

Equipment is critical in herbicide incorporation

KEWANEE, IL. — Many factors affect proper herbicide application and incorporation, but equipment is the most critical.

As chemical incorporation becomes more popular among farmers, many herbicides that were once recommended only for surface applications are now available for incorporation. Surface blending offers the advantages of reinforced weed control and higher speed application with larger equipment.

One of the most commonly used implements for chemical incorporation is the field cultivator. The cultivator does not toss soil as much as a disk because it uses a side-to-side soil movement. It can also be set to disturb only the top few inches of soil.

Like any farming practice, chemical incorporation must be done properly to be effective.

"The most critical factors affecting proper incorporation are equipment, equipment operation, and soil condition," says Tom Kniep, design engineer for Kewanee Machinery Division.

Kniep offers the following suggestions to insure successful chemical application and incorporation.

PROPER EQUIPMENT

Proper shanks and shank spacing are important to insure even herbicide coverage. It is best to have three or more rows of shanks spaced no more than 7 inches apart. It is equally im-

portant the shanks be uniformly spaced on each bar.

"True 6 inch spacing insures streaks or ridges are not left in the field," says Kniep.

"Shanks with sweeps provide better soil mixing than chisel points," Kniep adds. "Sweeps should be at least as wide as the shank spacing for even coverage. Farmers should also make sure that the sweeps are sharp and new as worn sweeps will be less effective."

Most field cultivators are built in three sections. However, on the larger machines, five sections are preferable. Added sections help keep the cultivator level so it can evenly run over rolling contours.

"A long hitch, walking beams on each section, and gauge wheels on the front of the cultivator also help keep it running level through rocks or depressions," explains Kniep. "Floating wings allow shanks on the outer wings to maintain the same depth as shanks on the main frame."

Because not all cultivators are built with herbicide incorporation in mind, it is a good idea to check these features when making a purchase.

OPERATION FACTORS

Running depth is one of the main considerations in incorporation. The cultivator should operate at a depth of only two to three inches.

"The top few inches of soil are where most weed seeds germinate and therefore herbicide placement

in this area provides the most effective control," Kniep explains.

Optimum speed for herbicide incorporation with a field cultivator is from 5-7 miles per hour."

These speeds are possible because the machinery is operating at such a shallow depth. However, faster speeds should be avoided because the herbicide could windrow between sweeps in the last row resulting in poor horizontal distribution.

Maintaining levelness from side to side as well as front to back is also important in order to avoid streaking. This is where the walking beams and floating wings are advantageous, Kniep explains.

Make sure each row of shanks is operating at the same depth. If the rear row is operating deeper than the front two, untreated soil will be brought to the surface, reducing herbicide effectiveness.

"Two passes with the field cultivator are usually recommended for even application," advises Kniep. "When using two passes, the second should be at an angle to the first rather than parallel. This will prevent herbicide banding."

If the farmer elects to use one pass incorporation for a reduced

tillage program, there are additional considerations. Correct speed and depth become especially important.

"Because the herbicide has to be distributed and mixed in only one pass, all of the equipment features that provide level running and even mixing become more critical," notes Kniep.

SOIL CONDITION

Soil should be dry for best chemical incorporation. Moist soil will clump and compact, preventing even herbicide distribution both horizontally and vertically.

Soil texture is another important consideration. Herbicides tend to attach to clay particles in soil.

Heavier textured soils absorb more so the rate of application should be higher than in light sandy soils. It is best to check the soil texture guidelines on the label of the herbicide and uniformly apply at the suggested rate.

"Keep in mind that herbicide rates may need to be increased slightly for a reduced tillage system to give weed control comparable to conventional tillage," adds Kniep.

Successful herbicide incorporation depends on the farmer. Careful attention to using proper machinery and operating methods will make the difference between a spotty, streaked field and a clean field with consistent weed control.



NEED SOMEONE WHO CAN FILL THE SHOES?

Try A Help Wanted Ad In Classified.

Phone: 717-394-3047 or 717-626-1164

COWTOWN RODEO

EVERY SAT. NIGHT - 7:30 P.M.

Rain or Shine



At Cowtown on Route 40 Woodstown, NJ (8 mi. E. of Del. Mem. Bridge)

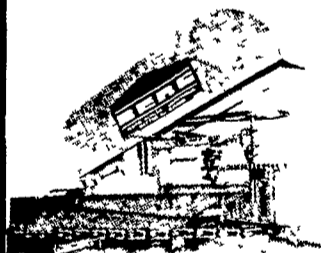
Adults \$4.00 Children under 12 \$2.00 Group Rates Available - 609-769-3200

AG-BAGGER

DESIGNED FOR THE 80's

See Page B-20

BERG BARN CLEANERS



**OUTRUN
OUTLAST
OUTCLEAN
OUTPERFORM**

Berg Barn Cleaners are the best you can put in any barn. They're the best in strength, durability and performance. Each chain link is forged in one piece from special nickel chrome content steel. No tools required to remove them. The continuous duty motor eliminates overheating and assures ample power at all times. We could go on and on but better yet for more complete details please call us.



