OHIO TWO CYLINDER CLUB NEWSLETTER
15136 County Road 75 Kenton, Ohio 43326
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June 2009

A MESSAGE FROM THE PRESIDENT

It sure is amazing how time flies. The last time I wrote we were getting snow. Memorial Day has already passed. Spring and summer activities are in full force with planting and haymaking. Summer shows are upon us with Wapakoneta Show already done and gone.
Several shows around Ohio are featuring John Deere tractors and equipment. It will be virtually impossible for a person to attend ALL of them. I would like to ask if you happen to live close to one of these shows, please take a few JD items to give our club representation. I say thanks in advance for your interest and efforts to help make it happen.
Several friends, including myself have committed to show tractors at the Eastern National EXPO Show at Canandaigua, NY on July 9, 10, 11, 2009. My wife and I will be promoting the Ohio Two-Cylinder Club there.
Skip Shepherd is busy preparing flyers about our Ohio EXPO 2010. We hope to have these fliers in time to hand out at Canandaigua.
Several of us attended Harold Ross's funeral on May 7 at West Union, OH. It was a very nice service. The funeral home was full. They had to bring in extra chairs. He had requested that the casket be placed on a hay wagon pulled by a two-cylinder tractor from the funeral home to the cemetery. As fate would have it, when it came time for the trip, a heavy rain with wind moved in soaking people and the 25 tractors that followed in the procession. A half hour later the sun was shining. Harold was one of the original organizers of Ohio Two-Cylinder Club. We will miss his efforts to support OTCC's activities. We thank the family for sharing him with us over the years.
Remember the State Show at Mt. Gilead on Aug. 7, 8, 9 with a general membership OTCC meeting at noon at the headquarters tent area. Some will be showing at COSI the next week. 5.26.2009 Dave Badger

COSI Farm Days Volunteers

The Ohio Two-Cylinder Club has been invited again to display and participate at the COSI Farm Days event. This show runs from Wednesday, July 15th through Sunday, July 19th. We still need a couple more tractors to display and volunteers to man the displays. Anyone interested may contact Skip Shepherd. 567-674-8132

OFFICERS AND DIRECTORS

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CONTRIBUTING EDITORS

If you have an interesting story or experience that you would like to share, please mail or e-mail it to us. We would like to see more members involved with your newsletter. I'm sure many of you are experts in your field and want to pass on some advice on restoring or collecting. Mail your articles to: OTCC Newsletter
15136 County Road 75
Kenton, Ohio 43326
e-mail: deererun@dbscorp.net

OTCC MEMBERSHIP

Our club roster to date is at 337 members. Club membership dues of $10 per year must be renewed by the end of November annually. You are welcome to renew for more than one year at a time or even lifetime memberships are available. Check the mailing label on your newsletter. The number following your name will reflect the year that your membership will expire. Dues should be mailed to:
The Ohio Two-Cylinder Club
15136 County Road 75
Kenton, Ohio 43326
Phone: 567-674-8132
e-mail: deererun@dbscorp.net
You may also register at any club-sponsored event.

TRACTOR MAGAZINE SUBSCRIPTIONS

It's never too late to subscribe to one of the popular tractor magazines. They make great gifts.

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TRACTOR TRIVIA

What was the 1st model(s) tractor that John Deere styled?

In what year did John Deere begin styling tractors?

If you know the answer to either of these trivia questions, be the 1st to give the correct answer to Skip Shepherd. Winners will receive a free hat or pair of EXPO coffee mugs.

