

THE AGRICULTURAL TRACTOR

1855 • 1950

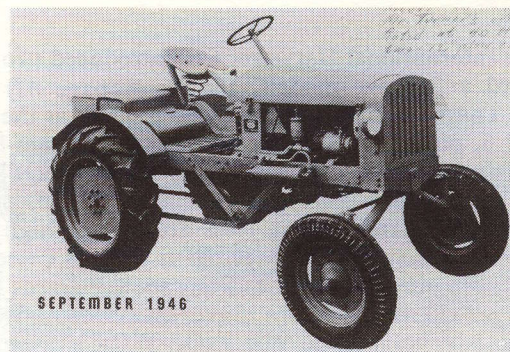


Compiled by
R.B. Gray

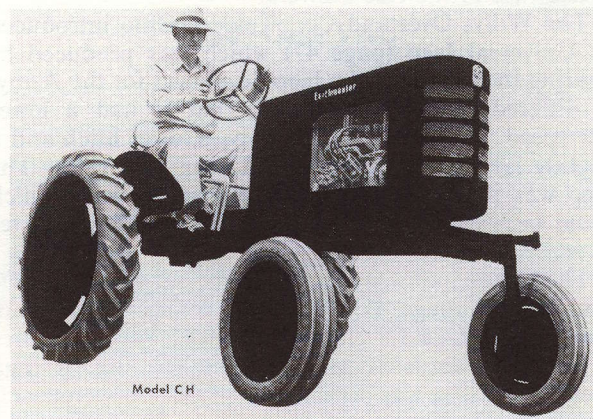
Ferguson, Inc. continued to distribute the Ferguson. The Ford Motor Co. powered its tractors with its own 4-cylinder engine, and made use of the 3-point suspension and the hydraulic system, in principle, the same as the original Ferguson system. The treads of both front and rear wheels were adjustable. Under a written agreement the manufacture of the Ford tractor with Ferguson system by the Ford Co. for Harry Ferguson was continued until June 30, 1947.

The Earthmaster Farm Equipment Co., Hollydale, Calif. put out a Model C series 1 to 2 plow general-purpose tractor. The outstanding feature was the "Duomatic" hydraulic control or so-called effortless implement handling. It was claimed that 9 speeds forward were possible with the company's 3 transmission ratios and 3 throttle settings. The Model C had 20 in. clearance while Model CH (page 48) had 24 1/2 in. Adjustments for altering clearance, wheel base and tread were also claimed.

The Leader Tractor Mfg. Co., Chagrin Falls, Ohio produced its Leader (page 48) which was powered with a Hercules 35 hp. engine. This tractor featured a hydraulic lift and power take-off. A clearance of 21 in. was provided and forward speeds up to 13 mi. per hour.

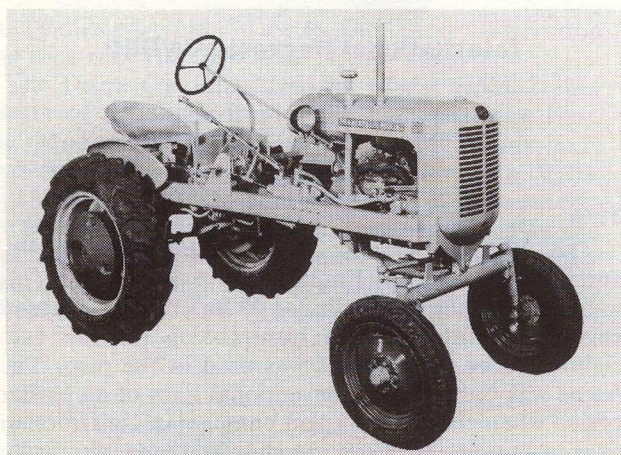


Empire 90

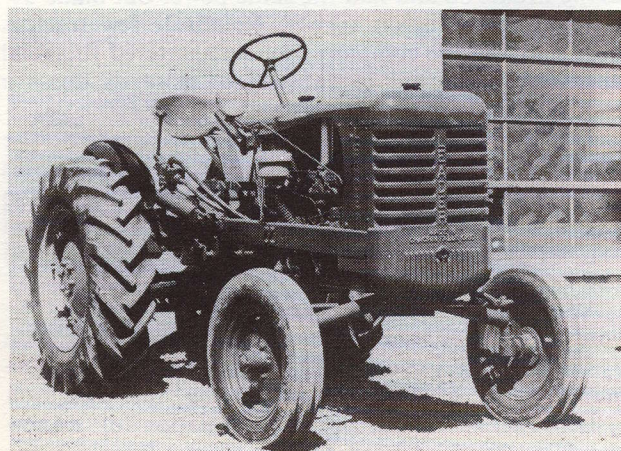


Earthmaster CH

Some 1946 Models



Minneapolis-Moline-Avery V



Leader

1947

The Cockshutt Plow Co. of Brantford, Ontario, Canada developed for their tractors a continuous running power take-off which continued to operate when the clutch was released. This was an important innovation as heretofore machinery operated by the regular p.t.o. would stop upon release of the clutch, such as sprayers and small combines so driven. Because of the importance of this development it was not long until many U. S. manufacturers fitted their tractors with a similar mechanism.

