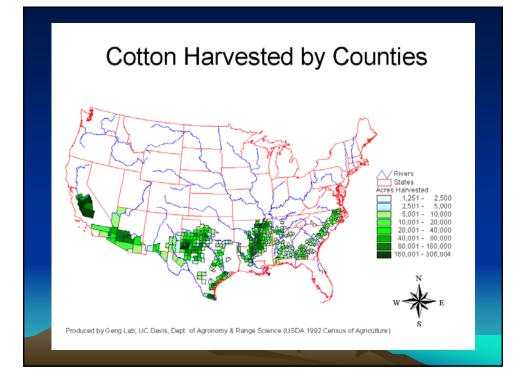


- Databases are the key for Environmental Management
- Computer technology is still advancing at a dizzying pace

Data by itself has limited value, and its value decreases with time

What have I done and How did I get to this point

- Agronomy & Range Science 1997-2001
- Gis with ArcInfo and ArcView
- Mapping United States Ag Production



Basins EPA'S Watershed Modeling Program

- Basins is a Program and Database for Watershed Analysis
- Distributed By US EPA at no charge
- Program is Available on the Internet
- Data for Any Watershed in the US is available on the Internet for downloading at no cost

Basins 3.0 - is the latest version (June 2001)

Introduced to Pur Data

- Data by year was available on CD-Rom
- First problem was with Outliners
- Calc Mean & Std and look for data > 3*Std
- Most Outliners easy to correct with analysis
- Outliners Easy to Remove with simple script
- Understanding Chemicals by Target Problem
- Understanding Chemicals by Potential Harm

How could the PUR data be used

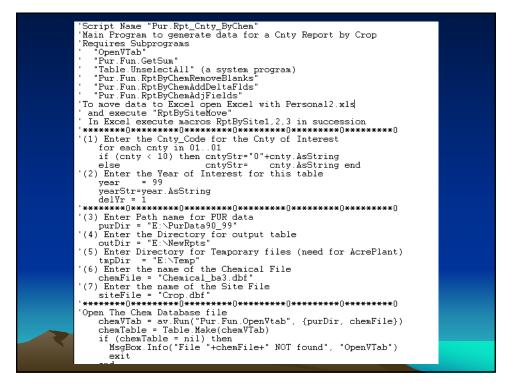
- Generate Reports of Applications by Year
- By Counties, Crops, Chemicals
- Generate Maps of Applications
- Who would be interested in Reports or Maps
- How do Corporations generate Reports
- Reports are designed for managers

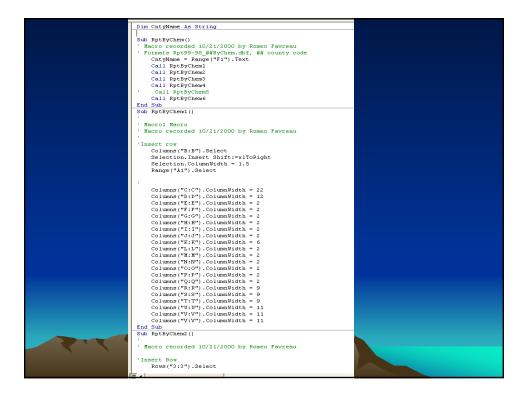
How could the PUR data be used

- Most Reports usually have 2 years of data
- To Provides a view of Present Status
- And a view of Direction
- At this time 1998-1999 Hard Disks ~ 1GB
- To have multiple years we needed ~ 5GB
- 20GB Hard Disks just became avaiable

How could the PUR data be used

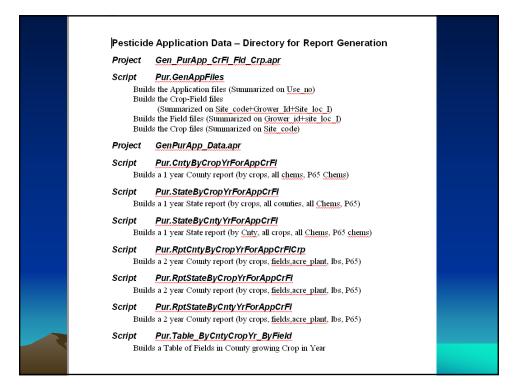
- To Generate Reports from Multi-year data
- ArcView provided "Avenue", a programming language good for database management and automatic map generation
- Reports require formatting for easy reading
- Excel provides excellent macro generation capability using Visual Basic





How could the PUR data be used

- Reports for the State Overall View
- Reports for the Counties Local View
- Reports by crops & fields Crop View
- Reports by crops & grower Grower View
- Reports to people who make decisions
- Ag Commissions & Growers
- Crop Boards Extensions agents



