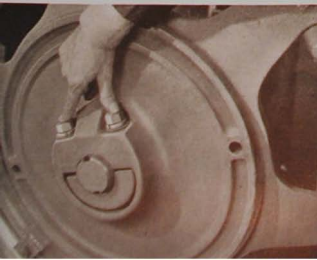
Rear view of Farmall-H showing minimum and maximum adjustments.

The adjustable rear wheel treads of Farmalls H and M make them readily adaptable to all kinds of field work. The new arrangement for loosening the wheels on the axles greatly simplifies adjustment. For example; the center of draft on two 16-inch bottoms is 22 inches from the furrow wall. By setting the rear wheels of the Farmall-H for approximately a 54-inch tread (rubber tired tractor), the tractor can be exactly accommodated to the center of draft of the plow. This lightens the load on the tractor and thereby reduces fuel costs, and makes an easy steering tractor.

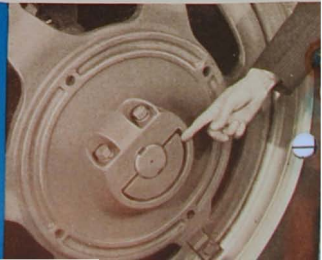
The same is true of Farmall-H with other size bottoms, and Farmall-M with three or four bottoms—that is, the wheel treads are readily adjustable to the size of the plow.

Of course, the primary reason for the adjustable tread is to adapt the tractors to work in row crops of all row spacings. With regular axles the treads are adjustable to all ordinary requirements. Where still wider treads are needed, the special 96-inch axles give adjustments from the regular minimum all the way up to 96 inches. Wide and adjustable front axle attachments further extend the adaptability to special requirements.

Don't forget the important advantage Farmall tractors possess in the number and variety of quick-attachable implements available for use with them.



Loosening the bolts indicated at left (there are two on each side of each hub) loosens the free portion of the hub, indicated at right, enabling the operator to slide the wheels in or out on the axles. When the bolts are again tightened, the wheels are held securely—they cannot work loose.



## FARMALL SPECIFICATIONS

Farmall-H and M tractors are equipped with combination manifold for burning distillate or gasoline, adjustable radiator shutter with heat indicator, variable governor throttle control, IHC magneto with automatic impulse coupling, oil bath air cleaner, absorption type oil filter with replaceable element, Floto oil screen, fuel strainer, foot-operated steering brakes, large sponge rubber upholstered seat, and quick-attachable drawbar.

See Page 11 for list of special equipment.

For specifications on Farmall-A, ask for Farmall-A catalog.