MAKE PLANS TO ATTEND

National Threshers Association
65th annual reunion, June 25 – 28, 2009
Featuring John Deere
Held at the Fulton County Fairgrounds in Wauseon, Ohio.
Web site: www.nationalthreshers.com
Information: Sue Rupert 269-962-2157

New York State Two-Cylinder EXPO IX. Held at Canandaigua, New York. Show dates are July 9, 10 & 11, 2009. Web site: www.newyorkstateexpo.com
Information: John & Cheryl Jensen 585-526-6607
Bruce & Lois Morris 607-776-3592

Farm Days at COSI
Little Seeds, Big Tractors July 15 – 19, 2009
Sponsored by: Franklin Co. Farm Bureau, JD Equipment and The Ohio State University
Information: www.cosi.org/visitors/calendar/

Annual Farm Days Show
Featuring John Deere and the Ohio Two-Cylinder Club
Held at the Morrow County Fairgrounds in Mt. Gilead, Ohio
August 7, 8, 9, 2009
Information: www.morrowcountytractor.com

Ohio Two-Cylinder Club Plow Days
August 15th and 16th, 2009
Held at the Gary Shepherd Farm, Kenton, Ohio

OTCC Life Memberships

Lifetime memberships are available.

40 years and under	$200
41 to 45 years old	$185
46 to 50 years old	$170
51 to 55 years old	$155
56 to 60 years old	$140
61 to 64 years old	$125
65 years and over	$110

General Purpose (Row Crop) Tractor Evolution

In 1917, Henry Ford started producing the Fordson tractor. The Fordson was a compact "light weight" that sold in great numbers. It started a revolution in the farm equipment industry. It was not suited for row-crop work, but did prove one thing - farmers would buy tractors if the price were acceptable.

In December of 1923, Deere started production of the model "D" tractor. This "D" was a compact "light weight" design, but right at home pulling a three-bottom plow. It was a bare-bones tractor, just right for the times. The configuration did not lend itself to row crop work. All tractor manufacturers were competing for the farmers' dollars. Most had a goal to build a general-purpose tractor that could plow and also cultivate row crops.

What defines a general purpose or row crop tractor?

1. Crop clearance. This varied according to the crop.
2. Adjustable tread width to fit into various row spacings.
3. Tires narrow enough to pass between row crop canopies.
4. Tractor capable of primary tillage and still do crop cultivation.

Corn and cotton were the most common row crops, but many specialty crops fit also, such as potatoes, flowers, nursery products, vegetables, etc. The only cultivators engineers could envision were those used by horses. The Deere engineers actually built a motor cultivator by turning the tongue around on a horse cultivator that straddled one row. To the tongue they attached a two-wheel power unit that utilized an air-cooled engine. This engine-powered cultivator worked, but at the end of the day had not done any more work than a team of horses, but cost more. So this approach was terminated. Several versions of cultivators were tried but none proved promising. Deere engineers wanted a narrow tractor to keep the line of draft straight when using a two-bottom plow. The wheel stance would not allow straddling two 40-inch rows. Consequently they arrived at the three-row concept. This General Purpose (GP) had a high arch front axle and straddled the center row for planting and cultivating. Several designs of cultivators were tried. No matter how they were made farmers just did not warm to the three-row concept.

Meanwhile International Harvester Corporation (IHC) was struggling with how to make general-purpose tractors too. In studying, the book 150 Years of International Harvester shows their efforts. IHC built a large number of tractor models mostly heavy gas/oil models that ruled for the time. In 1916 they started work on several motor cultivators. The most common was a two-row cultivator in front pushed by two small wheels with the engine on top driving these small wheels. One of these units appears at the Portland Indiana Show. This arrangement was top heavy and prone to tipping over. There were several versions built, some even going into limited production. The power unit was adapted to push a grain binder, corn planter, hay rake, two sickle-bar mowers, etc. Finally the power unit was turned around to put the narrow spaced wheels in front. A 1920 photo shows the engine lined up with the frame, powering the larger rear wheels. Now the two-row cultivator was placed around the front wheels. This helped steer the cultivator quickly and precisely. This was especially important when cultivating check-row planted corn where they wanted to cultivate both "long-ways" and "cross-ways". If the check wire slipped some the cross rows were out of line some requiring dodge steering to miss hills of corn. In 1923 IHC built 200 of these tractors. The IHC executives were still dubious and cautious. Management had to be convinced! They were afraid this tractor would hurt sales of the 10-20 standard tractors! In 1924 the tractor now called the Farmall was placed into production as the Farmall Regular. Farmers soon learned the Farmall could do many farm tasks. It was not long until IHC expanded the concept to F12 (1 Plow), F20 (2 Plow), and F30 (3 plow) models.