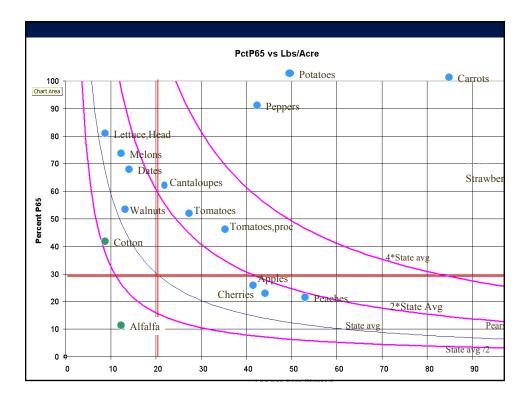
Calif DPR								1999 - 191	98								Ptr	C
the Later device 1 (b)				Caltornia	State	1.99.9		1,990										-
ite_rame	598 Lbs Om	S99 Lbs Dm	Della Ubs Ohm	S98 AG Fields	SHO AL	Della	S98 Aure anted	S99 Aire Planted	Della Vi Pl	S98 Lbs Acre Pl	S99 LLs Acre R	Del Lis Acre Pi	S98 Lbs Chm Bad	S99 Lbs Chm Bad	Delta Chem Bad	S98- Put Bad	S00- Put Bud	De Po
inal .	205003,626	106,137,043	(8,866,582)	180,769	140,073		i 🖬 🗲	,257,4	072 6		2120	(0.60)	62,846,783	67,644,005	4,697,222	26.78	29.34	
						1501	55	1			/							Æ
RAPES, WINE	34,340,297 35,538,027	32,601,053	(1,659,244) (5,566,067)	8,207	8,560	355	460,023	400,012	19,409	77.40	68,00	(0.50)	1,227,111	1,705,050	(01,436)	3.57	5.48 452	
4MOND	16,392,661	16 582,147	(810,614)	8,922	8,740	(104)	683,862	681,400	(0.043)	28.10	26.80	(1.30)	2786063	2,006,176	(01,430)	22.10	10.22	H-
OMATOES, FOR PROCESSING/C/		13,080,011	1,262,008	4011	4,581	670	320.411	364,407		28.10	35.90	0.00	3,778,152		1522711	3197	40.53	++-
TRAWBERRY (ALL OR UNSPEC)	7,483,952	0,325,440	1,841,497	1,524	1,030	106	62,202	52,851	640	143.40	176.40	33.00	4,957,810	0,000,002	1,103,082	6624	64.89	Ht.
RANGE (ALL OR UNSPEC)	10 450 405	9.049.013	(1.418.673)	6,390	6.104	(205)	212,387	208.582	(0785)	49.30		(5.90)	1074226	190.450	(180,750)	10.25	987	itt.
OTTON, GENERAL	11,372,276	0.927.277	(2,444,999)	11,349	10,627	(722)	1,032,265	995,105	(37,079)	11.00		(2.00)	4040,247	3,002,616	(965,631)	3560	3453	
												1						
ARROTS, GENERAL	7,269,796	8,252,609	1,082,813	1,626	1,630	105	101,589	98,840		71.60	8450	12.90	6,818,531	7,862,976	1,044,444	9379	94.14	44
UGARBEET, GENERAL	6,094,602 6,090,656	6.017.723	933,121	5,402	2,110	20.5	462502	159,483 409,434		33.60	3770	4.10	381,188	410,100	28,938	2,50	681 3386	4
ICE (ALL OR UNSPEC) LEALEA (EORAGE - EO DOER) (AL	4,104,056	4,907,855 4,151,137	46,253	5,402	5,770	358	462502	1,008,303		4.10	10.20	0.00	1,779,405	1,500,632	(140,935)	3498	3338	H-
DADA (FURNOE - FUDUER) (AL	6,112,607	4,101,107	(008,807)	4.468	4.418	(60)	79,250	78.386		64.60	6260	(11.90)	607.632	679,204	71.672	11.88	16.46	H
BMON	4059,589	3,779,255	(280,434)	1,509	1,425	(84)	56,190	63,755		72.20	70.30	(1.80)	239.651	252,378	12,727	5.90	6.68	H
OIL APPLICATION, PREPLANT-OU		3 200 133	799,299	1,204	1,605	241	71,770	72,254		34.40	45.20	10.80	2,078,385	2,891,081	812,000	8426	88.52	H
OTATO CONNITE, IRISH, RED, RUS		2,748,975	721,198	821	842	21	54,470	55.543		37.20		12.30	1,095,957	2,650,332	754375	9350	98.41	it.
HANUT (ENGLISH WHANUT, PER		2.097.150	(1.259.936)	4077	4.662	(215)	195.551	194,707		20.20	13.90	(6.30)	1.091.004		(84281)	35.15	41.44	th
E/R	2578530	2,560,966	(15,584)	704	655	(49)	21,262	20.036		121.20	127.80	6.60	244819	167,247	(87,272)	0.40	6.14	it.
ECTARINE	2,132,139	1,995,055	(137,084)	3,022	2,002	(00)	42,096	-40,287		50.60	49.50	(1.10)	304666	247,742	(56,924)	1429	12.42	th:
RUNE	2852375	1,959,755	(692,625)	1,835	1.050	(179)	98,952	90,104		25.80	2170	(5.10)	341,434	415.687	74253	12.87	2121	H
WEET POTATO	1042106	1,004,470	042,204	312	267	(45)	7,000	7,440		133.10	253.00	119.90	1,036,752	1,878,053	041,001	99.41	99.55	itt.
OUTOR CONTAINER/FLD GRIMN	1568,000	1,725,268	167.268	1,116	1,138	21	24603	34.161		45.40	60.60	6.10	1238619	1,326,818	87.199	78.99	76.84	tt.
ETTUCE, HEAD (ALL OR UNSPEC	1502779	1,045,591	142,812	8,432	8,481	49	192,837	179,014		7.80	9.20	1.40	1,071,132	1,189,871	118,739	71.28	7231	it.
OMATO	1,803,866	1,598,209	(215,657)	1,172	1,111	(01)	64781	60,215		32.90	28.30	(4.60)	768,576	705.015	(02.001)	42.01	44.45	cπ
LUM (INCLUDES WILD PLUMS FO		1,508,728	(228,946)	2.612	2.564	(48)	37,521	38,116		47.90	43.40	(4.50)	176,828	138,811	(38,017)	9.85	8.88	iT.
W/LE	1,000,582	1,521,513	(367,049)	1,459	1,379	(90)	40,440	38,939		46.70	41.20	(5.50)	386,416	300,940	(85,476)	20.46	1978	Œ
ISTACHO (PISTACHE NUT)	1,668,628	1,424,276	(134,263)	034	082	48	00,054	94,622	4,568	17.30	16.10	(2.20)	110,922	184,388	73,466	7.12	12:06	Œ
ANTALOUPE	1,362,221	1,293,283	41,182	916	889	Q7)	64,958	66,920	1,962	20.80	20.80	0.00	677,487	786,133	107,646	60.10	66.36	Æ
EPPERS (FRUITING VEGET ABLE)	879,798	1,202,215	382,417	791	705	(20)	34,628	29,714	(4,0,14)	25.40	42.60	17.10	708,866	1,001,040	382,183	80.57	80.44	ίT.
NION (DRY, SPANISH, WHITE, YE	991,242	987 D13	(4,229)	1,378	1,450	82	70,650	84,090		12.40		(0.70)	597,550	667,300	59,540	60.29	67.61	Œ
OUTOR GRWN TRNSPLNT/PRPC		903,475	(75,223)	545	494	(61)	11,165	9,954		94.00	98.80	4.00	768,976	733,393	(35,583)	7263	7457	П
ORN(FORAGE: FODDER)	1,146,530	065,812	(179,717)	6,103	6,660	(66.3)	368,120	326,428	(41,692)	3.10	3.00	(0.10)	674,976	648,140	(26,7.56)	68.91	67.11	1
VATERMELONS	982,940	964,029	(18,911)	242	610	117	16,907	20.281	3374	58.10	47.50	(10.60)	803,567	737.672	(65,995)	81.75	70.51	-
HERRY	783,829	888,319	102,490	8.58	895	37	19,363	20.071		40.50	4420	3.70	93,993	155,903	61,910	11.99	17.59	it i
ETTUCE, LEAF (ALL OR UNSPEC)	105.648	765.474	(130,174)	7,678	7.608	18	112,444	114,718		7.90	6.70	(1.20)	664049	666 220	(98,710)	7414	73.86	itt.
OUTDR GRWN CUT FLWRS OR	763,836	739.873	(14,192)	6.61	617	(44)	14210	14,308		62.70	6170	(0.0)	666,202	534,459	(30,8.43)	7499	72.26	11
ROCCOLI	667,902	733.065	65,763	7740	8,390	650	163,899	152,543		4.30	480	0.50	389,236	520,484	140,248	68.28	72.17	it.
LIVE (ALL OR UNSPEC)	561,336	711,132	149,795	976	9-48	(28)	27,464	28,547		20.40	26.80	6.40	58,949	69,703	10.754	10.50	080	m
MOCADO (ALL OR UNSPEC)	417,918	593.771	175,853	1,583	1,748	105	40,388	44,737	4,349	10.30	13.30	3.00	30,392	29,414	(978)	7.27	495	Œ
PRICOT	601,867	664,612	(47,246)	8.46	737	(10.9)	20,670	18,005	(0,676)	29.10	3260	3.60	67,516	47,665	(19,861)	11.22	8.59	Æ
NOULT MATED AGRICULTURAL /	665,992	480,928	(75,064)	2,037	2,093	(\$44)	147,886	122,187	(25,599)	3.80	3.90	0.10	326,263	334,935	9,672	68.60	69.8-4	ſΤ
ERMUDADRASS (FORAGE - FOD)	374,534	-401 (0-45	87,111	394	365	(39)	30,783	28,752	(2 # 31)	12.20	16.10	3.90	16,785	20,092	3,307	4.48	435	Æ
HEAT, GENERAL	548,021	421,126	(125,895)	5,948	4,335	(1,613)	510,205	338,555	(171,6-49)	1.10	1.20	0.10	121,674	111,243	(10,431)	22.20	26:42	П
SPARAGUS (SPEARS, FERNS, ET	374,425	393,337	18,911	890	909	70	41,515	42,548		9.00	9.20	0.20	176,005	198,957	23,292	46.92	50.59	П
EANS, DRIED TYPE	3:37,9:37	369,820	31,883	1,497	1,668	61	89,511	\$2,203	2/602	3.80	4.00	0.20	183,833	206,273	21,440	64.40	65.5.1	П
ELERY, GENERAL	474,246	363,514	(110,832)	1,836	1,681	(165)	41,208	40,013		11.50	9.10	(2.40)	297,367	206,763	(91,604)	62.69	66.60	44
RAPEFRUIT	377,669	339,000	(08,003)	6-43	659	(84)	16,942	15,260		22.30	22.30	0.00	32,635	25,985	(0.0.50)	8.04	7.85	11
ELONS	573,980	339,421	(234,559)	446	-440	3	27,707	28,185	(1522)	20.70		(7.70)	393,802	227,721	(166,081)	68.61	67.0.9	1
DRN, HUMAN CONSUMPTION	412736	324,309	(99,427)	1,810	1,403	C971	82,637	63,254		5.00	5.10	0.10	287,374	183,053	(104221)	69.63	50.44	4
RNAMENTAL TURF (ALL OR UNS	233,080	302,121	69,041	120	132	12	7,900	9,676		29.60	3120	1.70	216,112	270,636	64,424	02.20	02.52	44
EAS, GENERAL	280,280	253,116	(27,284)	607	487	(20)	9,177	7,659		30.60	33.50	2.90	10,203	13,198	2,995	3.64	621	14
AULIFLOWER	190,895	228 297	35,402	3,089	3,440	351	48,112	51,119		4.00	4.40	0.40	111,093	152,484	40,791	58.51	67.38	44
PINACH	244214	224,294	(19,920)	2,056	2,457	401	35,680	38,711		6.80		(0.70)	186,831	151,980	(34,851)	76.50	67.76	4
ARUC	470,293	211,209	(259,004)	629	541	(07)	67,997	51,734		0.10		(4.00)	199,909	95,726	(104,102)	42.51	45.32	44
RUSSELSSPROUTS	186,172	180,898	(5,274)	130	147	17	3,286	4,678		65.00	39.50	(15.50)	173072	166,332	(6740)	92.95	9195	44
NIGERINE (MANDARIN, SATSUM	100,074	179,822	13,148	316	289	<u>an</u>	7,906	0,495		21.10	27.70	0.0	12,822	13,840	1,018	7.09	770	4
GRNHS GRWN CUT FLWRS OR	128,809	178.087	49,258	296	268	(28)	3,623	1,854	(1,7.59)	35.60	95.50	59.90	63,890	42,620	(21,270)	49.00	23.93	11