	Farmall-H	Farmall-M
Maximum Belt H.P. (on distillate).....	22	33
Maximum Drawbar H.P. (on distillate).....	18	27
Engine R.P.M.....	1650	1450
Governor controlled from seat for.....	1150-1650	950-1450
Bore of Cylinders and Stroke.....	3 $\frac{3}{8}$ by 4 $\frac{1}{4}$	3 $\frac{3}{8}$ by 5 $\frac{1}{4}$
Number of Cylinders.....	4	4
Replaceable Cylinder Sleeves.....	Yes	Yes
Fields Speeds M.P.H.....	2 $\frac{5}{8}$ , 3 $\frac{1}{2}$ , 4 $\frac{1}{4}$ & 5 $\frac{1}{8}$	2 $\frac{5}{8}$ , 3 $\frac{1}{2}$ , 4 $\frac{1}{4}$ & 5 $\frac{1}{8}$
High Speed, rubber-tired tractors only, M.P.H. (with variable governor).....	11 $\frac{1}{2}$ to 16 $\frac{3}{8}$	11 to 16 $\frac{3}{8}$
Reverse Speed.....	2 $\frac{3}{4}$	3 $\frac{1}{4}$
Drive Wheels, diameter and rim.....	51 by 6	51 by 8
Front Wheels, diameter and rim.....	22 $\frac{1}{2}$ by 3 $\frac{1}{2}$ in.	22 $\frac{1}{2}$ by 4 in.
Rear Wheel Tread.....	44 to 80 in.	52 to 88 in.
Tread Front Wheels, center to center.....	8 $\frac{3}{4}$ in.	9 $\frac{1}{2}$ in.
Wheelbase.....	90 in.	90 in.
Length over-all.....	126 $\frac{3}{4}$ in.	126 $\frac{3}{4}$ in.
Width over-all, minimum.....	78 in.	84 in.
Height to top of Steering Wheel.....	74 $\frac{1}{16}$ in.	76 in.
Turning Radius.....	8 ft. 4 $\frac{1}{2}$ in. (44-in. tread)	8 ft. 5 $\frac{1}{2}$ in. (52-in. tread)
Cooling System.....	Closed-type, flat-tube radiator with water pump circulation. Adjustable radiator shutter with heat in- dicator.	Closed-type, flat-tube radiator with water pump circulation. Adjustable radiator shutter with heat in- dicator.
Capacity Cooling System.....	4 gals.	6 gals.
Capacity Fuel Tank.....	17 $\frac{1}{2}$ gals.	22 gals.
Capacity Gasoline Starting Tank.....	1 gal.	1 gal.
Lubrication.....	Force Feed	Force Feed
Clutch.....	10 in., single plate, spring-loaded	11 in., single plate, spring-loaded
Steering (18-in. wheel).....	Worm Gear, enclosed	Worm Gear, enclosed
Drawbar, vertical adjustment.....	6 in.	6 in.
Drawbar, lateral adjustment.....	26 in.	26 in.
Belt Pulley (special), diameter and face.....	9 $\frac{3}{4}$ by 7 $\frac{1}{2}$ in.	11 by 7 $\frac{1}{2}$ in.
Belt Pulley R.P.M.....	1019	898
Belt Speed, feet per minute.....	2601	2587
Power Take-off (special) R.P.M.....	540	537
Approximate Shipping Weight (on steel wheels)	2700 lb.	3495 lb.



# Lift-All

...SOMETHING ABSOLUTELY  
NEW IN HYDRAULIC POWER LIFTS

**F**OR years, power lifts of various types have been saving time and backaches for tractor operators by using the power of the engine to raise and lower plows, middle busters, planters, cultivators, beet pullers, and various other tractor-mounted implements. Now, for the first time, a device is available which not only will raise or lower the entire implement but also will:

1. Lift the front section of the implement before the rear section is raised.
2. Lift either side of the implement independently of the other side.
3. Lift and hold the implement to any desired intermediate working depth.

Here is a new McCormick-Deering "Lift-All," which does all these things—yet is extremely simple and foolproof in every respect. It makes use of hydraulic pressure in a new way. The pump, or power plant of the "Lift-All" is operated from the front end of the power take-off shaft of the new Farmall-H and M tractors. It forces oil through flexible tubes into cylinders which lift the various parts of the implement, or, if desired, the entire implement.

When operating a cultivator, with front and rear sections, for example, and you reach the end of the row, you simply pull a control rod which causes the pump to force oil into the cylinders which lift the front gangs. The rear section rises automatically at approximately the point where the front shovels came out. This is accomplished by a special delayed-action valve which prevents oil from entering the rear-section cylin-

inder until the rear shovels have moved forward to where the front shovels were raised.

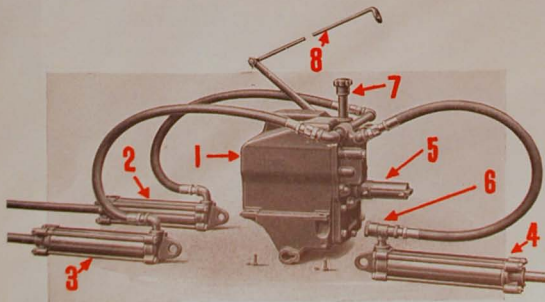
Likewise, in starting on succeeding rows, you can lower the front gangs before the rear. Cleaner cultivation at ends of field will result in increased crop production, which alone will quickly pay the small cost of the "Lift-All."

This automatic delayed lift of the rear section is also a big advantage on other machines, especially on the M-7 three-row middle buster, which has one bottom in front of each drive wheel and a rear bottom.

Raising and lowering are controlled by a single control rod within easy reach. In raising the implement, you pull the rod and let go. The pressure returns the rod to neutral position after the implement has been raised. Valve check balls in the pump hold the oil in the cylinders—and the implement in raised position—without strain on any of the pump parts. These check balls will hold the implement up indefinitely.

