

Total Farm Weed Control Practices Gaining Adherents

Agricultural Research Service

U.S. Department of

Agriculture A new concept called total farm weed control is gaining acceptance as the weed control specialist's "answer" to integrated pest management.

Total farm weed control is the process by which a farmer keeps pressure on the weed population in all crops and in all areas of his farm. The best possible methods of weed control are used throughout in order to purge all weeds from the soil profile. Weeds are not allowed to regenerate.

Total farm weed control is essential to the development of high-yielding agroecosystems. The latter must also include effective crop production and insect, disease, and nematode management practices.

A basic goal of the entire approach is the establishment of a quality environment.

Because there are many kinds of weeds with varying periods of germination and highly differing life cycles,

prevention and control of weed populations require an integrated total farm systems approach. The latter includes cultural, mechanical, biological, ecological, bioenvironmental and chemical methods.

Chemical control requires a broad spectrum of selective herbicides, mixtures of herbicides, and combination chemical treatments.

Although our best individual weed control practices have been used effectively, weeds continue to cause losses of about 13 percent of food production, valued at \$2.5 billion annually. It will be difficult to reduce these losses significantly unless total farm weed control is widely practiced.

It must be a farm-by-farm, area-by-area, region-by-region program or a farmer can only make annual progress. Research data shows that a particular weed can actually be wiped out of an area after three years of effective control. Eradication of a weed

specie, however, is not a practical objective.

With complete cooperation, total farm weed control will reduce chemical costs significantly. Here are some of the other benefits:

The general public benefits when farmers follow the concept, because we have fewer weeds in homelawns, gardens, waterways, and recreation sites.

The approach reduces human health problems caused by allergenic and poisonous weeds.

More efficient utilization of energy is realized with total farm weed control. As far back as 1957, our research emphasized that chemical energy would be required more in weed control and that mechanical energy would be used more effectively to transport chemical energy and to accurately place that energy in the specific amount, in the proper place, and at the exact time for it to perform its maximum work.

A 10-year study of chemical and cultural weed control methods by Dr. Fred W. Slife of the University of Illinois, Urbana, has proved that the principle of keeping maximum pressure on the weed population by the use of a series of herbicides and mixtures is not hypothetical. It really works.

It also suggests that crop rotation solely for the control of weeds is of much less importance as compared to previous years when selective herbicides were not available.

In the study, chemical weed control (1)

significantly increased yields, (2) reduced weed seeds in soils, (3) improved harvesting efficiency, (4) reduced labor requirements, and (5) dramatically increased net farm profits without damage to the biological, chemical, or physical properties of the soil.

In accomplishing all this, productivity of the soil was not impaired, nor were there any undesirable shifts in weed populations.

Dr. Slife's study clearly indicates that annual weeds can be controlled in intensive corn and soybean producing areas if the chemical and cultural control practices are based on the kinds of weeds present in the area.

The winter wheat crop under the conditions of this study allowed large numbers of weed seeds to be produced after harvest and, therefore, helped maintain the seed supply in the soil. Failure to control weeds in wheat after harvest poses a particular problem in a total farm weed control program.

Highest yields of an individual crop were achieved when this crop was grown in rotation with other crops rather than grown continuously.

Rotation of herbicides appeared to be a necessity in crop monoculture in order to prevent weeds that are resistant to a particular herbicide from increasing rapidly and becoming dominant.

Advances in total farm weed control have had a far-reaching impact on all phases of crop production, including the selection of crops and varieties, seedbed preparation, methods of seeding and seeding rates. These advances have made possible wide choice of row spacings, plant spacings in the row and plant populations. They also influence fertilizer practices, including time of application and placement.

As pointed out by other authors in this Bulletin, total

farm weed control improves the productivity of pastures and rangelands. The approach also has greatly increased the efficiency of following practices for weed control. The adoption of minimum tillage and chemical following practices greatly reduces wind erosion, improves fertilizer utilization, improves soil structure and drainage, and increases yields and quality

of crops.

Total farm weed control deserves the attention of everyone who wants to make weed control easier and less costly. By keeping constant pressure on the total farm weed population, the farmer will increase crop yields, reduce losses caused by weeds, reduce the cost of weed control, decrease the weed seeds in the soil, increase his profits.

PUBLIC SALE

OF FARM EQUIPMENT, FROM
7 FARMS AND DAIRY COWS
SAT., MARCH 22, 1975

9 A.M.

Located 3 miles East of Hessdale, turn off Route No. 222 on Bunker Hill Road to Weaver Road or 3 miles South of Strasburg [May Post Office Road] to Weaver Road, 1 mile West along Weaver Road, Strasburg Twp., Lancaster Co., Pa.

