

2012/2013 Roadside Cropland Transect Survey



Coordinated by:
Capital RC&D Area Council
www.capitalrcd.org



2012/2013 Roadside Cropland Transect Survey



**GOAL: TO GATHER ACCURATE AND
RELIABLE DATA ON THE USE OF
CONSERVATION TILLAGE PRACTICES
FOR COUNTIES WITHIN THE
CHESAPEAKE BAY WATERSHED IN
PENNSYLVANIA.**

2012/2013 Roadside Cropland Transect Survey



DATA COLLECTION WAS GUIDED BY
CONSERVATION TECHNOLOGY INFORMATION
CENTER (CTIC) PROCEDURES FOR CROPLAND
ROADSIDE TRANSECT SURVEY

[HTTP://WWW.CTIC.PURDUE.EDU/CRM/](http://www.ctic.purdue.edu/crm/)

DATA WAS SUBMITTED TO CTIC FOR
AUTHENTICATION AND PUBLICATION

2012/2013 Roadside Cropland Transect Survey



CTIC – CONSERVATION TECHNOLOGY
INFORMATION CENTER, WEST
LAFAYETTE, IN

- County Level Data 1989-2012
- By crop and tillage type: no-till, mulch till, reduced till and conventional till



Scope

Location

Twenty-six Pennsylvania counties within the Chesapeake Bay watershed and with greater than 50,000 acres of cropland

2012

- Adams
- Bedford
- Blair
- Cambria
- Cumberland
- Dauphin
- Franklin
- Fulton
- Huntingdon
- Juniata
- Lancaster
- Perry
- Snyder
- Union
- York

2013

- Bradford
- Centre
- Clinton
- Columbia
- Dauphin
- Franklin
- Lebanon
- Luzerne
- Lycoming
- Mifflin
- Montour
- Northumberland
- Schuylkill
- Susquehanna
- Tioga



Scope

Spring 2012 and 2013

Timeframe

- After spring planting and emergence of crop
- Before canopy closure (for easy visibility)
- Approximately seven weeks

Method

COUNTY TEAMS

- 1. COUNTY REPRESENTATIVE**
– ROUTE DEVELOPMENT AND DRIVING
- 2. CONSULTING TECHNICIAN**
– EXPERIENCED IN CROP RESIDUE OBSERVATION DETERMINATION
- 3. DATA ENTRY INTERN/TECH** – ENTER GPS WAYPOINTS AND OBSERVATION, MAKE NOTES ON MAP FOR FUTURE SURVEYS



Method



SURVEY OF ALL SIGNIFICANT CROP AREAS IN THE COUNTY

- INCLUDES ENTIRE COUNTY - CHESAPEAKE BAY DRAINAGE AND NON-BAY DRAINAGE
- OBSERVATION STOPS TAKEN EVERY 0.1 OR 0.2 MILE (ONE OR TWO-TENTHS OF A MILE) BY ODOMETER READING. **CONSISTENT INTERVAL DISTANCE IN EACH COUNTY**
- EACH STOP INCLUDES TWO OBSERVATIONS – LEFT SIDE AND RIGHT SIDE OF CAR

Method

AT EACH STOP

- **IDENTIFY CROP**
- **IDENTIFY PERCENTAGE OF CROP RESIDUE ON FIELD AND NO-TILL USE**
 - 0-15%
 - 15-30%
 - 30-50%
 - Over 50%
- **IDENTIFY LAND USE (IF NOT CROP)**
 - Easily identified categories
 - Includes other agricultural uses and non-agricultural uses



Method



REQUIRED

- **460 *CROP RESIDUE* OBSERVATIONS**
- **AT A MINIMUM – 130 MILE ROUTE TRAVELED**

Quality Assurance/ Quality Control



- 1. TRAINING**
- 2. CONSULTING TECHNICIAN EVALUATION**
- 3. LIMITED NUMBER OF CONSULTING TECHNICIANS WORKING IN MULTIPLE COUNTIES**
- 4. REVIEW OF FIVE-PERCENT OF CONSULTING TECHNICIAN OBSERVATIONS**
- 5. AUTHENTICATION AND PUBLICATION BY CTIC**