The ability of the "Lift-All" to lift one side of an implement before the other now makes it possible to cultivate "point" rows right up to the end of each row. This is accomplished with only two hydraulic cylin-

At the left is shown the "Lift-All" power plant and three lifting cylinders. "1" is the pump. "2" is the cylinder for raising the right side of any implement. "3," the cylinder for raising the left side. "4" is the rear cylinder, controlled by the delayed-action valve "6," to let the rear end of an implement stay in working position till it reaches the point where front section was raised. "5" connects with the power take-off drive. "7" is the oil inlet. "8" is the control rod which extends to within easy reach from the seat.





ders—one on each side. In approaching the end of a "point" row, you simply flip a lever on the side you want to keep in working position. At the end of the row you just open the valve and pull the master control rod and up comes that side. This feature saves time wherever there are "point" rows resulting from irregularly shaped fields or from lanes, brooks, railways, highways, or similarly bordered fields. This selective lift of either side is also used on the two-way plow.

The flexibility of the "Lift-All" is one of the reasons for its name. If your land is hilly, or if there are occasional wet spots that cause slippage, the "Lift-All" quickly adjusts the depth of the implement to ease up on the tractor. Depth control with a power lift has never before been available. The first pull on the control rod of the "Lift-All" starts the implement up immediately, and it can be stopped instantaneously at any desired point simply by shifting the control rod into neutral position.

The "Lift-All" pump tucks away in the tractor main frame out of the way. It is a complete unit and can be easily installed or removed. Being driven from the front end of the power take-off drive, the rear of the shaft is left free for operating a mower, harvesting machine, or any other power take-off machine.

The hydraulic cylinders are interchangeable on the various Farmall implements and are quick-attachable. One, two, or three cylinders are used, according to the job to be done. They can be attached or detached in two minutes or less.

The "Lift-All" is especially helpful on farms where a variety of crops are grown and cultivating, planting, and mowing are done at the same time of year. The front section of the cultivator can be used in conjunction with a rear-mounted planter. A front-mounted fertilizer attachment, used with the front section of a cultivator, can be used at the same time a rear-mounted planter is used.

The cylinders are single-acting and leakproof.

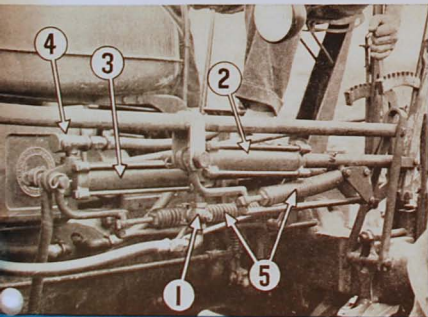
The more you know about the "Lift-All," the better you will like it. It saves time. It saves backaches. Once you sit in the seat of a new Farmall-H or M and operate the "Lift-All" control, you will agree that here, truly, is "Something New and Better in a Lift."



Entering a cornfield with two-row cultivator equipped with "Lift-All." Note that the "Lift-All" is holding the rear section out till the shovels reach the point where the front shovels entered the ground.



Coming out at the end of the row. The delayed valve action has left the rear shovels in the ground to come out when they reach the end of the row. This means clean cultivation clear up to the ends of the rows.



This shows the "Lift-All" applied to a two-row cultivator. The pump is located in the tractor main frame, out of the way. "2" is the cylinder on the left front section lift pipe. "3" the rear lift cylinder. "4" the delayed-lift valve. "1" and "5" are gang pressure springs on the cultivator.



The selective lift is used here on point rows to raise the right side of the cultivator, leaving the left side down till it reaches the end of its row. This selective feature of the "Lift-All" is a big advantage in other ways, for example when using a fertilizer attachment on the front and a planter on the rear.

**DEEP MELLOW**

# *Seed Beds*

**WITH FARMALL  
POWER**



This shows the H-86 two-way plow. It is built only for use with the "Lift-All," which raises or lowers each bottom independently, or adjusts the depth, with the touch of a simple control.



Farmall-M pulling three 14-in. bottoms. With this size plow, Farmall-M will plow up to 18 acres a day.