Deere's three-row GP just was not flying. Observing the IH Farmall, Deere began experimenting with the wide tread tricycle configuration using a two-row cultivator. The cotton farmers liked it. Some wanted four-row cultivators. Now, the GP was short on power. So the engine bore was increased to six inches. Performance was improved some but the L-head engine still lacked the performance of the "D". This tractor seated the operator low behind the fuel tank and the hood was rather wide. Visibility was not good for cultivating. Now, enter the General purpose Wide Tread (GPWT) with over-the-top-steering. The operator position was raised 9 ½ inches and moved forward 11 ½ inches. The hood was tapered to give the operator a clean line of vision to see rows for cultivation. To me, this is the true beginning of Deere's row crop or General Purpose tractor! The corn and cotton farmers had a tractor that suited them. Ironically the row-crop configuration was never well accepted in Europe. The same was true in Canada and Australia. Row crops are not dominant crops in those countries. While the GPWT was a great improvement, it still lacked desired features such as adjustable tread width and the

L-head engine performance just did not perform like the model “D”. The things learned from the GPs got Deere to start with a clean sheet of paper to design a new tractor that met the requested requirements. The result was the model “A”. The “A” had over-head valves to improve engine performance. The operator was placed high up with a flat platform. The rear wheels could be positioned from 56 inches to 80 inches tread width. This range of width allowed all kinds of row crop applications. It had the tapered hood for visibility. All the struggling problems of the GPs came together to make an agile, row crop tractor fully capable of doing primary tillage work, but still had vision for cultivation. The cultivators were mounted close to the front wheels to allow precise cultivation. The “A” was an instant success. Total production numbers are listed at 293,000 ending in 1952.

The “B” followed the same design but was to be 2/3 the size of the “A”. The “B” was an immediate success. “B” tractor production numbers (listed as 309,000 built) ended in 1952. The “G” followed the same design but was a three-plow tractor. All three (A, B, and G) tractors had “General Purpose” silk screened on the hood sides. The “G” never sold as well; it was more tractor than a lot of farmers were willing to purchase. But in the same breath, if a farmer wanted a heavy-duty three-plow tractor, it would live up to that expectation.

Now that the A, B, and G row crops were off and running, interest in another size tractor began to emerge. The fruit growers in western Michigan and the southeastern US had great potential for a small tractor. Many of the southeastern farmers used one mule or horse to plow, plant, and cultivate their crops of corn, cotton, and peanuts. Deere along with other companies eyed this market potential. The Waterloo factory was working at full capacity. Over at the Moline Wagon Works Sales of wagons was decreasing so they had some factory space available. In 1935 engineer Willard Nordenson was put in charge of the small tractor project labeled model “Y”. Money was short as the country was just emerging from the depression and Waterloo had just launched the “A: and “B” tractors. Nordenson had virtually a zero budget available. He had to start from scratch getting some components from a local junkyard. The steering and transmission were from a model A Ford automobile. Wheels came from a manure spreader. Two pipes made do for the frame. There was no money to develop an engine. So he bought a few Novo two-cylinder engines. The Novo engine proved unsatisfactory due to a small oil sump. Next he moved to a Hercules engine. The engine was placed inline with the frame and offset three inches to the left for visibility underneath for cultivating one row. Crop clearance under the engine came to 18 inches. As improvements were made the models changed to 62, L, LI, and LA. A foot clutch was incorporated. The transmission had the familiar H pattern used in automobiles. Many references to these tractors call them utility tractors. They were built with row crop clearance to do row crops of limited size crops. The vertical engine and foot clutch followed through into the model “M” and later Dubuque built models. The “H” came on the scene in 1939 to do the work of a team of horses and could cultivate two rows.. It sold well before WWII but after the war, farmers wanted larger tractors, so production ended in 1946. The MT took over from the “H” in 1948.