The John Deere Co. presented its Model M (page 49) a general-purpose tractor powered with a 2-cylinder vertical engine — a departure from their customary 2-cylinder twin horizontal engines. The M was of two plow capacity and featured "quik-tach" to give ease in attaching drawn implements. The tread could be varied from 36 to 42 in. and 4 speeds from 1-5/8 to 12 mi. per hr. were provided. This same year another new feature "Roll-O-Matic" was introduced on the tricycle model and consisted of a mechanism which equalized the load on both front wheels and cut in half the up-and-down movement on the front end of the tractor. Either wheel would ride over an obstruction while the other hugged the ground. The slightest up-and-down movement of one wheel was immediately transferred through gears to the other wheel thereby automatically equalizing the load on both front wheels. It was claimed this made steering and riding much easier on the operator.

The new Ford Tractor Model 8N (page 49) was introduced. New features included a mounted implement control system as a part of the hydraulic controls, a 4-speed constant mesh helical gear trans-

mission, new brakes and steering gear, and a new safety starter. Horsepower as tested at Nebraska in 1948 was 22.76 - 26.42.

The Oliver Corporation's Cletrac Model HG track-layer (page 49) for use in row crops appeared. Four tread widths were available — standard 42 in. and specials 31, 60 and 68 in. and a 20 in. clearance. This was powered by a 4-cylinder engine delivering 22 belt hp. and 18 drawbar hp. and had 3 forward speeds - 2.01 - 5.24 mph. Steering was by planetary gears.

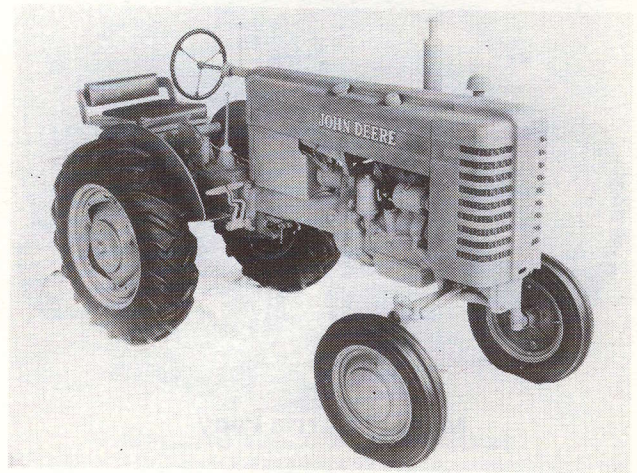
Production started on the Allis-Chalmers HD 19 (page 49) crawler tractor which featured the use of a torque converter. This was a great step forward in performance although it was not accomplished by other manufacturers for many years. It was claimed this was the world's largest and most powerful tractor and was powered with a 6-cylinder 2-cycle diesel engine. As tested at Nebraska the weight was 40,395 lbs. and the maximum drawbar horsepower was 118. The tread was 84 in. with a 106 in. length of track on the ground.

The Massey-Harris Co. put out six new models in five power ranges — Model 20 of 1 plow size and powered with a 4-cylinder engine, designed for auxiliary power on the larger farms; Model 30 with a 4-cylinder engine but of 2 plow capacity and adaptable for row crops; Model 44 also with 4-cylinders but of 3 plow capacity; Model 44-6 a 3 plow row-crop tractor; Model 55 a heavier tractor with 4-5 plow capacity and designed for big jobs; and the Pony (page 50) a 1 plow tractor with high compression (6.5 to 1) engine and adjustable treads for both front and rear wheels. All row crop models were tricycle, two wheels in front close together. All models except Model 20 were factory equipped with "Velvet Ride", a seat designed to do "for the tractor what the shock absorber did for the automobile".

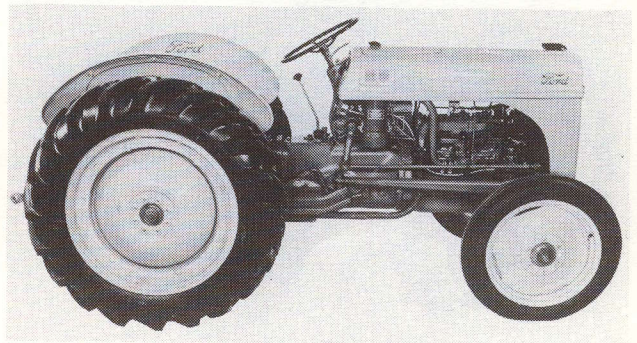
The International Harvester Co. added to their line a row crop tractor — the Farmall Super A (see page 000) which had either a 4 cylinder gasoline or distillate engine and adjustable front and rear axles. It was fitted with "touch control" which permitted raising or lowering implements by a touch of the control levers.

