



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C., 20460

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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Addendum to Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton: Percentage of National Barley, Buckwheat, Millet, Peanut, Oat, Rice, Rye, Sorghum, Triticale and Wild Rice Crops Rotated with Fluometuron-Treated Cotton, D321510

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PRODUCT REVIEW PANEL: September 14, 2005

SUMMARY

On August 9, 2005, BEAD completed the document *Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D300562*, which refined the percent crop treated for cotton, as well as to estimated the percent of rotated crops (corn, soybean, and wheat) exposed to fluometuron-treated cotton (Zinn, 2005). This document refines the estimates for ten additional crops: barley, buckwheat, millet, peanut, oat, rice, rye, sorghum, triticale and wild rice. Please see the original document (Zinn, 2005) for more information on the methods used.

11/16/05

The estimated percent of rotated crops exposed to fluometuron-treated cotton varies from 0.0 percent (buckwheat) to 9.6 percent (peanut). BEAD believes that the method used is conservative and may overestimate the percentage of these crops rotated with fluometuron-treated cotton.

BACKGROUND

Fluometuron is a phenylurea herbicide registered for use on cotton. Risk assessments have been conducted for this herbicide and several risks of concern have been identified, including cancer dietary, chronic dietary, ecological and endangered species. This document is intended to provide refined data that can be used in the risk assessments.

CROP ROTATION

Table 1. Estimate of Percentage of National Acreage Rotated with Fluometuron-Treated Cotton for Various Crops.

Crop	Percent of National Acreage of Crop Rotated with Fluometuron-Treated Cotton
Barley	0.3
Buckwheat	0.0
Millet (Proso) ¹	0.2
Peanut	9.6
Oat	2.5
Rice	3.6
Rye	5.7
Sorghum	3.7
Triticale	5.1
Wild Rice ²	1.8 ²

Sources: USDA NASS Agricultural Statistics, 2005; Padgett, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; USDA 2002 Census of Agriculture (Proso millet, wild rice, buckwheat, triticale, rye)

¹ "Proso millet is the only millet grown as a grain crop in the U.S." (Markle, Baron, and Schneider, 1998).

² California is the only state with overlap between wild rice and cotton production. Only 51 percent of the wild rice production occurs in counties that grow cotton. This information was taken into account for the wild rice percentage. Without this refinement, the wild rice percentage is 3.6 percent.

See Tables 1 through 10 in the Appendix.

REFERENCES

Markle, G., J. Baron, and B. Schneider, 1998, Food and Feed Crops of the United States, Second Edition, MeisterPro Reference Guide.

Padgitt, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969.

USDA NASS Agricultural Chemical Summaries, 1997 - 2004

USDA NASS Agricultural Statistics, 2005

USDA 2002 Census of Agriculture

Zinn, N., 2005, Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D300562, U.S. EPA

Appendix

Table 1. Estimate of Percent of National Barley Crop Rotated with Fluometuron-Treated Cotton

State ¹	Barley Acreage, 2004 ²	Cotton Acreage, 2004 ²	% Cotton acreage rotated to small grain ³	Calculated Rotated Acreage ⁴	Maximum Feasible Rotation ⁵
AL	0	550,000	0.07	38,500	0
AZ	40,000	243,000	0.16	38,880	38,880
AR	0	910,000	0.04	36,400	0
CA	110,000	775,000	0.04	31,000	31,000
FL	0	89,000			0
GA	0	1,290,000			0
KS	15,000	85,000			15,000
LA	0	500,000			0
MS	0	1,110,000			0
MO	0	380,000			0
NM	0	78,600			0
NC	23,000	730,000	0.01	7,300	7,300
OK	0	220,000			0
SC	0	215,000			0
TN	0	530,000			0
TX	0	5,871,000			0
VA	55,000	82,000			55,000
National	4,527,000	13,658,600			147,180
Percent of Barley Acreage Rotated to Cotton ⁶					3%
Percent Cotton Crop Treated with Fluometuron ⁷					10%
Percent Barley Crop Rotated with Fluometuron-Treated Cotton ⁸					0.3%

¹Only cotton growing states included

²USDA NASS Agricultural Statistics, 2005

³ Padgitt, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; See Appendix A in *Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D300562*

⁴Calculated Rotated Acreage = Cotton Acreage, 2004 * % Cotton Acreage Rotated to Small Grain Crops

⁵Maximum Feasible Rotation = Calculated Rotated Acreage, or the lesser of Barley Acreage, 2004 and Cotton Acreage, 2004

⁶Percent of Barley Acreage Rotated to Cotton = (National Maximum Feasible Rotation/National Barley Acreage, 2004)*100

⁷Revised Percent Crop Treated with Fluometuron Estimate

⁸Percent Cotton Crop Rotated with Fluometuron-Treated Cotton = Percent of Barley Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

Table 2. Estimate of Percent of National Buckwheat Crop Rotated with Fluometuron-Treated Cotton