Farmall-H will pull a 7-foot, Farmall-M a 9-foot double disk harrow under harder than average conditions.

Farmalls H and M are real plowing tractors. The Farmall owner has control of the time of planting—even in a late season he has time to get his acres plowed, disked and pulverized on time. If necessary, he works the tractor by night, for a Farmall never gets tired, never gets sore shoulders, never lags.

Farmall-H will handle two 14 or 16-inch bottoms at  $3\frac{1}{2}$  to 5 miles an hour—8 to 12 acres in a 10-hour day. Farmall-M will pull three 14 or 16-inch bottoms—plow 12 to 18 acres in harder than average soils in 10 hours.

Plows available for quick-attachment to these tractors are the H-86 two-way plow for the Farmall-H, and the HM-149 disk plows in 2 and 3-furrow for the H and M. There is also an extra heavy two-way plow, No. M-188, for the Farmall-M. Both the H-86 and the M-188 are designed only for use in connection with the "Lift-All," which is available as a tractor attachment.

McCormick-Deering trailing plows adapted to use with the new Farmalls are the Little Wonder in 1 and 2-furrow sizes, the Little Genius in 2, 3 and 4-furrow, the 18-inch Little Genius in 1 and 2-furrow, and disk plows in standard sizes.

The wide speed range of the new Farmalls is an especial advantage in seedbed work, as they enable the operator to use the same implements under a wide variety of conditions without ever subjecting the tractors to overloading.

For full information on McCormick-Deering plows and tillage tools, ask for special catalogs.





The Farmall-M with M-11 four-row middle buster. It is equipped with 14-in. bottoms. The M-11 is a combination three and four-row implement. A four-row planting attachment can be supplied. Rubber tires on the buster are supplied on special order.

Middle busters for the Farmalls H and M are the H-7 two-row and H-9 two-row for the H, and the M-10 two and four-row, M-7 three-row, and the M-11, which can be used for flat listing three rows or as a four-row lister or buster.

The H-7 is a split-row buster, the two bottoms being mounted on the front of the tractor ahead of the tractor drive wheels. This arrangement assures good traction. The M-7 is similar to the H-7, with the addition of a third bottom which is mounted in the rear. The delayed lift of the new "Lift-All" attachment leaves the center bottom in the ground until it reaches the point where the front bottoms come out.

FARMALL

# Middle-Busters

The H-9, M-10 and M-11 busters are all of the tool-bar type and therefore, with various equipment available, can be adapted to the different operations right up to picking time—busting middles, running middles, planting or listing. The H-9 can be used with two bottoms or three sweeps. The H-10 is primarily a two-row buster, but can be used with three or four bottoms where draft conditions permit. The tool bar takes two or four planting units.

The M-11 is an exceptionally heavy implement, and adapted to work in hard ground.

These busters are all of the quick-attachable type—only a few minutes required to attach or detach. They are all built with a new type of rear stabilizer which, while giving the implements complete freedom vertically, holds them rigidly in line laterally. They are also all adapted to use with the "Lift-All" attachment.



Farmall-H with H-9 two-row tool-bar middle buster. It will bust from 22 to 27 acres a day. A very simple implement that can be adapted to various kinds of work.



Farmall-H with H-7 two-row front attaching middle buster. It is a skip-row buster notable for building uniform beds. Drive wheels run in furrows—always have good traction.



The Farmall-M with M-7 three-row buster. It is like the H-7 with a center bottom on the rear of the tractor. Equipment available includes coulters, disk attachment, etc.

# FARMALL H AND M

## Planters

Planters for Farmalls H and M cover every planting requirement on the row-crop farm. There is the two-row corn planter shown above, which needs no introduction, being an adaptation of the well-known McCormick-Deering "100" Series planters and of the No. 110 planter which has become so popular for use with Farmall tractors. It can be supplied as a checkrow or drill planter.