The smallest tractor of the International Harvester Co. line, the Cub, (page 50) of the culti-vision type was offered to the trade. Capable of pulling one 12 in. plow it was fitted with other equipment such as cultivator, planters, etc. to round out its usefulness. It was fitted with a high tension magneto and electric starting and lighting equipment was special.

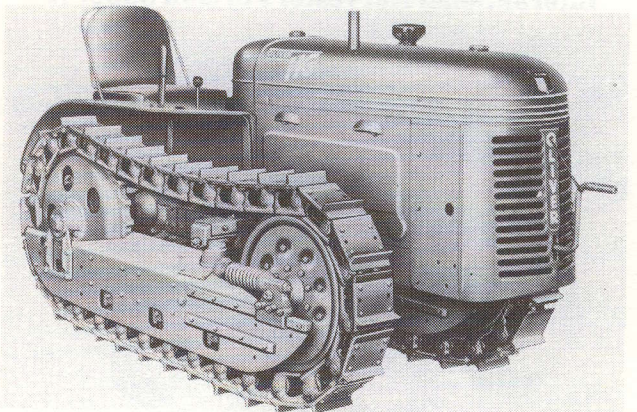
The International Harvester Co. added the TD-24 diesel crawler (page 50) to its line. It was powered with a 6-cylinder engine and as Nebraska tested it weighed 42,211 lbs., with maximum drawbar h.p. 161, being still larger than the Allis-Chalmers HD 19 recently announced. By means of a suitable mechanism the motor was started as a gasoline engine with an electric starter, when the compression was released and spark plugs in an auxiliary combustion chamber were energized. After having attained a speed of about 100 r.p.m. the changeover lever was moved to running position. This caused the auxiliary combustion chamber to close, spark ignition to be shut off, compression to be increased to 15 to 1 ratio and diesel fuel injected for normal diesel operation.