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			Delta		S98 AG	S99 Ag		Delta		S98 Acre	S99 Acre	1	Delta
Site_name	S98 LbsChm	S99 LbsChm	LbsChm		Fields	Fields	1	Fields		Planted	Planted		Acre PI
							Ц					4	
otal	205,003,625	196,137,043	(8,866,582)		180,759	180,073	11	(686)		9,430,613	9,253,400		177,213
RAPES, WINE	34,340,297	32,681,053	(1,659,244)		8,207	8,563	H	356		460,823	480,312	\square	19,489
RAPES	35,638,027	30,071,960	(5,566,067)		10,375	10,191		(184)		459,064	453,415		(5,649
LMOND	16,392,661	15,582,147	(810,514)		8,922	8,749		(173)		583,862	581,490		(2,372
OMATOES, FOR PROCESSING/CA	11,818,003	13,080,011	1,262,008		4,011	4,581		570		320,411	364,407		43,996
TRAWBERRY (ALL OR UNSPEC)	7,483,952	9,325,449	1,841,497		1,524	1,630		106		52,202	52,851		649
RANGE (ALL OR UNSPEC)	10,468,486	9.049.813	(1,418,673)		6,390	6,184		(206)		212,367	208,582		(3,785
OTTON, GENERAL	11,372,276	8,927,277	(2,444,999)		11,349	10,627		(722)		1,032,265	995,186		(37,079
ARROTS, GENERAL	7,269,796	8,352,609	1,082,813		1,525	1,630	Π	105		101,589	98,840	Π	(2,749
UGARBEET, GENERAL	5,084,602	6,017,723	933,121		1,905	2,110		205		151,492	159,483		7,991
ICE (ALL OR UNSPEC)	5,090,656	4,987,655	(103,001)		5,402	5,770		368		462,502	489,434		26,932
LFALFA (FORAGE - FODDER) (AL	4,104,884	4,151,137	46,253		15,276	15,017		(259)		1,004,670	1,006,383		1,713
EACH	5,112,607	4,125,800	(986,807)		4,468	4,418		(50)		79,250	78,385		(865
EMON	4,059,689	3,779,255	(280,434)		1,509	1,425		(84)		56,190	53,755		(2,435
OIL APPLICATION, PREPLANT-OU	2,466,734	3,266,133	799,399		1,364	1,605		241		71,770	72,254		484
OTATO (WHITE, IRISH, RED, RUSS	2,027,777	2,748,975	721,198		821	842		21		54,470	55,543		1,073
VALNUT (ENGLISH WALNUT, PERS	3,957,094	2,697,158	(1,259,936)		4,877	4,662		(215)		195,551	194,707		(844
EAR	2,576,530	2,560,966	(15,564)		704	655		(49)		21,252	20,036		(1,216
IECTARINE	2,132,139	1,995,055	(137,084)		3,022	2,962		(60)		42,096	40,287		(1,809
RUNE	2,652,375	1,959,755	(692,620)		1,835	1,656		(179)		98,952	90,104		(8,848
WEET POTATO	1,042,186	1,884,470	842,284		312	267		(45)		7,833	7,448		(385
FOUTDR CONTAINER/FLD GRWN F	1,568,000	1,725,268	157,268		1,115	1,136		21		34,503	34,151		(352
ETTUCE, HEAD (ALL OR UNSPEC)	1,502,779	1,645,591	142,812		8,432	8,481		49		192,837	179,014		(13,823
OMATO	1,803,866	1,588,209	(215,657)		1,172	1,111		(61)		54,781	56,215		1,434
LUM (INCLUDES WILD PLUMS FO	1,795,674	1,566,728	(228,946)		2,612	2,564		(48)		37,521	36,116		(1,405
PPI E N Sheet1/	1 999 562	1 521 512	(367.040)		1.460	1 270		(00)		40 448	36.030		/3 500