Most American companies were quick to get tricycle row-crop tractors introduced. Henry Ford did not. He was very set in his ways and would not make changes and improvements for the Fordson. Competition came with better tractors. Henry Ford’s Fordson just did not keep up. US sales slid down hill with production ending in1928. (Fordsons were built in Cork, Ireland and later at Dagenham, England through 1952.) Books show pictures of tricycle Fordsons, but they were apparently made in very low numbers. One book says they were “ made for export”. Some were made with after-market add-on parts that lacked proven designs.

Another story has to do with Harry Ferguson. He invented the three-point hitch, which you see on farm tractors today. In 1938 he and Henry Ford agreed to build what became known as the 9N. The 9 stood for 1939 and the N denoted tractor in the Ford’s manufacturing complex. The price was low and the 9N sold in great numbers. To cultivate row crops the rear wheels were switched to put the dish in giving a tread width of 76 inches. The front axle had to be unbolted and the front wheels moved out to be in line with the rear wheels. Crop clearance was 21 inches under the rear axle and 15 inches under the engine. Ford and Ferguson built the 9N until 1942 and then it was called the 2N. The 2N started out as a bare bones tractor on steel wheels and no electrics to meet the wartime austerity programs. Henry Ford had passed the reins to his son Edsel. Edsel died of cancer at age 49 in May of 1943. Henry again took the reins but now he was 80 and his health was failing. In 1945 Edsel’s son Henry II took the presidency of Ford Motor Company. Through all the turmoil Ford was losing money. The agreement between Ford and Ferguson soon began to unravel. In November 1946 Ford terminated the relationship. Ford made moves to take over the Ferguson product and patents. Ferguson sued Ford with lawsuits that lasted from1948 into 1952. The process was outlandish involving as many as 200 lawyers. This is a whole story by itself. Ford battled to get hold of Ferguson’s patents. Once the settlement was resolved the other companies were able to build tractors with three-point hitches without patent infringement on Ferguson. Finally when the air cleared, Ferguson was on his own. He had to rebuild his dealer organization and his products. He could not find anyone in the US to build his tractors. So he

ended up building his own factory in Detroit, Michigan. The first TO 20 came off the line July 6, 1946. Production built up slowly during 1947 due to steel shortages and fuel shortages due to the coldest winter in 70 years.

Ferguson harbored the idea that one tractor model should fit all applications and he wanted this model to stay in production for 20 years. The TO-20 simply did not fit into row-crop type farming such as corn or cotton, especially as the crops grew taller. The vegetable farmers in California were begging for a tractor to suit their needs. As brilliant as Ferguson was he ignored a big portion of America's farmers.

Ferguson made his home in England. By now Ferguson was building tractors in Detroit, Michigan and Coventry, England. Ferguson was struggling to keep the manufacturing going as the economy went into a down turn (1952) and money was in short supply. In 1953 he sold his company to the Massey Harris Company. He made arrangements to be part of the Massey Harris Ferguson Co. as chief engineer of any Ferguson related product. It did not take long to see the arrangement was not going to work because of Ferguson's difficult behavior. An interesting twist was the engineers in Detroit were hearing requests for a tractor that could do row-crop work. In 1955 they took the Ferguson TO-35, stretched it 4 inches, and put it up on 38-inch wheels with a narrow tricycle or wide front end. Then they added a mid-mount two-row cultivator. When Harry Ferguson got wind of this tractor he called it "a monstrosity"! He would have no part of such a tractor! This tractor became the Massey Harris 50 and Ferguson 40. It was the same tractor but different sheet metal and colors. It became obvious that Ferguson did not fit into the organization. Finally after much consternation Ferguson sold his stock in 1958 and bowed out. Now the company was known as Massey Ferguson. The so-called hi-crop tractor became the Massey Ferguson 65 and was produced for several years in row crop and utility models. (This is brought up to let you know some people did not appreciate row-crop tractors.)