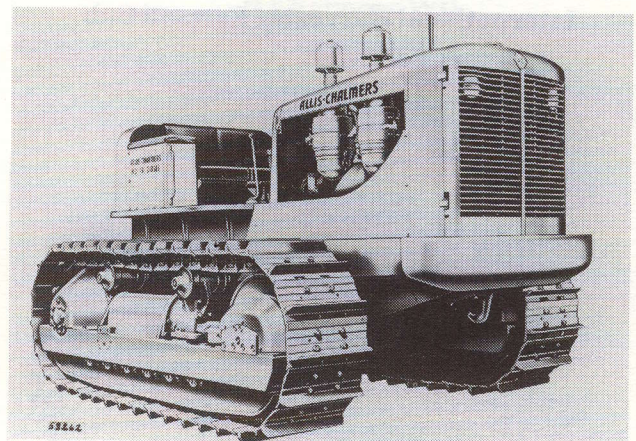
Deere M



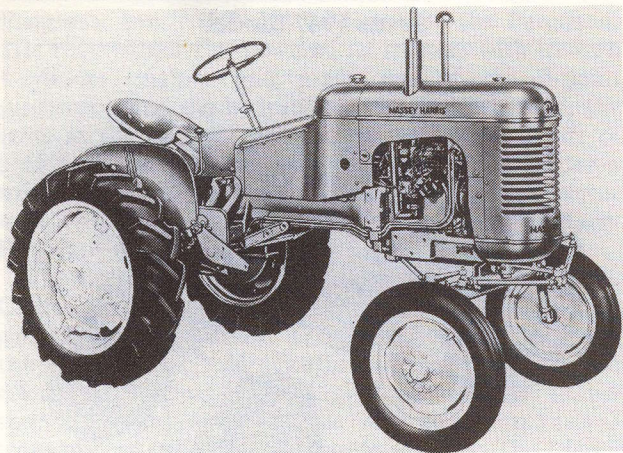
Ford 8N



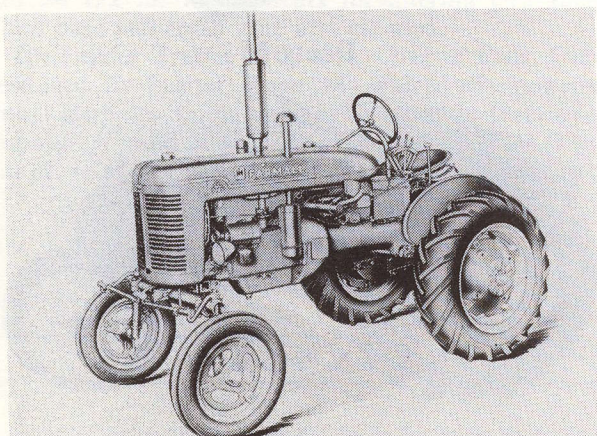
Oliver HG



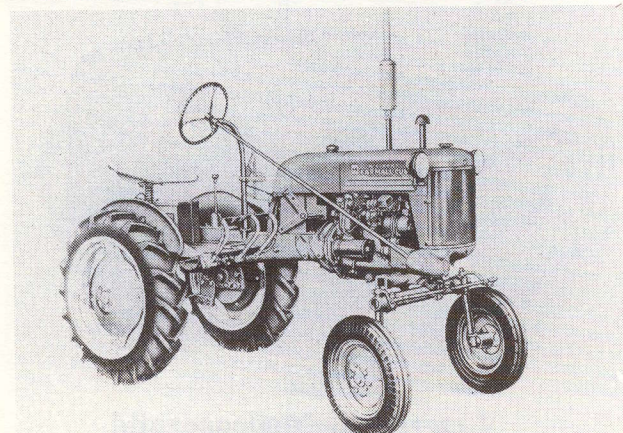
Allis-Chalmers HD 19



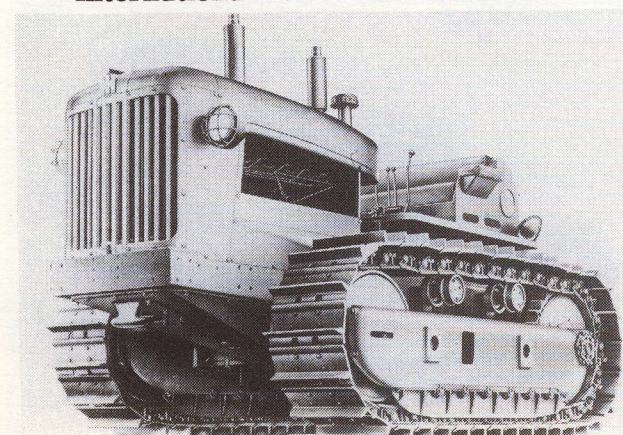
Massey Harris Pony



International Harvester Farmall Super A



International Harvester Farmall Cub



International Diesel TD-24

1948

Tractor production this year reached an all time peak when 753,623 units were produced - 529,587 wheel type, 184,624 garden tractors, both riding and walking, and 39,412 track type. Of this total production some 15,000 units, or about 2 percent were exported to ECA countries.

The Allis-Chalmers Co. at the Gladsden, Ala. plant offered its Model G tractor (page 52) with one 12 in. plow capacity. The 4 cylinder engine was located in the rear and provisions made for attaching the implements ahead of the operator. The tubular open frame construction served as a mounting place for the master tool carrier to which the various tools were attached. The high arch of the frame provided the necessary clearance for attaching these tools; a bucket seat was provided between front and rear wheels.

The Allis-Chalmers Model WD (page 51) with several innovations was introduced: the power of the engine was used to adjust the rear wheel treads by spiral bars on the rim to 10 different spacings; two clutches were provided which permitted continuous operation of the power take-off and hydraulic system, independent of tractor motion; and hydraulic control of mounted and pulled implements. The tractor was of the general-purpose type built around a frame of straight steel channels. When desirable to change the front end, the adjustable front axle can be converted into a single or dual front wheel style.

The first Ferguson tractor, Model TO 20, (page 51) was produced at the new Ferguson Park plant in Detroit. It was powered with a 4-cylinder Continental engine having a 6.1 to 1 compression ratio with 16.33 - 22.53 hp. as Nebraska tested. The wheel treads were adjustable and 4 forward speeds from 2.48 to 13.13 m.p.h. were provided. A safety feature was incorporated such that the starter would not operate when the machine was in gear.

The General Tractor Co. of Seattle, Wash. entered the tractor field with its Westrac track type tractor (page 51). It was powered with a 24 B.H.P. Waukesha or 29 B.H.P. Hercules engine. Final drive was effected with a heavy duty worm, and planetary type steering was used.

The Intercontinental Mfg. Co., Grand Prairie, (near Dallas) Texas also entered the field with the Model C-26 (page 52) of 3 plow capacity. The unit was powered with a 4-cylinder Continental Red Seal engine and was of the tricycle type, adjustable rear wheel tread and two narrow spaced wheels in front. Hydraulic controls, p.t.o., and electric starting and lighting were provided.

The Cimco, Model PH 31 (formerly PH 18) tractor was being manufactured by the newly established consolidated Implement Mfg. Co., Ogden, Utah. It was a short coupled machine with all four wheels drivers - 6 inches between front and back tires, and was powered by a Continental 4-cylinder engine having a maximum horsepower of 42 at 2200 r.p.m. Four speeds forward from 2.5 to 9 m.p.h. were provided and a power take-off front and rear.