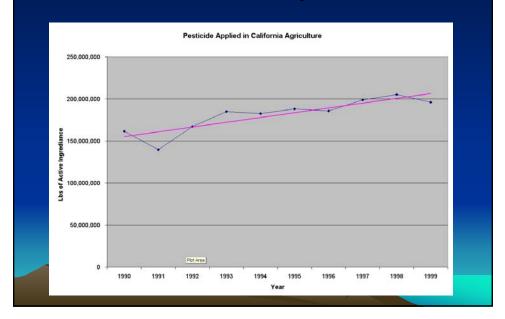
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В	Q	R	S	T	U	۷	W	Х	Y	Z	AA	AB	AC	IA.	AE
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Stell pomo		8 Lbs	S99 Lbs		Del Lbs		S98 Lbs Chm Bad	S99 Lbs Chm Bad		Delta Chem Bad		S98-	S99- Pct Bad		Delta Pct Bad
Site_name	A	re Pl	Acre PI	-	Acre PI		Crim Bad	Crim Bad	-	Chem Bad		PCI Bad	PCI Bad		PCI Bad
otal		21.70	21.20		(0.50)		52.846.783	57.544.005	F	4,697,222		25.78	29.34		3.56
otai		21.70	21.20		(0.00)	_	52,040,705	07,044,000	1	4,007,222		20.70	20.04	++	0.00
RAPES, WINE		74.50	68.00		(6.50)		1,227,111	1,785,050		557,939		3.57	5.46	++	1.89
RAPES		77.60	66.30		(11.30)		1,441,343	1,359,907		(81,436)		4.04	4.52		0.48
LMOND		28.10	26.80		(1.30)		3,786,063	2,995,176		(790,887)		23.10	19.22		(3.88)
OMATOES, FOR PROCESSING/CA		36.90	35.90		(1.00)		3,778,152	5,300,863		1,522,711		31.97	40.53		8.56
TRAWBERRY (ALL OR UNSPEC)		143.40	176.40		33.00		4,957,610	6,060,692		1,103,082		66.24	64.99		(1.25)
RANGE (ALL OR UNSPEC)		49.30	43.40		(5.90)		1,074,226	893,458		(180,768)		10.26	9.87		(0.39)
OTTON, GENERAL		11.00	9.00		(2.00)		4,048,247	3,082,616		(965,631)		35.60	34.53		(1.07)
ARROTS, GENERAL		71.60	84.50		12.90		6,818,531	7,862,975		1,044,444		93.79	94.14		0.35
UGARBEET, GENERAL		33.60	37.70		4.10		381,168	410,106		28,938		7.50	6.81		(0.69)
RICE (ALL OR UNSPEC)		11.00	10.20		(0.80)		1,779,485	1,688,632		(90,853)		34.96	33.86		(1.10)
LFALFA (FORAGE - FODDER) (ALI		4.10	4.10		0.00		1,739,959	1,599,024		(140,935)		42.39	38.52		(3.87)
EACH		64.50	52.60		(11.90)		607,632	679,204		71,572		11.88	16.46		4.58
EMON		72.20	70.30		(1.90)		239,651	252,378		12,727		5.90	6.68		0.78
OIL APPLICATION, PREPLANT-OU		34.40	45.20		10.80		2,078,385	2,891,081		812,696		84.26	88.52		4.26
OTATO (WHITE, IRISH, RED, RUSS		37.20	49.50		12.30		1,895,957	2,650,332		754,375		93.50	96.41		2.91
VALNUT (ENGLISH WALNUT, PERS		20.20	13.90		(6.30)		1,391,004	1,306,623		(84,381)		35.15	48.44		13.29
EAR		121.20	127.80		6.60		244,619	157,247		(87,372)		9.49	6.14		(3.35)
IECTARINE		50.60	49.50		(1.10)		304,666	247,742		(56,924)		14.29	12.42		(1.87)
RUNE		26.80	21.70		(5.10)		341,434	415,687		74,253		12.87	21.21		8.34
WEET POTATO		133.10	253.00		119.90		1,036,752	1,878,053		841,301		99.48	99.66		0.18
FOUTDR CONTAINER/FLD GRWN F		45.40	50.50		5.10		1,238,619	1,325,818		87,199		78.99	76.85		(2.14)
ETTUCE, HEAD (ALL OR UNSPEC)		7.80	9.20		1.40		1,071,132	1,189,871		118,739		71.28	72.31		1.03
OMATO		32.90	28.30		(4.60)		768,576	705,915		(62,661)		42.61	44.45		1.84
LUM (INCLUDES WILD PLUMS FO		47.90	43.40		(4.50)		176,828	138,811		(38,017)		9.85	8.86		(0.99)
DDIE N Sheet1/		46.70	41.20		(5.50)		396.416	300.040		(95.476)		20.46	10.79		10 691