FARM EQUIPMENT CONSISTS OF:

A.C. 190 XT Diesel Tractor (wide axle)
A.C. D19 Diesel Tractor (wide axle)
A.C. D15 series 2 Tractor - 2 row cultivator
A.C. D15 Industrial Tractor with shuttle clutch-loader with bucket and fork
1953 Ford Jubilee Tractor
9N Ford Tractor
8N Ford Tractor and loader
600 Ford Tractor
BN Farmall Tractor
Farmall Super C Tractor
510 Massey Ferguson diesel combine 13 ft. head - air condition 1 yr. old (like new), I.H. model 127 combine 13 ft. head, 2 A.C. self unloading forage wagon, A.C. hopper blower, Heston self propelled hay bine with dropper head, Case hay bine model 550, New Idea mower and conditioner, New Idea mower, 40 ft. grain auger elevator on wheels, 2 tank manure spreaders, 2 grain wagons with gravity beds, A.C. 56F flail chopper, 2 Billian rotary mowers pull type - 3 point hook up, grass head for Gehl harvester, A.C. 16 disc grain drill (like new), A.C. 4 bottom trip plow, Ford 3 bottom trip plow 3 point hook up, A.C. disc harrow, A.C. disc harrow 3 point hook up, Ford 2 row cultivator 3 point hook up, 2 row cultivator for I.H. super H, 2-13 ft. cultipackers (Big Packers), 2 chisel plows, 2-3 section spring harrows, 2 rollers, grain drill, dump rake, 8 ft. cultipacker (double packers), 3 point adapter for A.C. tractor, Ford 1 row pull type corn picker, A.C. 303 baler with thrower, I.H. model 46 baler with thrower, 3 new Case 8 T wagons with high sides, A.C. 6T wagon with high sides, Case wagon with high sides, 2 bale elevators, A.C. no till 4 row corn planter, Hershey tobacco planter (like new), 5 double tobacco ladders (quick assembled ladders), single tobacco ladders, A.C. field sprayer, A.C. 780 forage harvester 2 row corn head and grass heads, Maccick mill and mixer, Owatonna mill and mixer, tractor driven corn sheller, flat bed wagon, 20 ft. flat bed trailer, 16 ft. flat bed trailer with sides, cattle trailer (2 wheels), 6T tag along trailer (new), 1961 H.D. 6 bulldozer with front end loader, V Snow Plow, highway snow blower, pull type road scraper, corn drag, portable fire water pump and hose, irrigation pump, 2-3 point scraper blades, tobacco lath, 4 bailing boxes, 2 grass seed drills, grass seeder PTO, seed cleaner, 6 electric motors (½ to 1 horse), air compressor, 6 fence controllers, salamander, 2-5 gal. grease guns, electric water pumps, V belts and hoses, iron hog tough, 2 circular saw blades, harness of all kinds, 5 gal. gas cans, animal vacuum cleaner, power brush on Stewart clippers, 20 HP electric fan, chain saw, pipe vices, gas motors, log chains, hydraulic rams, acetylene and oxygen tanks, new truck tire chains, tire changer, tobacco clippers, shovels and forks, power unit D.C. current, 55 K.W. alternator 110 and 220 volts A.C. current (new), Century portable heater, 6 coal and kerosene heaters, 150 tobacco plant boxes, 275 gal. gas tank, 150 gal. tank with pump, 500 gal. water tank, 16 ft. all steel feed trough, 10 ft. steel truck bed, liquid protein feeder, dairy supplies, electric water heater, milk cans suitable for water, milker pails and parts, 2 large 8 unit DeLaval milker pumps, 3 unit DeLaval milker pump, electric coke machine and a lot of small articles used on 7 farms.

1973 F-100 Ford truck ½ T A.T., P.S. and factory A.C.

1969 F-100 Ford truck 4 speed, 4 wheel drive

1969 Mercury Marquis car P.S., P.B., and factory A-C

Mobile Home 10 x 15 (Suitable for office)

60 Tons Straw

60 HEAD HOLSTEIN DAIRY COWS

This is a herd of high grade Holstein dairy cows. Mostly springers. Accredited to blood and TB.

Whirlpool 10 speed automatic washer, Kenmore dryer (like new), and refrigerator.

Order of sale: Small articles 9 a.m., farm equipment 10:30 a.m., dairy cows 1 p.m.

Lunch available.

SALE BY

MARVIN E. MILLER

GLENN FITE, Sales Manager

KERSEY A. BRADLEY

LLOYD KREIDER, Auctioneers

ESCHBACH, KIRK, TRIMBLE, Clerks

PUBLIC SALE

OF BEEF CATTLE,
FARM MACHINERY,
AND HOUSEHOLD GOODS

Along Maxwell Drive, 1 mile southwest of Unicorn 5 miles south of Quarryville, off Route 222.