The Jumbo Steel Products Co., Azusa, Calif. announced its Simpson Jumbo (page 51) 3 plow tractor said to be designed especially for the extra rugged soil and climatic conditions of the west. This machine was available as a standard 4 wheel job (Model C) and 4 wheel tricycle (Model B) and was powered with

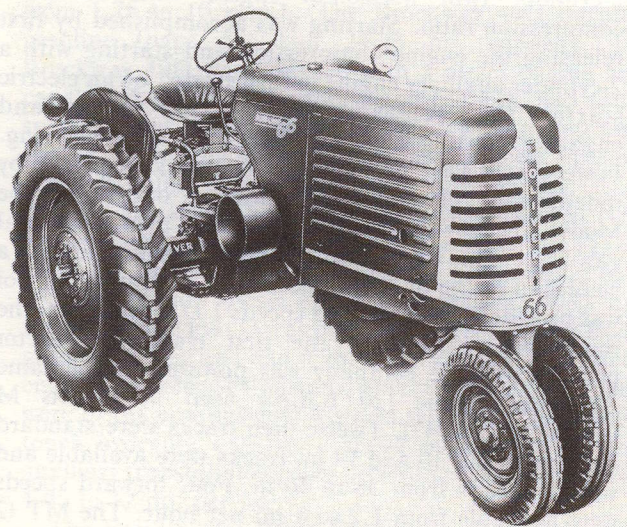
a 6-cylinder 35 drawbar hp. Chrysler engine. Five forward speeds up to 22.4 m.p.h. and hydraulic brakes were provided.

The Minneapolis-Moline Co. started manufacturing its Model ZA (page 52) 2-3 plow tractor. Five forward speeds ranging from 2.4 to 13.1 m.p.h. were provided. Four types of this model were produced featuring different front end designs; ZAU with 2 front wheels close together, but which could be reversed for wider spacing ZAN with single front wheel for narrow spaced row crops; ZAE with adjustable front and rear axles and ZAS a standard tread type model.

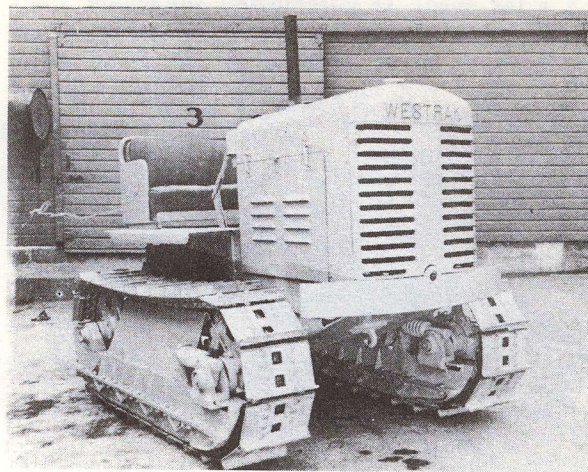
The Oliver Corporation as a part of its centennial celebration announced a new and improved line of tractors - the Oliver 66 (page 51), Oliver 77, and Oliver 88, unique in having continuous running power take-offs (direct engine driven p.t.o.) - the first wheel-type tractor to be thus equipped in the United States. With the small Model 66 (1-2 plow size) there was a choice of a 4-cylinder so-called high compression, with 129 cu. in. piston displacement, a diesel of the same size or a 145 cu. in. engine with lower compression for operation on kerosene or distillate. The 77 (2-3 plow) was provided with a 6-cylinder high compression or diesel engine of 194 cu. in. or with a 216 cu. in. engine for kerosene or distillate. The 88 (3-4 plow) was powered with a 6-cylinder 231 cu. in. high compression or diesel engine or a 265 cu. in. engine for kerosene or distillate. The standard, row crop with close spaced front wheels and row crop with adjustable front axles were provided for each model as were also standard treads. Magneto or battery ignition was optional on all 3 models, but battery ignition and electric starting were standard equipment.

The Farmall C (page 52) was added to the International Harvester Co. line. It was fitted with a gasoline or distillate engine of tricycle design with double front wheels and adjustable rear wheel tread. In addition, it was fitted with "touch control" which permitted raising or lowering of the drawn implements by a touch of the small control levers.