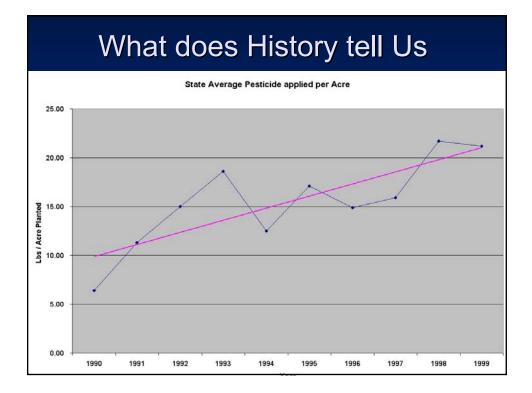
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de	Chemical Name	Use Type	Cance	Devel	Inhib (5 5	Male	S98 Count	S99 Count	Delta Count	S98 LbsChem	S99 LbsChem	LbsChem
		//	-	-	_		-						
99999	Total							2,767,168	2,701,192	(65,976)	205,003,625	196,137,043	(8,866,58
104	CAPTAN	Fungicide	C					15,389	11,124	(4,265)	1,604,453	976,331	(628,12
677	CHLOROTHALONIL	Fungicide	C					23,339	17,042	(6,297)	1,178,962	916,108	(262,85
449	MOLINATE	Herbicide			1			3,423	3,171	(252)	1,003,598	914,964	(88,63
531	SIMAZINE	Herbicide	E		P	<		22,725	21,277	(1,448)	786,187	807,932	21,74
1626	ETHEPHON	Plant Growth			1			10,236	10,803	567	1,061,335	779,868	(281,46
1933	THIOBENCARB	Herbicide			1			2,236	2,286	50	726,912	734,265	7,3
335	PHOSMET	Insecticide	T		1			9,364	8,210	(1,154)	648,099	646,680	(1.4)
383	METHOMYL	Insecticide	T		1			36,126	31,680	(4,446)	710,841	632,231	(78,6
367	MALATHION	Insecticide			1			12,834	14,780	1,946	551.092	631,487	80.3
231	DIURON	Herbicide	T		k	<		18,285	16,985	(1,300)	680,906	621,178	(59,7)
211	MANCOZEB	Fungicide	C					19,798	13,543	(6,255)	987,532	604,600	(382,9
198	DIAZINON	Insecticide	Ľ		1			24,310	31,152	6,842	712,405	601,884	(110.5
216	DIMETHOATE	Insecticide	1		1		-	21,761	35.229	13.468	364,506	576.001	211,4
264	EPTC	Herbicide		D	1			2,642	2,742	100	392,110	452,814	60,7
2081	IPRODIONE	Fungicide	С				-	33,666	25,290	(8,376)	579,916	402.280	(177,6
2019	NORFLURAZON	Herbicide	1		ŀ	<		6,376	6.511	135	305,846	384.025	78,1
105	CARBARYL	Insecticide	t		Ē	-	+	6,968	6,757	(211)	410,368	374,941	(35,4)
190	S.S.S-TRIBUTYL PHOS	Defoliant	+		1	-	-	3,847	3.019	(828)	466,516	352,757	(113,7
1685	ACEPHATE	Insecticide	t		i	-	+	19,026	22,784	3,758	265,691	337,976	72,2
575	ALDICARB	Insecticide	1		1		-	5,007	3,633	(1,374)	537,100	282,180	(254,9
418	NALED	Insecticide	1		i t		+	4,887	5.059	172	247,512	273,804	26.2
70	BENSULIDE	Herbicide	1		i t	+	+	2.854	5.696	2.842	163.069	238,762	75.6
590	PEBULATE	Herbicide	1		i	-	\square	985	1,102	117	185,642	228,084	42,4
314	AZINPHOS METHYL	Insecticide			i		1	2.626	3,151	525	192,819	217,558	24.7
230	DISULFOTON	Insecticide	1		i t		+	3.004	2.723	(281)	104,672	211.739	107.0
1697	METHAMIDOPHOS	Insecticide	1		i t	+	+	3.685	2,343	(1.342)	261,144	198,661	(62.4
106	CARBOFURAN	Insecticide	1		i t	+	+	4,955	4,564	(391)	313.072	196,313	(116,7
1640	CYANAZINE	Herbicide	1	D		+	+	2,159	1,596	(563)	274,713	179,688	(95,0
1689	METHIDATHION	Insecticide	1				+	3,282	3,543	261	164,153	177,284	13,1
Sheet1/	International Incom	1130000100	-	-	• 1	_	-	0,202	3,043	201	104,105	117,204	1 10,1

