## What is the Environmental Impact of Agriculture on our Community?



## Utilizing Technology To SOLVE

Water Quality Issues

#### West Sandy Watershed Project

→ 52,000 acres in Henry Co. TN

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→ 34,000 Forest
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♦ 8.000 Crops

10,000 Pasture

14,000 People

Four Tributaries

West Sandy Creek Embayment

#### IDENTIFIED POLLUTION PROBLEM

Non Point Sources

Complexities

Overall Objective

#### **PRIORITIES**

- ◆ Inform Public
- Develop Positive Attitude
- Implementation Team Approach
- Cooperative Agencies (\$)

# Over 200 Structural Best Management Practices

were implemented by West Sandy Basin Landowners

#### No-Till was the Rule

NOT THE EXCEPTION

### Henry County, TN Soil Lysimeter Test

Gerald Bomar
Dickie Brewer
1998,1999,2000

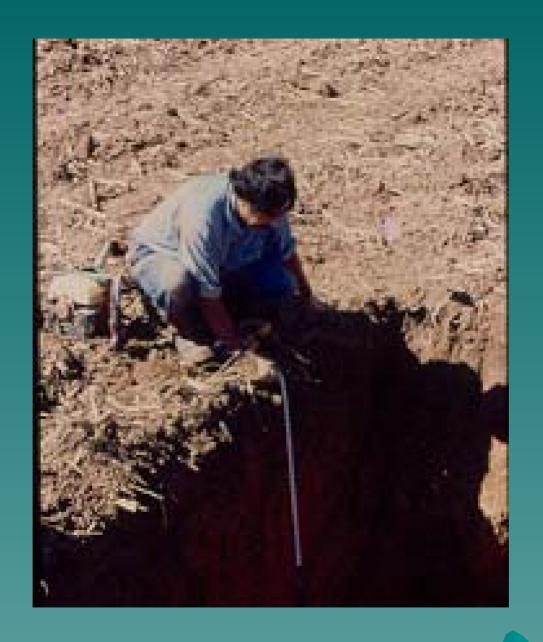
#### Crop and Soil Line

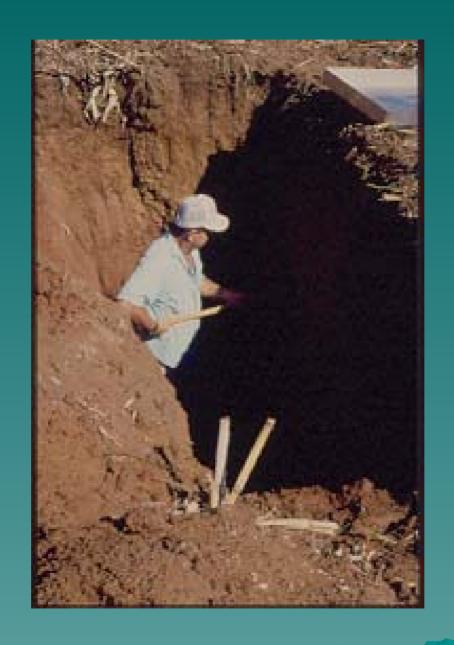