SAT., MARCH 22, 1975

11:00 A.M.

27 Head of Beef Cattle

6 Angus cows, 1 Char. due soon

2 Angus bulls 1,000 lb.

2 Angus steers 900 lb.

2 Holsteins 700 lb.

3 Charolais heifers 500 lb.

2 Holstein steers, 4 Holstein heifers 600 lb.

2 Angus steers 450 lb.

2 Angus bulls & heifer 150 lb.

1 500 lb. brood sow

3 Case tractors; 2 VC Case tractors, 1 with cults.; 1 S.C. Case with cults; 2 2-bottom trailer plows; 2 discs; walking plow; potato plater; IHC 6 ft. mower No. 7; 2 hay tedder; weeder; John Deere manure spreader; IHC 2 row cornplanter; 2 iron wheel wagons; 3 sec. roller; 2 light rubber tired wagons; 2 wheelbarrows; hay loader; side delivery rake; 2 dump rakes; double 20 ft. tobacco ladders; 1500 lath; Minnich press; shears; spears; 2 row Stauffer tobacco planter; 2 wheel trailer; bob sled; saw buck; platform scales; hog troughs; 2 coal brooder stoves; Penna. 21 inch reel mower; 2 push mowers; 4 cross cut saws; vice; other articles not mentioned.

150 tomato baskets; old milk cans; 3 elec. motors; hand seeder; hammer; axes; wedges; 2 scythes; log chains.

1939 Chevrolet 4-Door Sedan

ANTIQUES

Blanket chest; spindle back rocker & chairs; Rayo lamp; extra wide ex. table with 9 boards and large lion head carved at each end of table; kerosene lantern; old bureau; wooden tub; jugs; porch bench; shoe lathe; 2 ship trunks; corn dryer; 3 wash boilers.

Frigidaire elec. stove; 2 Home Comfort cookstoves; Frigidaire refrigerator; Maytag washer; wash tubs; 2 Estate coal stoves; White sewing machine; 1 bedroom suite; 3 iron beds; metal wardrobes; library table; occasional table; 3 pc. living room suite; floor lamp; large wall mirror; cane seated chairs; bureau; clothes dryer; picture frames; 6 kitchen chairs; cream separator; dish pans & dishes; quart jars.

Small lot of Hay & Straw

Small brooder house.

Terms by,

Paul G. & Mable V. Weaver

Kreider & Diller, Aucts.

Lunch furnished

PUBLIC SALE

OF CATTLE, FARM EQUIPMENT
& POULTRY EQUIPMENT

Located along School Road, 2 miles East of Fleetwood. Follow Signs

TUESDAY, MARCH 18, 1975

10:30 A.M.

CATTLE: 35 head of Charolais, Angus and Holstein steers weighing from 500-900 lbs.

Case 500 tractor, Cockshutt 30 tractor, Cockshutt 20 tractor, Allis Chalmers WD tractor, Massey Ferguson No. 10 baler, N.I. No. 323 1-row corn picker, N.I. No. 290 9 ft. Mow-conditioner, Coop 7 ft. mower, Allis Chalmers 4-bar hay rake, J.D. 1240 4-row corn planter, J.D. 3-bottom 14 in. plow, J.D. corn sheller, Case 6 ft. combine with motor, Case No. 95 manure spreader, Johnson No. 40 loader, Grove forage wagon, Grain-O-Vator No. 10 auto. unloading wagon, T.S.C. 14 ft. dump wagon, T.S.C. 150 bu. gravity wagon, 2-16 ft. farm wagons, 1-50 bu. dump wagon, Gandy 10 ft. fertilizer spreader, tractor seeder, Coop 2-bottom 14 in. plow, Coop 8 ft. disk, Ford 4-section harrow, spike harrow, Coop 13-hole grain drill, 2-9 ft. cultipacker, Kingwise 30 ft. elevator, Cardinal 16 ft. elev., 1-16 ft. grain auger, T.S.C. 5 ft. rotary mower, weed sprayer, 12 kil. generator, International Cub Cadet with mower, Chief garden tractor with plow, cultivator and mower, 3 Quakermaid auto. feeding units, 600 ft. chain and trough, many hand feeders of various sizes and lengths, water fountains, nests, etc., egg cleaner and grader, forks, shovels, lots of good hand tools and items on wagon, all tools and equip. very clean and in good condition. Odds and ends of household goods. Approx. 20 ft. of excellent corn silage.

Terms by:

HAROLD ALTHOUSE

Auctioneer:

Alvin Horning, Jr., Fleetwood 683-8659

Elton Horning

Refreshments - Pioneer Grange