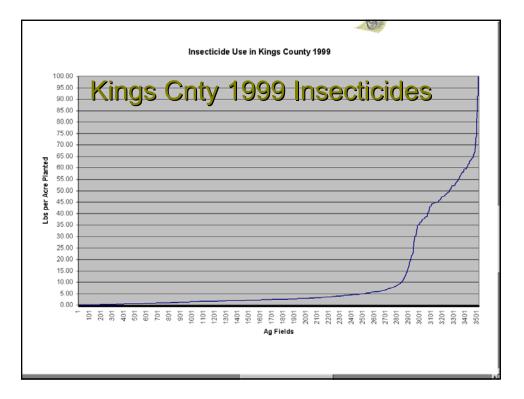
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chem Code	Chemical Name	Use Type	Cancer	Devel	Inhib C	GndWat	Female	Male	S98 Count	S99 Count	Delta Count	S98 LbsChem	S99 LbsChem	Delta LbsChem
99999	Total		\square						2,767,168	2,701,192	(65,976)	205,003,625	196,137,043	(8,866,582
455	PARA-DICHLOROBENZEN	Insecticide	c					_	1	0	(1)	40	0	(40
465	PCP	Wood Preserva	C						3	0	(3)		0	(18
479	PHOSALONE	Insecticide			L				1	0	(1)		0	(11
560	SULFUR	Fungicide							186,411	165,185	(21,226)	78,891,518	70,713,072	(8,178,446
765	PETROLEUM OIL, UNCL	Insecticide							25,015	25,753	738	22,148,697	20,782,984	(1,365,713
401	MINERAL OIL	Insecticide							6,382	5,602	(780)	5,124,508	4,476,297	(648,211
136	CHLOROPICRIN	Fumigant							3,980	4,260	280	3,052,635	3,830,365	777,730
151	COPPER HYDROXIDE	Fungicide							55,976	43,917	(12,059)	5,328,742	3,744,198	(1,584,544
1855	GLYPHOSATE, ISOPROP	Herbicide							110,386	107,087	(3,299)	3,281,331	3,062,615	(218,716
99	CALCIUM HYDROXIDE	pH Adjustment							3,010	2,677	(333)	2,871,619	2,706,226	(165,393
161	COPPER SULFATE (PEN	Insecticide							4,564	4,832	268	2,668,168	2,358,967	(309,201
536	SODIUM CHLORATE	Defoliant							6,078	5,386	(692)	2,442,658	2,208,968	(233,690
173	CRYOLITE	Insecticide							10,619	9,268	(1.351)	2,474,981	2,149,363	(325,618
597	TRIFLURALIN	Herbicide							15,857	18,027	2,170	1,192,194	1,324,718	132,524
629	ZIRAM	Fungicide							9,049	8,126	(923)	1,552,639	1,146,110	(406,529
358	LIME-SULFUR	Insecticide							1,823	2,789	966	677,239	1,073,599	396,360
1601	PARAQUAT DICHLORIDE	Herbicide							36,101	32,336	(3,765)	1,200,445	942,077	(258,368
503	PROPANIL	Herbicide							2,065	2,894	829	580,852	823,010	242,158
162	COPPER SULFATE (BAS	Fungicide							5,214	4,420	(794)	849,922	731,456	(118,466
2273	SODIUM TETRATHIOCAR	Fungicide							544	627	83	693,038	691,657	(1,381
2270	UREA DIHYDROGEN SUL	Adjuvant							1,786	3,081	1,295	968,152	632,600	(335,552
1868	ORYZALIN	Herbicide							14,455	12,415	(2.040)	984,163	603,286	(380,877
763	PETROLEUM DISTILLAT	Insecticide							5,025	5,065	40	253,748	578,573	324,825
346	DICOFOL	Insecticide							7,930	6,841	(1,089)	384,541	551,782	167,241
748	ALKYLARYL POLY(OXYE	Adjuvant							47,000	39,461	(7,539)		513,947	(25,386
473	PETROLEUM HYDROCARE								10,576	9,981	(595)		502,494	(38,076
N Sheet1/			-								(***)			-