Results

2012/2013 Tillage Survey - Summary of Observations							
County	Number of Crop observations	Total acreage of crops observed (data from NASS previous year)	Percentage observations w/ residue <30	Percentage observations w/ residue >30	Percentage No-till observations (all residue levels)	Percentage conventional till observations (all residue levels)	
2013 Survey							
Bradford	484	47,690	80%	20%	28%	72%	
Centre	483	97,170	63%	37%	66%	34%	
Clinton	548	42,477	35%	65%	84%	16%	
Columbia	508	39,782	31%	69%	76%	24%	
Dauphin	472	79,549	56%	44%	75%	25%	
Franklin	475	206,539	60%	40%	82%	18%	
Lebanon	478	125,800	62%	38%	56%	42%	
Luzerne	460	30,475	53%	47%	62%	38%	
Lycoming	460	84,080	72%	28%	42%	58%	
Mifflin	494	58,250	71%	29%	54%	46%	
Montour	521	41,960	30%	70%	75%	25%	
Northumberland	586	117,893	20%	80%	86%	14%	
Schuylkill	482	97,972	45%	55%	65%	35%	
Susquehanna*	258	36,219	88%	12%	20%	80%	
Tioga	486	57,572	52%	48%	54%	46%	
2012 Survey							
Adams**	461	76,132	48%	52%	52%	48%	
Bedford	474	46,220	65%	35%	37%	62%	
Blair	509	37,046	63%	37%	65%	35%	
Cambria	471	30,644	74%	26%	35%	65%	
Cumberland**	460	85,632	53%	47%	46%	54%	
Dauphin	462	47,934	64%	36%	64%	35%	
Franklin**	481	114,789	58%	42%	27%	73%	
Fulton	491	20,073	49%	51%	59%	41%	
Huntingdon	451	37,484	58%	42%	55%	45%	
Juniata	461	37,729	74%	26%	59%	41%	
Lancaster	475	187,407	54%	46%	42%	58%	
Perry	460	39,780	50%	50%	51%	49%	
Snyder	464	37,816	47%	53%	52%	48%	
Union	465	39,114	26%	74%	76%	24%	
York	481	140,081	45%	55%	44%	56%	



Land Use Counts & Non-Crop Forage Points

Land Use Key	Bradford			Centre			Clinton			Columbia		
	Land Usage	Qty	Forage	Land Usage	Qty	Forage	Land Usage	Qty	Forage	Land Usage	Qty	Forage
Animal Feeding Operation	AFO	2		AFO	1		AFO	3		AFO	0	
Pasture with Riparian Area	PR	0		PR	0		PR	0		PR	0	
All Other Pasture	AP	44		AP	35		AP	54		AP	13	
Alfalfa	ALF	10		ALF	7		ALF	28		ALF	5	
Grass (for Hay)	GR	115	169	GR	81	123	GR	73	155	GR	62	80
All Other Crops	AOC	0		AOC	0		AOC	0		AOC	6	
Fallow and CRP	FCRP	5		FCRP	0		FCRP	0		FCRP	8	
Construction/Mining	CM	0		CM	0		CM	0		CM	0	
Developed - Impervious	DI	5		DI	46		DI	49		DI	4	
Developed - Pervious	DP	88		DP	7		DP	16		DP	123	
Forest - Undisturbed	FOR	49		FOR	25		FOR	54		FOR	41	
Forest - Disturbed	FD	0		FD	0		FD	0		FD	3	
Water Bodies	WB	5		WB	0		WB	0		WB	12	
Winter Grain	WG	1		WG	13		WG	13		WG	0	
	TOTAL	324		TOTAL	215		TOTAL	290		TOTAL	277	

For more information contact:

Susan Richards
Capital RC&D
srichards@capitalrcd.org
(717) 241-4361