For the South and Southwest there are two- and four-row cotton and corn planters and listers. There are attachments for the tool-bar middle busters—two-row for the H-9 and H-10 and four-row attachments



The HM-110 two-row checkrow planter shown here on the Farmall-A can be supplied for Farmalls H and M in the quick-attachable type. It can also be supplied as the HM-111 two-row drill.

for the M-10 and M-11 middle busters. Then there are the HM-70-A two-row variable-drop corn listers, HM-70-B loose ground two-row corn listers, HM-71-A two-row cotton and corn listers and loose-ground listers, and the HM-71-C two-row cotton and corn planter.

M-57 is a four-row cotton and corn planter for planting on beds. It is an adaptation of the FA-57 which has been a popular planter in Mississippi, Arkansas, and other sections.



The planter shown above can be supplied as shown, or as the two-row cotton and corn planting attachment for the H-9 tool-bar middle buster. It can also be supplied as a lister or a loose-ground lister.



This is the M-57 four-row cotton and corn planter. Hoppers are combination single seed cotton and flat-drop corn. Equipment available includes, special plates for kafir corn, and other sorghums, peanut attachments, etc.





Farmall-M with M-420 four-row cultivator in Georgia cotton. This is a rugged cultivator that will do clean, thorough work in corn or cotton at the rate of 50 to 65 acres a day.

Cultivators for Farmalls H and M are the HM-221 and HM-229 in two-row, the M-420 four-row for corn, cotton and similarly spaced crops, and HM-430 and HM-630 four and six-row beet and bean cultivators.

The HM-221 is a quick-attachable cultivator especially adapted to work in checkrowed crops, having the well-known Farmall shifting gang feature which enables the operator, just by turning the steering wheel, to guide the tractor and at the same time shift the gangs sidewise to give him double-quick dodging ability. As commonly equipped, there is a front and

a rear section, the front section carrying the shovels next to the rows.

The HM-229 is a pendulum gang cultivator, also with the shifting gang feature. It is considered regular with all the shovels on the front, and when so equipped is especially suited to hilly or rolling ground.

The M-420 is ideal for large acreages of corn or cotton. Shovel equipment is optional on these cultivators, and various gang arrangements are available.

The beet and bean cultivators are the double tool bar type, and any desired arrangement of ground working tools can be obtained for cultivating four rows 18 to 30 inches apart, or six rows 18 to 22 inches apart. Any of the standard ground working tools are available.



The Farmall-M with HM-221 cultivator in tall corn. It will cultivate corn like this at a speed of four to five miles an hour—28 to 35 acres a day, and do a clean, thorough job. It's a pleasure to use this cultivator, especially when the tractor is equipped with the new "Lift-All" attachment.



This is the Farmall-H with HM-221 cultivator in soybeans. For cultivating beans in narrower rows, or beets, a tool-bar attachment can be supplied. It takes any of the standard beet and bean tools—duck feet, knife and disk weeder, deer tongues, diamond points, etc.

# Cultivating

## WITH FARMALLS H AND M



The Farmall-H with Farmall 7-foot, quick-attachable mower. It will cut from 20 to 30 acres a day.

# Making Hay

WITH FARMALLS **H** and **M**

**M**AKE hay while the sun shines is an old rule easy to follow when the Farmall supplies the power. The Farmall cuts the grass, rakes, teds, pulls the loader, and will haul it to stack or mow.

When the weather is uncertain, and you would ordinarily cut and store a little dab at a time, the speed with which Farmall power enables you to get things done makes it possible to get your hay in several times as fast, and when the hay is right. You not only save time but from one year to another you will have better hay because of the timeliness of the different operations and the fact that you do not have to take risks by putting the hay up before it is properly cured, or when it is damp.

The Farmall mower cuts a 7-foot swath. It can be attached to the tractor in a few minutes. The cutter

bar is driven by the power take-off, which is ideally located for this purpose. It is a high-grade mower in every respect, with the same cutter bar as all other McCormick-Deering mowers. The gears run in oil. A safety feature is provided so that if the cutter bar strikes a stump or rock it lets loose and swings back, thus preventing breakage. A slip clutch in the power take-off connection prevents damage if any hard object gets caught in the knife.

## Other Farmall Machines

A one-row corn picker is available for the Farmall-H, a two-row for the Farmall-M. These pickers make corn harvest a matter of days instead of weeks. One man with a one-row will husk 8 to 10 acres a day; with a two-row a man and one or more haulers, according to the length of the haul, can husk and crib 16 to 18 acres a day. Farmall pickers get the down and leaning stalks, and they get the nubbins. Further information can be obtained by asking for McCormick-Deering corn picker catalog.