State ¹	Buckwheat Acreage, 2002 ²	Cotton Acreage, 2004 ³	Maximum Feasible Rotation ⁴
AL	0	550,000	0
AZ	0	243,000	0
AR	0	910,000	0
CA	0	775,000	0
FL	0	89,000	0
GA	0	1,290,000	0
KS	0	85,000	0
LA	0	500,000	0
MS	0	1,110,000	0
MO	0	380,000	0
NM	n/a	78,600	
NC	0	730,000	0
OK	0	220,000	0
SC	0	215,000	0
TN	0	530,000	0
TX	0	5,871,000	0
VA	0	82,000	0
National	42,641	13,658,600	0
Percent of Buckwheat Acreage Rotated to Cotton ⁵			0%
Percent Cotton Crop Treated with Fluometuron ⁶			10%
Percent Buckwheat Crop Rotated with Fluometuron-Treated Cotton ⁷			0%

¹ Only cotton growing states included

² USDA 2002 Census of Agriculture

³ USDA NASS Agricultural Statistics, 2005

⁴ Maximum Feasible Rotation = The lesser of Buckwheat Acreage, 2002 and Cotton Acreage, 2004; Note that Calculated Rotated Acreage was not used for this crop since buckwheat production did not overlap with cotton production

⁵ Percent of Buckwheat Acreage Rotated to Cotton = (National Maximum Feasible Rotations/National Buckwheat Acreage, 2002)*100

⁶ Revised Percent Crop Treated with Fluometuron Estimate

⁷ Percent Buckwheat Crop Rotated with Fluometuron-Treated Cotton = Percent of Buckwheat Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

Table 3. Estimate of Percent of National Proso Millet Crop Rotated with Fluometuron-Treated Cotton

State ¹	Proso Millet Acreage, 2002 ²	Cotton Acreage, 2004 ³	% Cotton acreage rotated to small grain ⁴	Calculated Rotated Acreage ⁵	Maximum Feasible Rotation ⁶
AL	0	550,000	0.07	38,500	0
AZ	0	243,000	0.16	38,880	0
AR	0	910,000	0.04	36,400	0
CA	60	775,000	0.04	31,000	60
FL	266	89,000		0	266
GA	988	1,290,000		0	988
KS	3,930	85,000		0	3,930
LA	0	500,000		0	0
MS	n/a	1,110,000		0	
MO	0	380,000		0	0
NM	0	78,600		0	0
NC	33	730,000	0.01	7,300	33
OK	55	220,000		0	55
SC	n/a	215,000		0	
TN	0	530,000		0	0
TX	1,480	5,871,000		0	1,480
VA	0	82,000		0	0
National	282,664	13,658,600			6,812
Percent of Proso Millet Acreage Rotated to Cotton ⁷					2%
Percent Cotton Crop Treated with Fluometuron ⁸					10%
Percent Proso Millet Crop Rotated with Fluometuron-Treated Cotton ⁹					0.2%

¹Only cotton growing states included

²USDA 2002 Census of Agriculture; "Proso millet is the only millet grown as a grain crop in the U.S." (Markle, Baron, and Schneider, 1998).

³USDA NASS Agricultural Statistics, 2005

⁴Padgett, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; See Appendix A in *Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D300562*

⁵Calculated Rotated Acreage = Cotton Acreage, 2004 * % Cotton Acreage Rotated to Small Grain Crops

⁶Maximum Feasible Rotation = Calculated Rotated Acreage, or the lesser of Proso Millet Acreage, 2002 and Cotton Acreage, 2004

⁷Percent of Proso Millet Acreage Rotated to Cotton = (National Maximum Feasible Rotations/National Proso Millet Acreage, 2002)*100

⁸Revised Percent Crop Treated with Fluometuron Estimate

⁹Percent Proso Millet Crop Rotated with Fluometuron-Treated Cotton = Percent of Proso Millet Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

Table 4. Estimate of Percent of National Peanut Crop Rotated with Fluometuron-Treated Cotton

State ¹	Peanut Acreage, 2004 ²	Cotton Acreage, 2004 ²	% Cotton Acreage Rotated to Row Crops ³	Calculated Rotated Acreage ⁴	Maximum Feasible Rotation ⁵
AL	200,000	550,000	0.46	253,000	200,000
AZ	0	243,000	0.24	58,320	0
AR	0	910,000	0.09	81,900	0
CA	0	775,000	0.29	224,750	0
FL	145,000	89,000		0	89,000
GA	620,000	1,290,000	0.53	683,700	620,000
KS	0	85,000		0	0
LA	0	500,000	0.25	125,000	0
MS	0	1,110,000	0.11	122,100	0
MO	0	380,000	0.23	87,400	0
NM	17,000	78,600		0	17,000
NC	105,000	730,000	0.5	365,000	105,000
OK	35,000	220,000		0	35,000
SC	35,000	215,000	0.45	96,750	35,000
TN	0	530,000	0.1	53,000	0
TX	240,000	5,871,000	0.34	1,996,140	240,000
VA	33,000	82,000		0	33,000
National	1,430,000	13,658,600			1,374,000
Percent of Peanut Acreage Rotated to Cotton ⁶					96%
Percent Cotton Crop Treated with Fluometuron ⁷					10%
Percent Peanut Crop Rotated with Fluometuron-Treated Cotton ⁸					9.6%