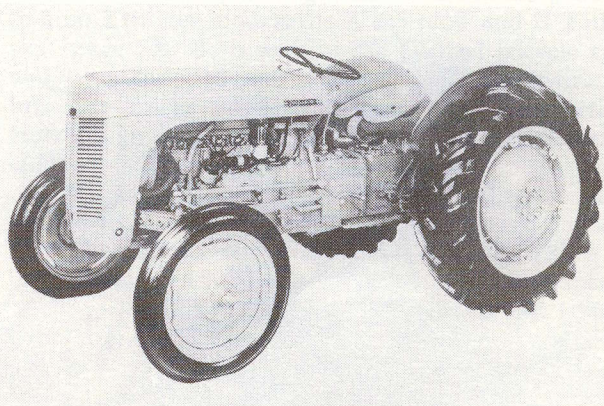
Some 1948 Models



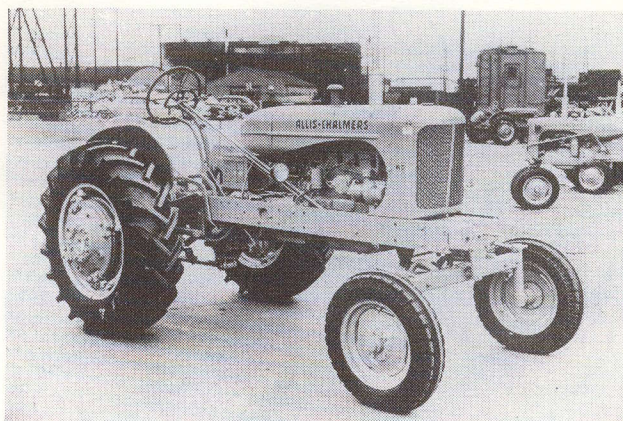
Oliver 66



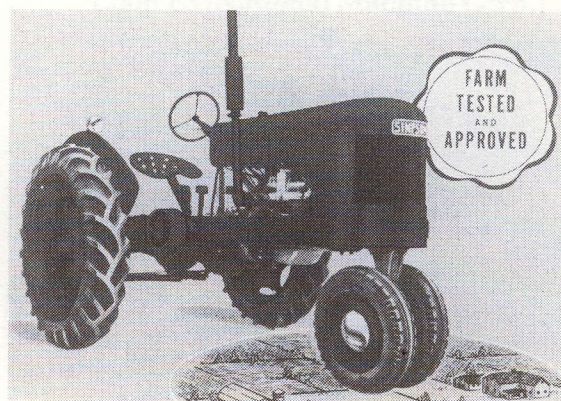
General Tractor Co. Westrak



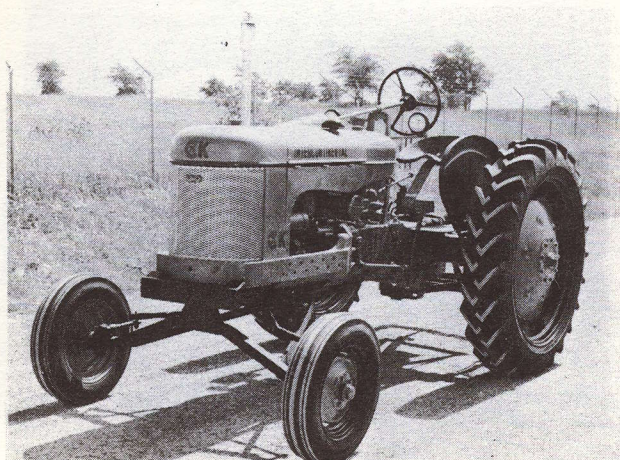
Ferguson TO-20



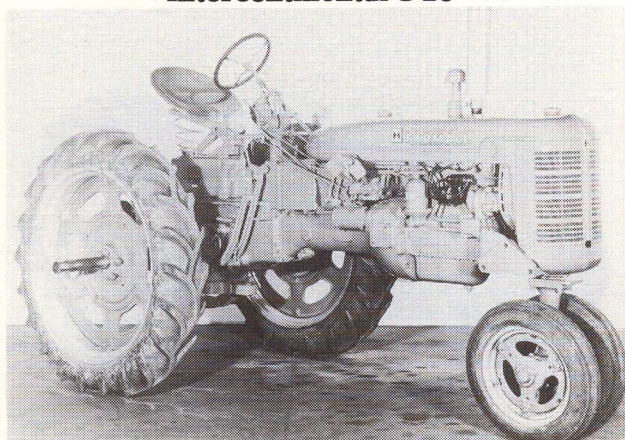
Allis Chalmers WD



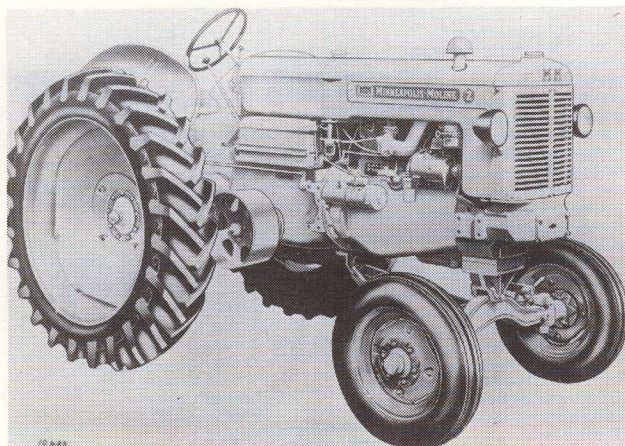
Jumbo



Intercontinental C-26



International Harvester Farmall C



Minneapolis-Moline ZAS



Allis-Chalmers G

The Detroit Tractor Corp., Detroit, Mich. offered a 4-wheel, all wheel drive tractor in 3 sizes, 16, 35 and 45 hp., (page 54) with magneto ignition or battery ignition, electric starting and lighting, and powered with either a 4-cylinder vertical Waukesha or Continental engine. Steering was similar to that in crawler tractors and the top speed was 17 mi. per hr.