36 inches down to Collection pan

48 inches farther down to Collection Jar





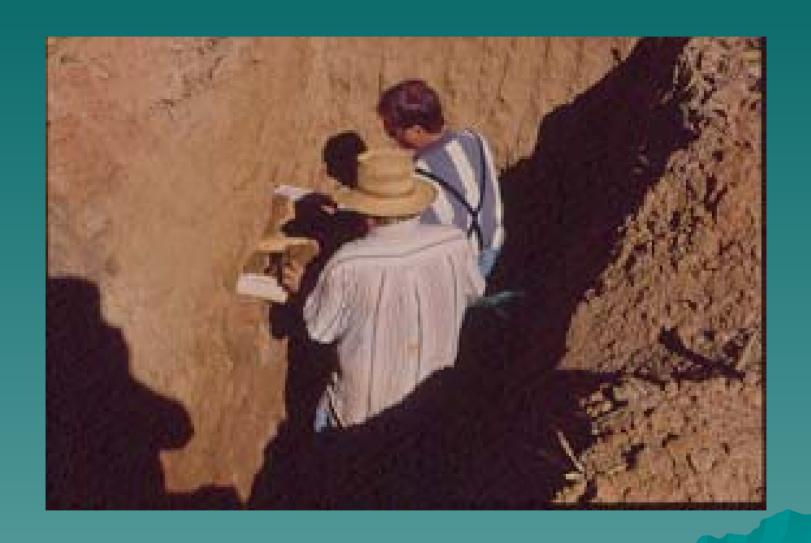


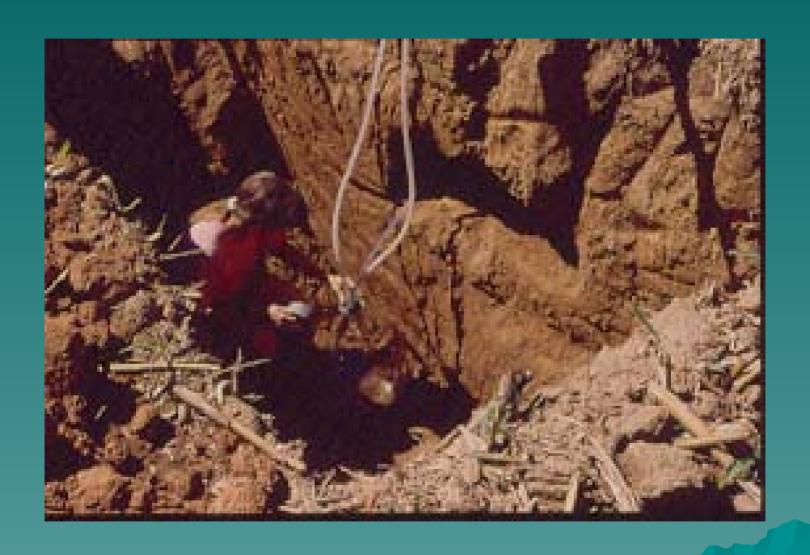


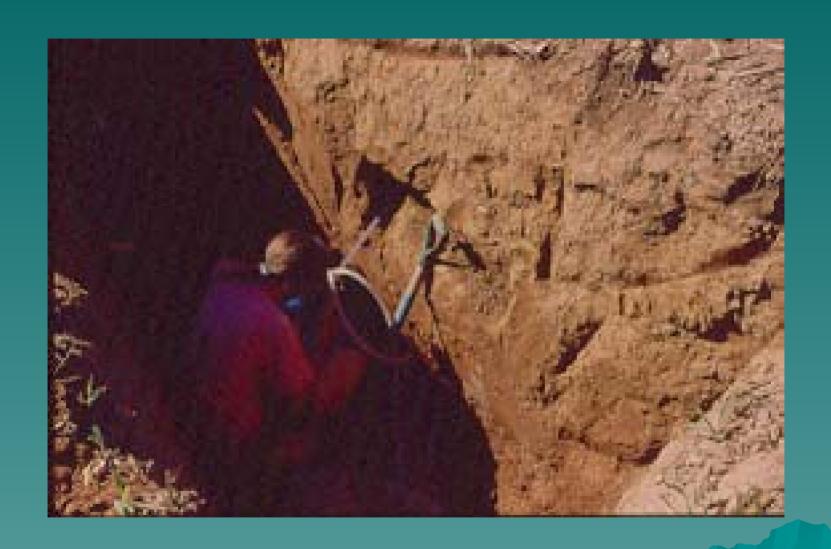






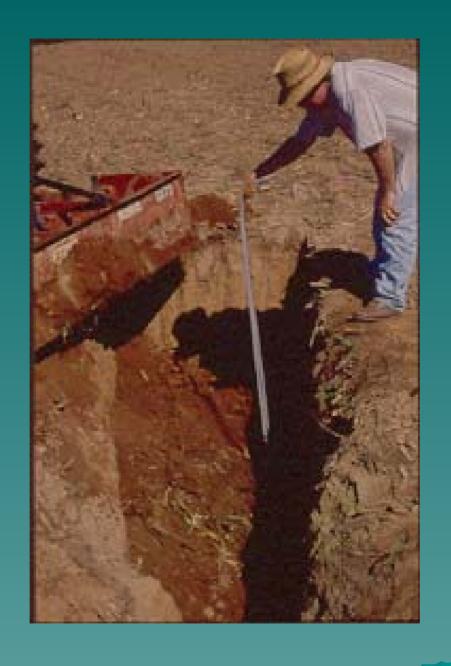


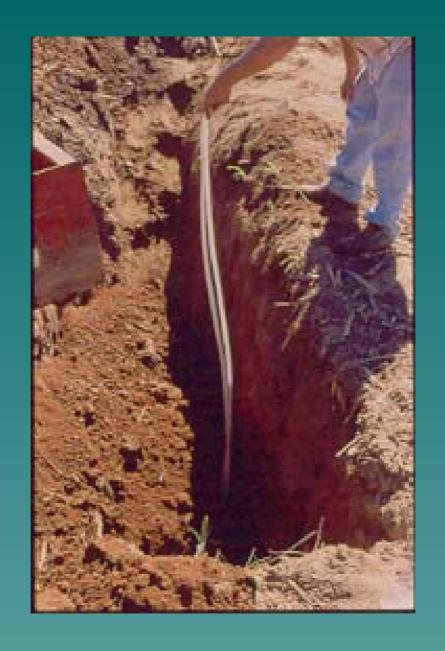


















#### Specifics of the Two Sites

- Bomar Site
- 5 Lysimeter Pans
- ◆ 100 ft. apart
- Memphis Silt LoamSoil Type

- Brewer Site
- 4 Lysimeter Pans
- ◆ 100 ft. apart
- Lexington SiltLoam Soil Type

## TN Dept. of Agriculture Tested for:

PPM - Nitrate Nitrogen PPB - Atrazine

Maximum Contamination Levels
Nitrate Nitrogen 10 PPM
Atrazine 3 PPB

#### **BOMAR SITE**

→ 1997 - Corn 140# N

2 qts. Atrazine

◆ 1998 - Wheat /Soybeans 94#N-wheat

◆ 1999 - No-Till Corn 163# N

2 qts. Atrazine

→ 2000 − Conv. Corn 163# N 1 qt.

#### BOMAR SITE

1997 (CORN FOLLOWED B	Y WHEAT PLANTED 1	IN OCTOBER)
	NO3N	ATRAZINE
DATE	(MCL @ 10 ppm)	(MCL @ 3 ppb)
01/20/98	12.70	.92
02/20/98	7.60	1.30
