

Constructing an Inexpensive AG Chemical Rinse Pad

Simple, every-day solutions often exist to questions about proper agricultural (ag) chemical storage, mixing/loading and application. However, state and federal regulations are rapidly becoming more complex and restrictive, and more intricate solutions may be needed in the very near future to comply with changing surface and ground water protection requirements.

Faced with this prospect, many farmers and other ag chemical users are asking what they can do to be prepared for the new laws and regulations. Of course, no one has a crystal ball, but some areas of ag chemical use seem more vulnerable to change than others.

For example, ACRE has cautioned not to repeatedly load and rinse equipment in the same location and certainly not directly next to wells or surface water. Yet, it's a mistake commonly made, since that's where the water for mixing and rinsing is located. It is important to protect areas where loading or rinsing of sprayers and spreader equipment occurs.

What can golf supts. do? Golf supts. may want to construct a cement rinse pad to prevent inadvertently spilled ag chemicals from leaching into ground water or contaminating streams or ponds, and endangering the water that you, your family and neighbors drink. Designed properly, it can also serve as a secure ag chemical storage area and permit easy cleanup of spills incurred during ag chemical handling.

SIMPLE, EFFICIENT DESIGN:

There are many possible ways to design and build a cement rinse pad, but one we like was designed by Ronald T. Noyes, extension ag engineer at Oklahoma State University. His standardized, modular design

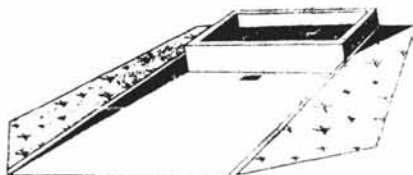
uses input from numerous engineers, researchers and regulators. A key feature is that it provides size flexibility, allowing golf supts. (as well as dealers) to scale the construction to their needs. Professor Noyes estimates construction costs for a 20x25 foot rinse pad, including professional labor, to be about \$900 to \$1300, excluding equipment such as sump pump and tanks.

Professor Noyes can provide detailed design specifications and cost information in his publication *Modular Farm-Sized Concrete Agricultural Chemical Handling Pads*. His address is: Cooperative Extension Service, 224 Ag Hall, Oklahoma State University, Stillwater, OK 74078.

The basic design for the Noyes' system guides the construction of a watertight, reinforced, concrete pad large enough to hold the largest application vehicle you use, plus containment areas dedicated to rinse-water storage tanks, mixing and loading equipment and for ag chemical storage.

The pad is sloped to the center and contains floor drains to sumps for easy cleanup. Steel-grated, shallow concrete collec-

(cont'd. page 18)



This sketch illustrates the type of ag chemical rinse pad/storage and containment facility you can build at home.



The Professional Choice



It's a great team. The best, most reliable commercial products and a dealer who takes care of you all year long.

See us today.

J.W. Turf, Inc.

Your John Deere Golf/Turf Distributor

14N937 Rt. 20 & 47
Hampshire, IL 60140
708-683-4653



Nothing Runs
Like a Deere®

JOHN DEERE

(AG Rinse Pad cont'd.)

tion sumps serve as sediment settling basins and are designed to collect spills and rinse water for transfer to above-ground rinsate tanks. A pump can also be used to move solutions directly from the drain valve on your sprayer into rinsate storage tanks.

CAPTURING WASTE WATER:

To use the rinse pad, a golf supt. drives his sprayer onto the concrete pad and makes sure that the sump drain valve (if installed) is locked in the closed position. Any leftover field-strength chemical and rinse water from the sprayer drain valve is pumped into a marked rinsate tank. Any spills can be hosed into the sump for later recovery.

Rinse water or rinsate can be stored temporarily in various types of holding tanks, including mobile nurse tanks. A good choice, however, is one or more 300-gallon, cross-linked polyethylene or fiberglass tanks(s). Liquid levels can be easily seen through these types of tanks. Noyes recommends that the rinse-water storage tanks be mounted three to five inches above the concrete floor so leaks can be spotted easily. Pumps and piping should be above ground, too, and contained within the rinse pad area.