The Ford Company was floundering for lack of management. WWII was going on. They called Edsel's son, Henry II, home to take the reins. Henry II got the company turned around. As part of this management change, Ford did introduce row-crop models but it took until 1955 to get there. We did not see them in big numbers. In retrospect it was probably too little too late. Also, Ford autos and trucks had priority; tractors came in second.

Meanwhile what is happening over in the Deere camp? Dubuque factory engineers took the JD "M" and "MT" and grew them into the 40 model tractors. They took the basic engine and transmission and made them into seven different configurations. Five of them could handle row-crops. The 40S was a one-row straddle with 21 inches of clearance. The 40V was a one-row straddle with 26-inch clearance. The 40T could cultivate two rows. The 40W was called the Two-Row Utility. The 40H was a Hi-Crop with 32-inch vertical crop clearance along with a good range of wheel tread spacing. It could work in sugar cane or bushy crops like flowers and tomatoes. Only the 40U-Utility and 40C-Crawler did not fit into row-crop work. They were low compact machines ideal for orchard work. It was pretty amazing that they all came from one basic engine-transmission unit! Some models did not sell in great numbers; but for every tractor Deere sold, that was one less some other company sold! Over at the Waterloo factory they had recently introduced the 50, 60, and 70 tractors. The row-crop versions were loved in the corn and cotton belts. They were just the ticket for spraying and cultivation jobs. These tractors were right at home doing primary tillage, planting, pulling harvesting machines, etc. All these tractors moved into the 20 and 30 series with few changes in configuration but did have enhancements such as an increase in horsepower, cosmetics, and three point hitches. So while Ford and Ferguson fought in the courts, Deere was very busy building tractors (a large portion were row-crops)!

Today we do not see new tricycle tractors. Why? In the 1950s engineers figured out that combines could shell corn. It did not take many years to see corn picker sales drop like a rock! Narrow front or tricycle tractors were no longer needed for mounted corn pickers. Then in the 70s and 80s corn and cotton went from wide (40inch) rows to narrow (30 inch) rows. Cotton was later, as the 30 inch rows had to wait for a cotton picker that could work in 30-inch rows. At the same time tractors were getting bigger requiring larger tires. Two fat front tires just did not fit between 30-inch rows especially if there was any crop canopy. Then in the 90s front-wheel power-assist swept in. Those tires were larger yet. The wide front wheel stance solved the tire space problem. So what were the last JD models with tricycle narrow front tire stance? You could order a 4030 and 4230 with narrow fronts. There were a few 4040s equipped this way. Dubuque built a few 1010 and some 2010 tractors with narrow fronts. In the fall of 1964 Dubuque introduced the 1020 and 2020 tractors. From that point on Dubuque did not produce narrow front tractors.

Today you can still buy a row-crop tractor with crop clearance and adjustable width wheels in two-wheel drive or four-wheel drive configuration. It is a real trick to have the mechanical front-drive wheels set on 60-inch tread centers and still get short turning. In 1994 when the 8000 Series of tractors were introduced the engineers had a new idea to solve this problem. The engine was raised 10 inches and moved forward 44 inches so only the engine oil sump was down close to the wheels. The sump was made quite narrow to allow space for the wheels to have room to turn short. This feature has

continued into the 8010, 8020, and 8030 Series. Today (2009) you can buy an 8530 row-crop tractor with 330 engine horsepower (275 PTO HP). This far exceeds our dreams of 30 years ago! Three-point hitch lift capacity can be up to 18,300 pounds. Deere literature has shown a four-row potato planter on one of these tractors that was so heavy it required lift assist wheels behind the planter in order to lift it! Also the 8000 series of tractors can be bought with rubber tracks. Some are provided with narrow tracks to fit into row-crop applications. Deere makes sure they have tractors available for the great variation in row-crop farmers' requirements.