Another implement is the two-row HM-6 beet puller. It is the same as the No. 6 puller with which Farmall users in the beet sections are already familiar. It can be attached to the tractor in a very few minutes. It is built for use with tractors equipped with "Lift-All" attachment.

*Buy machines  
when you  
need them —*

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TO FIT THE PAYMENTS TO  
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Today that policy, in the form of the **INCOME-PURCHASE PLAN**, reaches a new high point of usefulness to the customer. Under the **INCOME-PURCHASE PLAN** you, the purchaser, suggest the schedule of payments you can most conveniently meet. Payments are scaled and spaced to coincide with your seasonal cash income. Former hard-and-fast "fall due dates" have been done away with. You contract to pay what you can when you can. Your purchase receives individual consideration and in every way possible the settlement is made to suit your circumstances.

The adaptation of each pur-

chaser's payments to his own marketing program for the year enables him to pay in such amounts and at such intervals as he knows in advance he conveniently can. If he is getting hogs, or lambs, or steers ready for market he knows approximately when he will ship them and can estimate how much of the proceeds he will apply on his obligation. If he is raising wheat, or soybeans, or fruit, or potatoes he can estimate his income from these sources and figure on applying a portion of it as the cash comes to hand. If he enjoys a relatively steady income from the sale of poultry or dairy products he undoubtedly would want to arrange monthly payments of equal or varying amounts. The flexibility of the plan is such that it can be accommodated to virtually any marketing schedule.

Pay cash on delivery when you can. But when cash must be conserved you can still get the full benefit of the equipment you need by buying it under the individualized **INCOME-PURCHASE PLAN** offered by International Harvester and by an increasing number of local banks.

## **PERMANENCE**

Practically every farming community in the land is served by a well-established McCormick-Deering dealer. His repair stocks and service are backed by an established International Harvester branch house not far from his store.

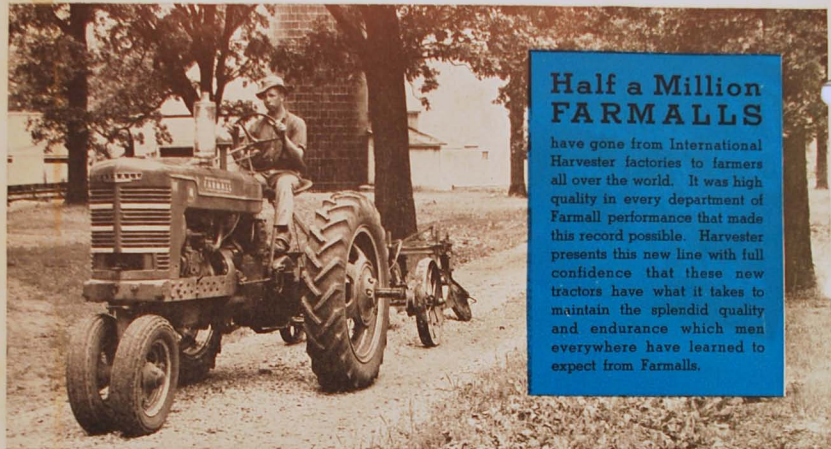
McCormick-Deering dealers' repair bins are stocked with genuine IHC repair parts. Thousands of these dealers maintain completely equipped service stations, offering factory-standard service on all International Harvester equipment. Additional service stations are being established all the time.

As a direct result, McCormick-Deering service is better today than it ever has been. The resources and reputation of the Harvester Company are your assurance that McCormick-Deering service always will be available.

Keep this superior service in mind when you select new power and equipment with which to reduce your crop production costs. Invest in time-tested machines backed by the quick, convenient service rendered by the International Harvester branch and the McCormick-Deering dealer in your community.







## Half a Million FARMALLS

have gone from International Harvester factories to farmers all over the world. It was high quality in every department of Farmall performance that made this record possible. Harvester presents this new line with full confidence that these new tractors have what it takes to maintain the splendid quality and endurance which men everywhere have learned to expect from Farmalls.

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