Probably more than one rinse-water tank will be needed. By separating rinse water by use into different tanks, it can be used later as makeup water the next time the product or a compatible chemical is sprayed. Caution should be used to follow label instruction and mix only label-compatible ag chemicals.

Storage tanks are mounted on a level area at the back of the concrete pad, within low concrete walls high enough to contain an amount 10% greater than the volume of the largest rise-water tank should a severe leak occur. A separate sump in the containment area is needed to handle rainfall and potential rinse-water spills. It's important to keep sumps pumped dry so rain water and snow won't become a handling problem. Sumps should be checked and rinsed regularly.

STORAGE OF FULL-STRENGTH CHEMICALS:

When designing a rinse pad, it may be useful to consider adding extra convenience and greater environmental protection by including an area for storage of full-strength ag chemicals. For security as well as safety, this area should be designed to include security fencing and a locked gate. A weatherproof shed would be useful for those products that need weather protection.

Full-strength crop protection chemicals and rinse-water tanks can be stored in the same containment area, but they must not be stored in the same containment area as fertilizers and the rinse waters from them. Keeping crop protection chemicals and fertilizers separate within the containment area is accomplished by building a concrete subdividing wall. Separate sumps are needed within each subdivision.

SITE SELECTION:

Selection of a suitable site for the rinse pad is also important. It should not be in a location where the water source can be contaminated by an accidental spill. If possible, pick a site that hasn't been used for chemical storage, mixing/loading or equipment rinsing. If not possible, take precautions to remove contaminated soil or otherwise decontaminate the site before constructing a rinse pad.

(cont'd. page 19)



VERTI-DRAIN®
The Ultimate Solution For Compacted Soil

Mechanical Soil Technology

— Contract Aeration Service —
Serving The Entire Midwest

David Strang
Ph. 309-342-2419

442 Pine St.
Galesburg, IL 61401



Downers Grove, IL
Business

Bill Boyd 708-963-9088

Home
708-963-4510

Golf Course Remodeling, Expansion & Renovation Ponds,
Lakes, Waterways, and Ditch Work.



DIVISION OF CHRISTENSEN POWER EQUIPMENT

DISTRIBUTORS FOR:

RANSOMES

BOB-CAT®

BROUWER
TURF EQUIPMENT LIMITED



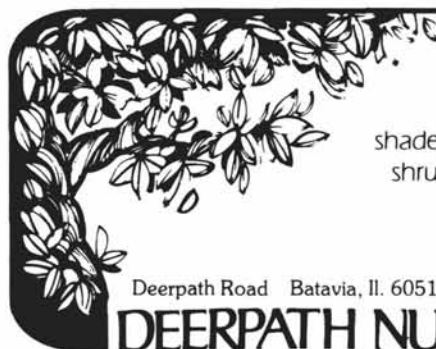
PROMARK PRODUCTS INC.

KUBOTA TRACTOR

R&R PRODUCTS CO.

Phone 708-301-8500

Phone 815-469-8500



Selected varieties of shade, ornamental trees, shrubs and evergreens.

Deerpath Road Batavia, IL 60510 708/879-0120

DEERPETH NURSERIES

DETAILS, DETAILS, DETAILS:

If you decide to construct a rinse pad, write to Professor Noyes for details and specifications. Then carefully review these with your cement contractor, paying particular attention to requirements for re-bar replacement, concrete strength, plastic admixtures and waterproofing.

OTHER REFERENCES:

Drawings and specifications from other sources are also available. They include:

- National Fertilizer Solutions Association
339 Consort Dr., St. Louis, MO 63011
- Farmsted Assessment System
University of Wisconsin, Ag Engineering Dept., Madison, WI 53706

Credit: "Heart Beat", 11/90

The following was taken out of the "Landscape Contractor/February 1985". It was written by John Schwarz when he was president of the association and this was one of his President's messages, tongue in cheek. John died of cancer in the prime of his life in 1984.