The Long Manufacturing Co., Tarboro, N. C. started production on the Long tractor (page 54) powered with a 4-cylinder vertical 26-29 hp. engine. This tractor was provided with electric starting and lighting and a hydraulic lift and had 4 forward speeds from 2.45 to 18 mi. per hr.

The National Farm Machinery Cooperative Inc., Bellevue, Ohio introduced its CO-OP E3 tractor (page 53) of 2-3 plow capacity, in 2 types, standard and row crop. Hydraulic control and a "live" power take-off were provided, and eight forward speeds 1 1/2 to 10 mph. When use was made of the "creeper" speed especially helpful with transplanter, an auxiliary set of reduction gears was used.

The Massey-Harris Co., Racine, Wis. during the year came out with five models; models 22 RT (page 53) and STD tricycle row crop and standard respectively, powered with a 4-cylinder vertical Continental Red Seal engine (Nebraska test 17.93 - 26.85 hp.). Depth-O-Matic hydraulic control was provided, power take-off and electric starting and lighting. This model succeeded the company's light 2-plow 20 placed on the market last year: Models 44 diesel standard and 44 K kerosene standard - the diesel with a 15 to 1 compression ratio (Nebraska test rating 29.61 - 36.58 hp.) and the kerosene with 4.65 to 1. (Nebraska test rating 27.64 - 33.53 hp.); and the 55 K standard with a Nebraska rating of 37.12 - 46.32 hp. This was a standard type and used kerosene fuel.

The Fate-Root-Heath Co., Plymouth, Ohio announced the production of a new Silver King (page 54) 3-wheel row crop tractor, powered with a 4-cylinder vertical Continental engine having a compression ratio of 6.23 to 1. The Nebraska test rating was 22.35 - 29.35 hp.

Deere and Co., Moline, Ill. introduced several new models to the trade; the Model R, (page 54) the first diesel built by this company, was powered by a 2-cylinder twin horizontal engine with 16 to 1 compression ratio. Starting was accomplished by first releasing the engine compression and starting with a 2-cylinder auxiliary engine in turn started by an electric starter, then releasing compression release and engaging starting engine pinion with fly-wheel ring. Power-Trol was provided - hydraulic control by independent clutch for continuous operation; the Model AR, powered with a 2-cylinder twin horizontal gasoline engine with a 5.57 to 1 compression ratio and a Nebraska rating of 26.16 - 33.24 hp. Hydraulic control was provided and 6 forward speeds 1 1/2 to 11 mph; the model MC (page 54), the first track-type tractor produced by the company was powered by the same 2-cylinder engine (20 b.h.p.) used in models M (produced in 1947). Twelve-inch tracks were standard equipment but 10 and 14 in. tracks were available and various treads from 36 to 46 in. Four forward speeds were available from 1.2 to 6 mi per hour. The MT (2 plow) which was designed mainly for extremely hilly farms, orchards and vineyards was a 1-row wheel

tractor with a capacity to pull 2 12 in. bottoms. Touch-o-matic (hydraulic) control was provided, power take-off and belt pulley.

The Dodge Division of the Chrysler Corp., Detroit, Mich. announced the production of a 4-wheel drive Power Wagon (page 54) powered with a 94 hp. engine, and fitted with a 4-speed transmission, 2-speed transfer case, dual power take-off which delivered 536 r.p.m. at tail shaft or 3124 r.p.m. at belt pulley. A front mounted winch was also provided. This Power Wagon was originally designed for the military.

The Love Tractor, Inc., Eau Claire, Wis., announced the production of a 3-plov Love tractor (page 55) powered by a 6-cylinder Chrysler engine. Standard equipment included a built-in three point hydraulic lift implement hitch, electric starting and lighting system, belt pulley and power take-off. The front axle was adjustable for use in row crops. Ten forward speeds were provided, the highest being variable between 21.2 and 42.3 m.p.h. according to the engine speed which could be altered by 250 r.p.m. increments from 100 r.p.m. to 2000 r.p.m.

The R. H. Sheppard Co., Hannover, Pa. introduced 3 models of diesel powered tractors; model Sheppard SD air cooled engine of 1-12 in. plov capacity (3.6-5.4 hp.) adjustable front and rear wheel spacing and 3 forward speeds 3-10 m.p.h.; Sheppard SD-2 (page 55) with 24 hp. 2-cylinder engine (2 plov capacity). Four standard speeds forward 2.76-10.7 m.p.h. or with auxiliary transmission, 7 speeds forward 2.7 to 14.3 m.p.h. 12 and 24 volt electric starting and lighting systems were available; Sheppard SD-3, with a 29.4-32 hp. (3 plov capacity) 3-cylinder engine and 4 forward tractor speeds slightly greater than the SD-2, with auxiliary overdrive top speed was 15 m.p.h. This company manufactured its first tractors in 1940 when they were put in the field for test purposes, but due to the war emergency, was unable to market the tractors until 1949.

