

# ROTAVATION *for* CONTINUOUS CORN



Horace Barber

## CASE HISTORY - ILLINOIS CORN

Horace Barber  
R.R. 1  
Genoa, Illinois

★ Mr. Barber, like many farmers, has for many years, considered that far too much equipment is used in the preparation of land. Costs are going up each year raising the investment in machinery to a point where a revision must take place in order to reach a balance between the cost of growing a crop and the price received for the finished product; bearing in mind that labor must be kept to a minimum and time used productively.

Mr. Barber owns 451 acres of black silt loam on the extreme tip of the corn belt in Northern Illinois. 436 acres are actual crop land and 258 were to be put into corn for 1962. Part of this land has been continuous corn for 13 years and the whole 258 acres has been in corn for the last 6 years.

The usual procedure would be to shred the stalks, disc once and then Fall plow. Horace has always considered this essential since the heavy black land must be exposed to the winter freeze in order to guarantee workable soil next Spring.

## MAXIMUM RESULTS with MINIMUM OUTLAY

I would say that the following list pretty well describes why I like my ROTAVATOR.

- Save time, fuel, tractor hours.
- Soil warms up quicker, gives more germination, absorbs and holds moisture better.
- ROTAVATOR can work in adverse conditions and does not cause any tractor slippage or compaction.
- Tillage costs are reduced while soil is improved and yields increased.

*Horace Barber*

**Says Horace:** Time and weather is always against you, especially this far North, and 3 passes over the land after the picker tends to pack the land, sealing off the moisture from the subsoil and leaving the surface bare encouraging run off during the early rains, and loss of moisture during the thaw next Spring.

I have often thought about rotary tillage, in fact many years ago I checked into the pros and cons but found that it was still in its infancy and the machinery available at that time was not practicable. As time went by I kept myself informed of the progress being made and in the Fall of 1961 decided that a MODEL K HOWARD ROTAVATOR could well be the answer to my problem.

I farm by myself and hire part time help during the busy seasons, so my whole idea was to keep my equipment to a minimum.

This then was my total inventory for my 1962 crop: 1 K-90 ROTAVATOR (90" width), 1 4010 John Deere tractor, 1 I.H. 4 Row Planter and 1 4 J.D. Row Cultivator. I would rent the anhydrous applicator, and contract out for the picking. My total investment in new equipment was \$9,121.00.



**FOLLOWING THE PICKER WITH FALL ROTAVATION**

**FALL PREPARATION - One pass October 6.**

I started Rotavating in October 1961 and believe me it was a test for any machine. The land was wet when we picked the corn, consequently we made a terrible mess leaving deep ruts where the tractor wheels cut in. Rotavating at 5 to 6" deep in 2nd and 3rd gear I worked up 258 acres with the ROTAVATOR. The rear shield was raised leaving a rough, trashy finish to hold the moisture and all the ruts were filled in by the ROTAVATOR leaving the land level. I found I could work in very adverse conditions. Normally I would get wheel slippage and I would have to pick and choose my days for plowing, but this year I was able to work through all the wet spots, and even when the ground was frozen to a depth of 4"; in fact the frozen ground worked better since the blades had something to cut against. I also notice that due to the forward thrust of the blades I was losing nothing through wheel slippage. When the tachometer read 3-1/4 mile per hour, this was my actual ground speed; whereas normally I always expect to lose a certain amount due to wheel slippage when pulling a drag type implement.

**SPRING PREPARATION - One pass April 1962.**

On April 11, I started my Spring pass with the ROTAVATOR working 6 to 7" deep, using 2nd and 3rd gear of my tractor. I was the only one working in the neighborhood. My soil was in very good shape due to the pass I made in the Fall, whereas the neighboring land had water standing and was not fit to work. I reckon my water was in the subsoil where it belonged. During the last week of April I started to check my soil temperature and noticed that although the local radio station would be quoting a 55° average, my soil would test out at 65°. I had been told that a Rotavated seedbed warms up quicker but seeing is believing. I figure it's the mixture of soil, air and trash. The trash tends to protect the soil from extreme temperatures, but when the sun comes out in early Spring the trash appears to act as a heat conductor, producing a warmer seedbed.

**PLANTING - May 2nd 1962.**

This was all I needed to plant corn, so planting began on May 2nd. I was the first to plant and the first to



**CULTIVATION WITH THE ROTAVATOR**



**SEPTEMBER 29th PICKING 134 BUSHEL CORN**

finish and I had some of the finest looking corn a man could wish for. Germination was good and population high; in fact population was so great I decided to give it an extra shot of nitrogen. The Aldrin went in during my Rotavation pass. A 10" band of Atrazine went in with my planter, plus 120 lbs. of 5-20-20 starter fertilizer. Anhydrous was put in at the rate of 100 lbs. actual, and all I needed to complete the job was rain.

This I had no control over, and in fact we finished up with 11.29 inches of rain during the growing season, far short of the 30" required for 150 bushel corn.

**START PICKING - September 29th.**

Picking began on September 29th. Although we only had 11.29 inches of rain in the growing season my Rotavated ground held every drop of it and I am fully convinced that this was one of the major factors governing the fact that I finished up with 120 to 160 Bushel Corn giving me an average of 134 B.P.A. in an area where other corn crops were definitely held back and the yield down due to lack of moisture.

(Continued)

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## THE PAY-OFF

134 Bushel Corn is good but the cost of producing it must be kept down and I consider I have found the answer in Rotavation. The following figures will back my statement.

Starting from scratch on 258 acres for corn:

<b>New Equipment</b>	Total investment \$9,121.00 — picking contracted out.
<b>Fuel</b>	2,040 gallons. Saving of 1,460 gals. over last year.
<b>Tractor Hours</b>	Total 390 hrs. (does not include picking).
<b>Yield</b>	134 B.P.A. — 25° moisture Government measure — elevator Weights.
<b>Fertilizer</b>	120 lb. 5-20-20. 100 lb. Nitrogen actual. Usual amount of Aldrin & Atrazine.
<b>Labor</b>	Approximately 30% saving in labor over same acreage last year.

This Fall (62) all work was finished by October 24, and this included my alfalfa. Total acreage Rotavated was 436 acres.

**A N E X P E R I M E N T I N**

# MINIMUM TILLAGE



**MODEL K-90 ROTAVATOR,  
J.D. 4010  
I.H. TWO ROW PLANTER  
WITH GANDY APPLICATOR.**



**SETTING UP THE ROTAVATOR  
FOR CULTIVATING**

**by**

**HORACE  
BARBER**

•  
**Genoa, Illinois**

**Minimum Tillage** is foremost in every farmer's mind today and I am no exception.

20 Acres were planted in corn on a purely experimental basis with very surprising results.

The land was left after picking the previous Fall and nothing was done until I was ready to plant. A two row planter was fitted directly behind the ROTAVATOR. All blades were removed from the rotor with the exception of two sets of 6 pairs at 40" centers.

The ROTAVATOR and planter were driven straight over the old rows at approximately 4-1/2 mile per hour, turning over the soil and planting at the same time.

Germination was good and as soon as the corn was up I used the ROTAVATOR to cultivate. I replaced all the blades except for two 10" spaces, and fitted plant guards to restrict the flow of soil and protect young plants.

This corn yielded 120 B.P.A. and showed real profit since the cost of planting was limited to only one run over the land. — Using the same machine for cultivation shows how much you can do with a ROTAVATOR.

This is real minimum tillage with the minimum of equipment.