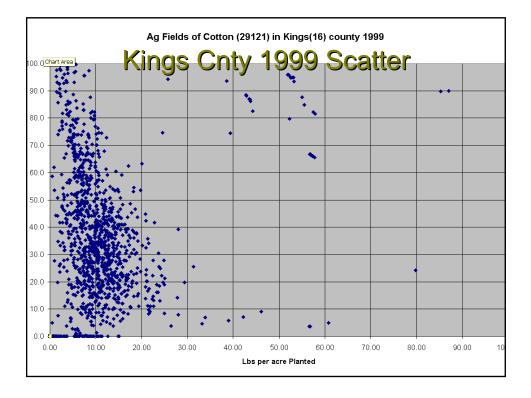


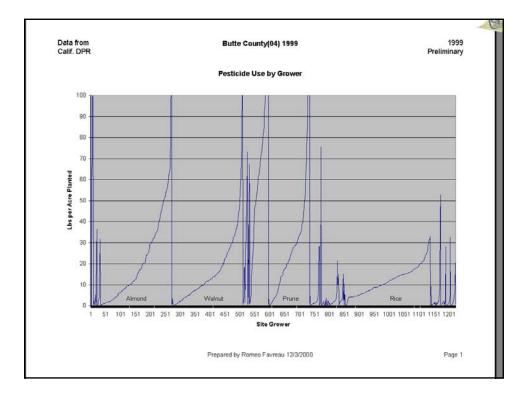
What does History tell Us ?