The Metal Parts Corp., Racine, Wis. announced the Haas "Atomic" tractor (page 56) unique in that it was powered with a 1-cylinder 12 1/2 hp. airplane type engine. It was of the conventional 4-wheel type and had 6 speeds forward.

The Brockway Tractor Co., Chagrin Falls, Ohio entered the market with three 4-wheel tractors with adjustable treads front and rear. Forward speeds were from 1.75 to 10 m.p.h. The Brockway 49G burning gasoline (page 54) had 24-28 hp. capacity, the Brockway 49D was powered with a diesel engine and capable of pulling 2 bottoms, and the 49K had same specifications as the 49G but fitted with a kerosene engine. Hydraulic lift and combination power take-off and belt pulley were optional with either model.

The Farmmaster Corp. with executive offices in New York City offered its Farmmaster in 2 models, the FD-33 (page 55) and the FG-33. The FD-33 was powered by a 4-cylinder Buda diesel engine and had a 27-32 hp. rating and the FG-33 was powered by a 4-cylinder Buda gasoline engine and had a 28.43-32.95 hp. rating. Both engines had identical piston displacement. The tractors were of the conventional 4-wheel type with the master touch hydraulic control, 2 speed power take-off and auxiliary transmission gears providing 8 forward speeds 1.65 to 12 mi. per hr.

The Earthmaster Farm Equipment Co., Hollydale,

Calif. added the Earthmaster D, (page 54) a 2-plov tractor to its line. It was a 4-wheel tractor with tread adjustments from 56 to 84 in. It was provided with a Speedi-Hitch hydraulic control.

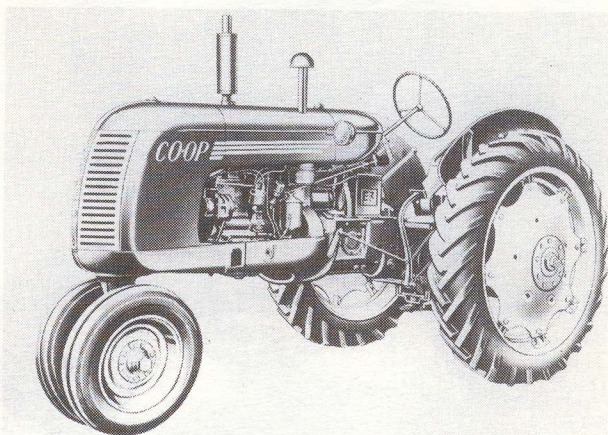
The Friday Tractor Co., Hartford, Mich. entered the tractor field with its 3-plov Friday (page 55). It was powered with a 46 hp. 6-cylinder Chrysler engine and with a 2 speed rear axle and had 10 forward speeds from 1.9 to 32.4 m.p.h. Optional were power take-off, hydraulic control and variable speed governor.

The Laughlin Tractor, Inc., Marshall, Texas entered the field with its model C-27, 2 to 3 plov size, 4-wheel tricycle tractor (page 55). It was rated as 27-31 hp. and was powered with a 4-cylinder vertical Continental Red Seal engine. Battery ignition and electric starting and lighting were provided and 4 speed transmission with forward speeds 1.64 to 6.50 m.p.h. Hydraulic lift was optional.

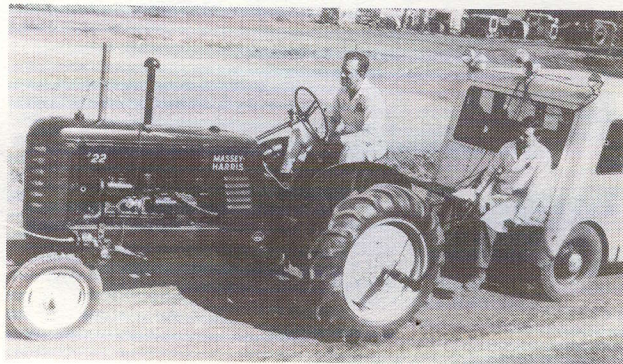
The Gibson Corp., Longmont, Colo. started production on 2 tractor models the I, 2-3 plov and H 2 plov size (page 55). Both were of the 4-wheel tricycle type and were equipped with power take-off and hydraulic lift. The I was powered with a 4-cylinder vertical Hercules engine and the H with a 6-cylinder Hercules engine.

The Custom Manufacturing Corp., Shelbyville, Ind. offered its 4-wheel standard tractor, C (page 55) and its 4-wheel tricycle tractor B, each powered with a 25 hp. 6-cylinder Chrysler engine. Five forward speeds were provided, 2.32 to 21.14 m.p.h. for B and 1.96 to 17.82 m.p.h. for C.

Some 1949 Models



Coop E3 (National Machine Corp.)



Massey-Harris 22RT