Necessary additions to your *Funk and Wagnell*, written after a few beers on a cold February day at Schwarz Nursery.

Aphid — (a-fid) one fid.

Boysenberry — (boys-n-berry) the male counterpart of the girlsenberry.

Cockscorn — (cocks-corn) a comb used by hairy roosters.

Dogwood — (dog-wood) a shrub distinguished by its bark.

Exfoliate — (ex-fo-le-ate) strip tease.

Foxglove — (fox-glove) mittens sold in fours rather than pairs.

Gladiola — (glad-he-ola) a happy male ola.

Humor — (hu-more) a shift of wit.

Inkberry — (ink-berry) a well-written fruit.

Judas tree — (jou-das tree) a gift for the person who turned you in to the IRS.

Kentucky coffee tree — (Ken-tuck-ee cough-ee tree) good to the last drop.

Leatherwood — (leath-er-wood) by Gucci.

Merrimac — (merry-mac) a happy hamburger.

Nematodes — (ne-ma-toads) toads from the planet Nema.

Odor — (oh-der) opposite of humor.

Peony — (pee-on-knee) I should have been more careful.

Quack grass — (quack-grass) something ducks smoke.

Russian olive — (rush-in olive) something that goes in a Vodka martini.

Scab — (scab) a disease of a non-union landscaper.

Toadstools — (toad-stools) an organic fertilizer provided by toads.

Umbrella tree — (um-brel-a tree) a tree needed at the Field Day.

Virginia creeper — (ver-gin-knee-a creep-er) an eastern low-life.

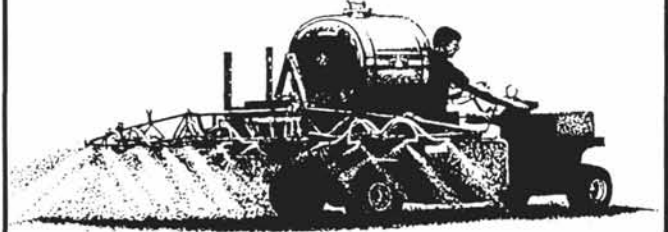
Witch's broom — (which-es broom) my mother-in-law's car.

Xerox — (zear-ox) it saves design time.

Yellow wood — (yell-oh-wood) the favorite tree of male canines.

Zoysia — (zoy-za) a grass not recommended for smoking.

Accurate Spraying with "CHEM-PRO"



Precision Spray Equipment for Professional Turf Managers
... that's Chem-Pro, a Division of Chem-Farm, Inc.

Ask anyone who uses Chem-Pro Sprayers, they all say, "It is the most accurate spray unit I have ever used." Features make the difference.

- Metercone Nozzles
- Level float boom
- Metered manifold
- Whirlfilter
- Magnetic mount electric control center
- Meter flow pump
- Stainless tank
- Four-way stainless jet agitator
- Float gauge with gallon indicator

We have a lot to offer
Try us for your
horticultural needs

For a demonstration, call: (708) 537-2177 or
FAX (708) 537-2199

Arthur Clesen, Inc.
543 Diens Drive, Wheeling, IL 60090



© 1988 AC

Let
the
Professionals
Blend
Your
Greensmix



The nation's leading soil blenders

Producing premium blends of sand and organic mixes since 1946.

GREENSMIX owns and operates high capacity soil conglomerators/homogenizers for precision blending of sand and amendments at, or near, your jobsite. **We travel anywhere in the USA or Canada to blend your rootzone mixture.**

CALL TOLL-FREE 1-800-537-1796

GREENSMIX
A DIVISION OF FAULKS BROS.
CONSTRUCTION, INC.

Christine Faulks
715-258-8566
FAX: 715-258-8750