



KILL !!!
**UNWANTED GRASS,
WEEDS AND BRUSH**

WITHOUT CHEMICALS

Let's Talk

Many people believe the best and most effective grass, weed and brush control can be accomplished by using the latest formulation the chemical industry has to offer. The chemical industry spends millions of dollars every year developing new products and advertising those products to the consuming public.

Much gain has been made in the development of selective herbicides, many of which are widely used in 'No-Till' or 'Reduced-Tillage' systems. As the agriculture chemical industry has grown and prospered, much of the profits generated from the agricultural community have been used to fund weed control research at many university research facilities. Little money has been offered or spent conducting research on alternative methods of vegetation control.

The moldboard plow gained acceptance for its ability to suppress vegetation by turning over the soil, thus burying vegetation and bringing fresh clean soil to the surface. The clean soil exposed to the surface was then possible to 'work down' into an acceptable seed bed. Unfortunately, 'out of sight - out of mind' tillage does not work very well if the objective is to kill vegetation, especially a mature sod mat. Merely turning over a developed root mat only slows the growth for a while. Time and a little moisture enable the roots to regrow, weed seeds are brought to the surface to germinate, and the resulting grass and weed pressure may be only marginally better than before.

The disk has also been popular for weed and grass control. A disk is faster than a moldboard plow. Rather than bury weeds and a grass root mat, it cuts everything loose and reburies roots, allowing the vegetation to bounce right back. A disk will not work well in many conditions especially if the soil moisture is high in heavy soil. A disk is a notorious tool for compacting the soil at the depth the disk is cutting and additional compaction is caused by the weight of the tractor needed to pull the disk, and from the multitude of trips required to put the soil in a finished condition.

Other tillage tools are designed to pull roots to the surface such as a field cultivator or a quack digger but these are ineffective and inefficient.

In 1912, A.C. Howard built the first conservation tillage tool ever made. The Rotavator was designed to break virgin ground, without turning the soil over. A.C. Howard's 'Rotary Hoe' was designed to undercut all unwanted weeds, grass, brush and root structure free from the topsoil, and leave the residue on the surface so the sun and wind would kill all the vegetation. It was more effective with this objective than any other tillage tool in 1912, and retains that advantage today.

The initial worldwide acceptance of the Howard Rotavator was because of its unique ability to kill unwanted vegetation, not because of its ability to make a superior seed bed.

From 1912 until the late 1930's Rotavators were designed and sold as the fastest method to bring virgin ground into production by killing vegetation better and cheaper than any other method. The blades on Howard's Rotary-Hoe were all open; no metal soil shields were present to contain the soil and vegetation. This early design was intended to put all vegetation on the surface so the sun and wind would kill everything.

The most effective killing is done when time and weather are on your side. Sun and wind must be used to maximum advantage to stress and kill roots. Plan ahead, and use the Rotavator during the fallow season to get the best possible mechanical kill.

The rear soil shield on a current model Rotavator must be fully raised, or removed in order to leave the vegetation and put the root system on the surface. It is important that the first pass in heavy matted grass and weeds be slow and not too deep (approx. 4") to completely chop up the root mat, in order to put the majority of the roots on the surface for the sun and wind to kill. Some roots not put on the surface will survive. Additional passes will put those roots on the surface.

Rotavated soil is thought to encourage the growth of weeds. This is true. Weed seeds germinate better in Rotavated soil than in soil prepared with any other tillage tool. Why? The Rotavator creates an ideal germinating environment. The Rotavator saves moisture, the seedbed is uniform to make for good seed-to-soil contact, air is present, and the Rotavated seedbed is warmer than other seedbeds.

Encouraging weed seeds to germinate before planting can be the best low-cost form of weed control. It is possible to create a sterile seed bed by germinating most weed seeds as early as possible ahead of planting. Subsequent shallower passes with a Rotavator will kill the growing weeds, and help germinate weed seeds that did not germinate. It is important to never go deeper than the initial pass, so as to not bring weed seeds into the germination zone.

It is important to understand that sun, wind and stress is what kills roots and established weeds. The number of trips necessary to kill vegetation with a Howard Rotavator depends on the severity of the problem, and the cooperation of the weather. The right plan set into motion ahead of planting season, and a Rotavator used correctly, can kill unwanted vegetation more effectively than any other mechanical system.

WORMS

Farmers who use Rotavators and do not mold board plow, chisel plow, or disk, report greater earth worm activity than ever before. Crop residues, animal and green manures are kept near the surface. The soil is loose with plenty of air and moisture. Rotavated ground is a healthier and friendlier environment than what is found using other tillage systems.

A HOWARD ROTAVATOR IS THE MOST VERSATILE SURFACE TILLAGE TOOL ON THE FARM, BECAUSE IT IS THE MOST ADJUSTABLE. THE ADJUSTABILITY OF THE ROTAVATOR ALLOWS FOR CONTROLLED TILLAGE. THE BEST TILLAGE IS THE LEAST TILLAGE; JUST ENOUGH TO MEET THE NEEDS OF THE CROP THAT WILL FOLLOW. DEFINE THE TILLAGE OBJECTIVE, THEN ADJUST THE ROTAVATOR FOR OPTIMUM ONE-PASS PERFORMANCE.

FOR ADDITIONAL INFORMATION OF HOW TO GET THE BEST PERFORMANCE FROM YOUR ROTAVATOR OR HOW ROTARY TILLAGE CAN BEST FIT YOUR NEEDS, CONTACT GUY MACHINERY.

GUY MACHINERY - 14213 WASHINGTON ST - WOODSTOCK, IL. 60098 PHONE 815-338-0600 - FAX 815-338-2525