BERG
BUILDS EVERYTHING
BETTER FOR BARN

SEE YOUR LOCAL
BERG DEALER

AARON ZIMMERMAN
RD 1,
East Earl, Pa. 17519
215-445-5309

R. LAMAR HACKMAN
RD 2,
Mifflinburg, Pa. 17844
717-524-4901

ROBERT GUTSHALL
RD 1,
Womelsdorf, Pa. 19567
717-933-4616

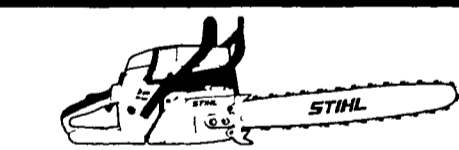
AREA
REPRESENTATIVE.
CHESTER INGRAM
RD 2,
Bellefonte, Pa. 16823
(Hublersburg)
814-383-2798

DONALD UPPERMAN
1126 N. Franklin St
Chambersburg, Pa.
717-264-6007

DOMBACH
EQUIPMENT INC.
McAllisterville,
Pa. 17049
717-463-2191

ROVENDALE SUPPLY
RD 2,
Watsontown, PA 17777
717-538-5521

CLAIR C. BEATTY
RD 4, Box 188A
Indiana, Pa. 15701
412-465-7368



**WHEN OTHER SAWS ARE
OVERHEATING, THE
STIHL 038AVE IS JUST
WARMING UP.**

We designed our newest pro saw to stand up under even the most extreme weather and cutting conditions. So to test it, we brought the Stihl 038AVE to the steamy hot jungles of Brazil. And with temperatures soaring past 95 degrees, this rugged saw bucked and limbed for hours on end.

The Stihl 038AVE. It can handle any mid size cutting job. Even when the heat's on.

STIHL
The World's Largest Selling Chain Saw

FREE DEMONSTRATION
Chain Saw - Concrete &
Metal Saw Rentals

STOLTZFUS
WOODWORK
RD Gap PA Box 183
1 Mile North Rt. 897 From Gap

A & B SALES
& SERVICE
2 Miles South of Rt. 23 Along 772
Thru Monterey RD 1 Ronks PA

MARTIN
HARDWARE &
EQUIPMENT CO.
Rt. 501 1 1/2 Miles South of
Schaefferstown PA
Phone 717 949-6817

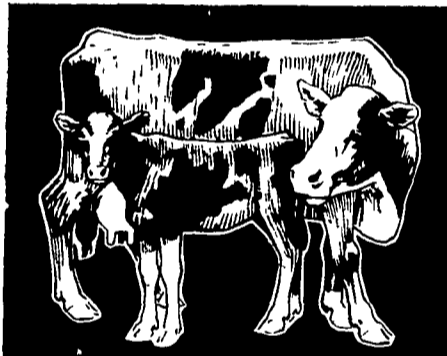
NORMAN H.
ZIMMERMAN
Myerstown RD 2
Phone (717) 866-4695
1/2 mile west Myerstown
West Main St

WES STAUFFER SALES & SERVICE

RD 3 Ephrata PA
Phone (717) 738-4215
Ephrata Exit New Rt. 222
1/2 Mile West on Rt. 322
Turn left onto Pleasant Valley Rd

Introducing The ALL NEW

**HONEY BROOK
NATURAL
20
ENERGI BLOCK**



For Dairy And Beef Cattle

Net Wt. 50 Lbs GUARANTEED ANALYSIS	
Crude Protein, Minimum	20 percent
Crude Fiber, Maximum	5 percent
Crude Fat, Minimum	1 percent
Calcium, Maximum	2.5 percent
Calcium, Minimum	1.5 percent
Phosphorus Minimum	2 percent
Salt	None
Vitamin A	25,000 USP per LB
Vitamin D	5,000 USP per LB
Vitamin E	10 IU per LB
Sugar as Invert	40 percent

INGREDIENTS Beet Molasses
Soybean Meal Phosphoric Acid
Calcium Oxide, Zinc Sulfate Ferrous
Sulfate, Manganese Sulfate Copper
Sulfate Ethylenediamine
Dihydroiodide (source of iodine) Cobalt
Sulfate, Vitamin A Palmitate, Vitamin D
Supplement Vitamin E Supplement
Soy Oil

**Contains NO
UREA - All
Natural Protein**

Remember...
ENERGIBLOCK con-
tains no salt and is
not affected by the
weather.



**FOR ADDITIONAL INFORMATION
CALL US.**



ZOOK MOLASSES CO.

WEST MAIN ST., BOX 160
HONEY BROOK, PA. 19344
Phone 215-273-3776
or 717-393-3987

Call toll free in area code 215 & 717
800 662 7464