03/24/98 (TOP DRESSED WHEAT	10.80	1.26
05/21/98 (PLANTED SOYBEANS)	11.80	.58
06/25/98	5.30	.66
09/14/98	.00	.12
12/09/98	8.70	.00
02/09/99	.00	.28
04/08/99 (PLANTED CORN)	.01	.00
05/26/99	4.90	9.30
07/14/99	17.00	9.00
11/16/99	2.10	1.30
04/10/00 (PLANTED CORN)	8.30	1.00
11/21/00	<u>.36</u>	00
AVERAGE	6.39	1.80

#### BREWER SITE

1997 – CO	RN OCTOBER 1 <sup>ST</sup>	to APRIL 15 <sup>TH</sup>	
BEEF CATTLE GRAZED CORN STALKS			
	NO.	3N ATRAZINE	
DATE	(MCL @	10 ppm) (MCL @ 3 ppb)	
01/20/98	.84	.00	
02/20/98	.26	.00	
03/24/98	.00	.00	
05/21/98	(PLANTED SOYBEANS) .26	.04	
06/25/98	.00	.00	
09/14/98	.00.	.00	
12/09/98	14.00	(DECOMPOSING RESIDUE) .00	
02/09/99	.00	.00	
04/08/99	(PLANTED CORN 190# N) .00	.00	
05/26/99	28.04	7.03	
07/14/99		3.50	
TURNED II			
11/16/99	139.00	2.70	
PLANTED SOYBEANS			
04/10/00	<u>50.80</u>	<u>1.00</u>	
11/21/00	.27	.00	

#### UT Agricultural Extension Service



Program by:
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