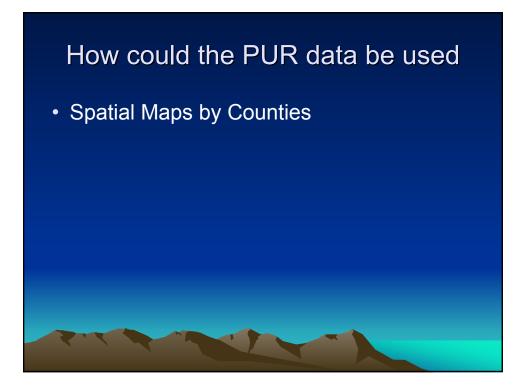


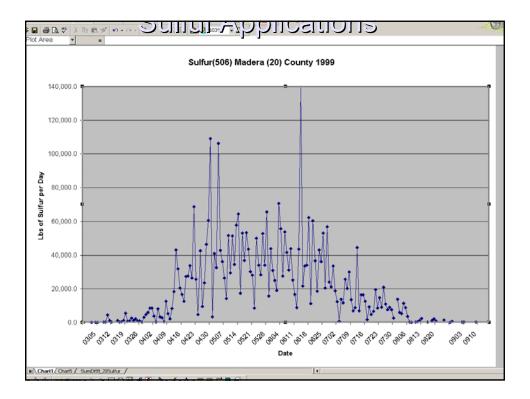


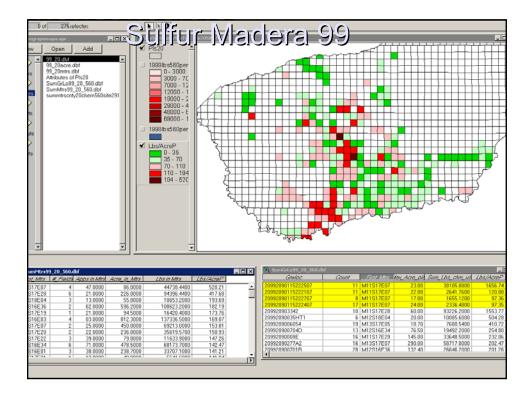


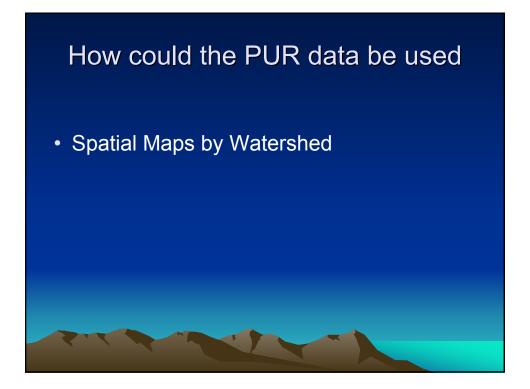


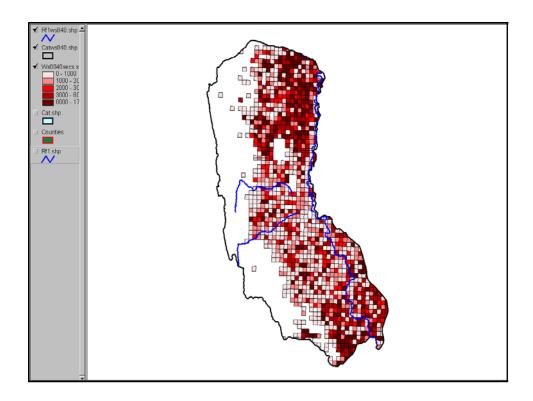


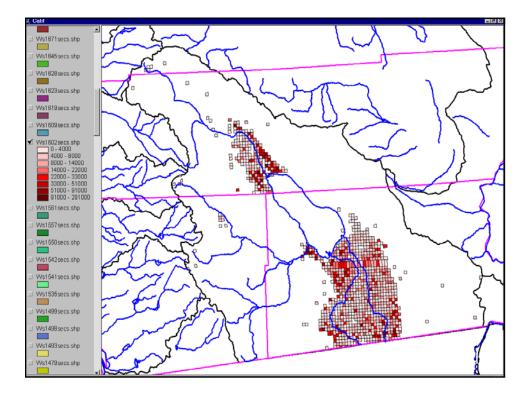


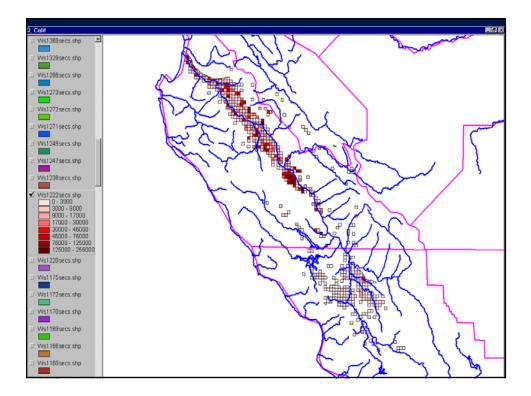












Agricultural Production Data & Pesticide Use Data

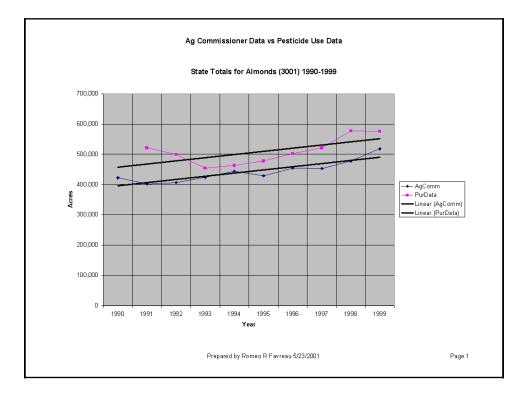
- Are both reported to the State by County
- But by Different Systems
- We present Crop Production vs Pesticide Use
- Planted Acres vs Harvested Acres
- Provides some measure of control

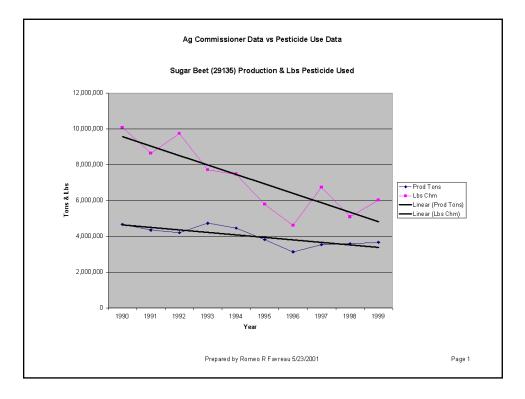
Agricultural Production Data

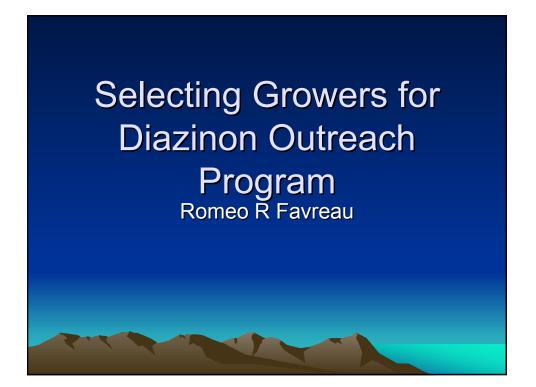
- Assembled by Dept of Food & Agriculture
- Obtained from County Ag Commissioner Annual Report
- Data includes Harvested Acres
- Also Production, Yield, and Value

Pesticide Use Data

- Assembled by Dept. Pesticide Regulation
- Data on Amount and Type of Pesticide used
- Data includes Planted Acres
- Data on Location and Crop and Acres Treated
- Reported to County Ag Commissioner
- From Pesticide Use Reports
- Submitted by Growers and C P(esticide) A's







Vision Statement

• We would like to identify Growers of Stone Fruit Orchards who have the greatest potential of reducing Diazinon runoff.

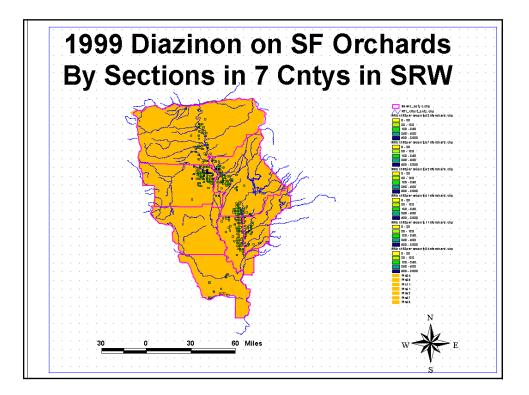


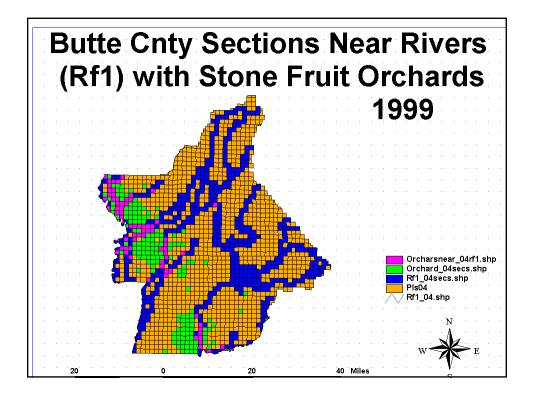
Goal and Objective

- Develop a list of Growers by county that have the highest potential of reducing Diazinon runoff
- Ask the county Ag Commissioners to convert grower_ids to one or more mailing lists

 Reduce the # of required Outreach courses







What have I learned from Working with Pur Data

- Databases are the key for Environmental Management
- Computer technology is still advancing at a dizzying pace
- Data by itself has limited value, and its value decreases with time

Real-time Analysis and Feedback to responsible managers should help attain goals