Today crop cultivation is not such an issue as spraying has greatly reduced the need for cultivation. The vertical clearance is not great unless you order a Hi-Crop that does have lots of underneath clearance. Deere and other companies now have crop sprayers that have lots of crop clearance underneath especially used for spraying cotton and other tall crops.
I have seen advertising literature showing four-wheel drive articulated tractors such as the 7020 cultivating corn. This was possible by spacing axle-mounted duals on 30-inch centers and using fairly narrow tires to allow rows of corn to pass between the dual tires. These tractors typically pulled an eight or twelve row cultivator on the three-point hitch. I must add there was not much room for error! Some 6030 tractors were set up with similar rear wheel spacing to allow row-crop work.

This takes us through the gamut of row-crop tractor evolution. As you can see they are an American invention that helps our farmers care for their crops. These tractors are not well accepted in some other parts of the world. Hindsight always has 20-20 vision. We can look back and observe the test of time - what worked and what did not. When customers plunk down their money that is a vote for a product.

Sources of information and further reading:

The Ford Tractor Story Part One by Stuart Gibbard
Ford Farm Tractors by Randy Leffingwell
Harry Ferguson Inventor and Pioneer by Colin Frazer
150 Years of International Harvester by C H Wendal
The Big Book of Massey Tractors by Robert N Pripps
John Deere A History of the Tractor by Randy Leffingwell
Two-Cylinder Magazine July-August 2001 Pages 38 and 39.
Classic John Deere Two-Cylinder Tractors by John Dietz and Jeff Hacket

Dave Badger 6 April 2009

TRADING POST

We will run your ad for 3 consecutive newsletters unless you contact us and want it continued. Please contact us if your item has been sold or if you want it removed from the listing. Phone: 567-674-8132

For Sale: JD 2-row corn planter. 937-845-9519 (2)

For Sale: 1941 JD "H" with 1 bottom plow
New tires, complete restoration. $3500
(2)

For Sale: Original JD fenders to fit "A", "B", "H"
Very good shape. $400. 419-393-2937 (2)

For Sale: JD 3010 gas, narrow front end,
Excellent shape, approximately 4000hrs.
With JD snow plow. 231-796-2093. (2)

For Sale: Heavy duty steel ramps for low-boy trailer. Sturdy and in perfect condition.
740-426-6444 (2)

For Sale: 1947 JD "B"
Good rubber and sheet metal
Runs good $1800 740-852-3896 (1)

For Sale: JD "40", "50" with 801 hitch
"60", "70D", "80" with 2 hyd. outlets
1950 "G" WF, 1937 "D", 1945 "H" elec start
"730D" pony, WF. Triple axle trailer w/ ramps
All tractors are restored and running. 937-377-6572 (1)

For Sale: (2) JD 110's 4 speed transmissions
1 good, 1 needs top end repair. Both for $150
Howard 740-361-3192 (1)

Ohio Two-Cylinder Club
Plow Days

Come see and hear the "ole 2 bangers" at work again!

This is the 10th anniversary of the Ohio Two-Cylinder Club Plow Days event held at the original location on August 15th and 16th, 2009.

Gary Shepherd Farm
7106 County Road 150
Kenton, Ohio 43326

200 ACRES TO PLOW!

Campers Welcome

Restroom facilities on site

Food will be available

Weiner roast on Saturday night

Local Motel Information:
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Comfort Inn, Bellefontaine 937-599-5555
Super 8, Bellefontaine 937-599-5300
Questions or information, please call:
Janice Shepherd 419-675-1467
Skip Shepherd 567-674-8132
Craig Shepherd 419-673-8210

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