¹Only cotton growing states included

²USDA NASS Agricultural Statistics, 2005

³ Padgett, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; See Appendix A in *Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D30056*; Row crop estimate obtained by adding "Continuous Row Crops" + "Mix of Row Crop and Small Grain"

⁴Calculated Rotated Acreage = Cotton Acreage, 2004 * % Cotton Acreage Rotated to Row Crops

⁵Maximum Feasible Rotation = Calculated Rotated Acreage, or the lesser of Peanut Acreage, 2004 and Cotton Acreage, 2004

⁶Percent of Peanut Acreage Rotated to Cotton = (National Maximum Feasible Rotations/National Peanut Acreage, 2004)*100

⁷Revised Percent Crop Treated with Fluometuron Estimate

⁸Percent Peanut Crop Rotated with Fluometuron-Treated Cotton = Percent of Peanut Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

Table 5. Estimate of Percent of National Oat Crop Rotated with Fluometuron-Treated Cotton

State ¹	Oat Acreage, 2004 ²	Cotton Acreage, 2004 ²	% Cotton acreage rotated to small grain ³	Calculated Rotated Acreage ⁴	Maximum Feasible Rotation ⁵
AL	0	550,000	0.07	38,500	0
AZ	0	243,000	0.16	38,880	0
AR	0	910,000	0.04	36,400	0
CA	240,000	775,000	0.04	31,000	31,000
FL	0	89,000		0	0
GA	90,000	1,290,000		0	90,000
KS	120,000	85,000		0	85,000
LA	0	500,000		0	0
MS	0	1,110,000		0	0
MO	26,000	380,000		0	26,000
NM	0	78,600		0	0
NC	55,000	730,000	0.01	7,300	7,300
OK	50,000	220,000		0	50,000
SC	40,000	215,000		0	40,000
TN	0	530,000		0	0
TX	680,000	5,871,000		0	680,000
VA	0	82,000		0	0
National	4,085,000	13,658,600			1,009,300
Percent of Oat Acreage Rotated to Cotton ⁶					25%
Percent Cotton Crop Treated with Fluometuron ⁷					10%
Percent Oat Crop Rotated with Fluometuron-Treated Cotton ⁸					2.5%

¹Only cotton growing states included

²USDA NASS Agricultural Statistics, 2005

³ Padgett, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; See Appendix A in *Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D30056*

⁴Calculated Rotated Acreage = Cotton Acreage, 2004 * % Cotton Acreage Rotated to Small Grain Crops

⁵Maximum Feasible Rotation = Calculated Rotated Acreage, or the lesser of Oat Acreage, 2004 and Cotton Acreage, 2004

⁶Percent of Oat Acreage Rotated to Cotton = (National Maximum Feasible Rotations/National Oat Acreage, 2004)*100

⁷Revised Percent Crop Treated with Fluometuron Estimate

⁸Percent Oat Crop Rotated with Fluometuron-Treated Cotton = Percent of Oat Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

Table 6. Estimate of Percent of National Rice Crop Rotated with Fluometuron-Treated Cotton

State ¹	Rice Acreage, 2004 ²	Cotton Acreage, 2004 ²	% Cotton acreage rotated to small grain ³	Calculated Rotated Acreage ⁴	Maximum Feasible Rotation ⁵
AL	0	550,000	0.07	38,500	0
AZ	0	243,000	0.16	38,880	0
AR	1,561,000	910,000	0.04	36,400	36,400
CA	595,000	775,000	0.04	31,000	31,000
FL	0	89,000		0	0
GA	0	1,290,000		0	0
KS	0	85,000		0	0
LA	538,000	500,000		0	500,000
MS	235,000	1,110,000		0	235,000
MO	196,000	380,000		0	196,000
NM	0	78,600		0	0
NC	0	730,000	0.01	7,300	0
OK	0	220,000		0	0
SC	0	215,000		0	0
TN	0	530,000		0	0
TX	222,000	5,871,000		0	222,000
VA	0	82,000		0	0
National	3,347,000	13,658,600			1,220,400
Percent of Rice Acreage Rotated to Cotton ⁶					36%
Percent Cotton Crop Treated with Fluometuron ⁷					10%
Percent Rice Crop Rotated with Fluometuron-Treated Cotton ⁸					3.6%

¹Only cotton growing states included

²USDA NASS Agricultural Statistics, 2005

³ Padgett, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; See Appendix A in *Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D30056*

⁴Calculated Rotated Acreage = Cotton Acreage, 2004 * % Cotton Acreage Rotated to Small Grain Crops

⁵Maximum Feasible Rotation = Calculated Rotated Acreage, or the lesser of Rice Acreage, 2004 and Cotton Acreage, 2004

⁶Percent of Rice Acreage Rotated to Cotton = (National Maximum Feasible Rotations/National Rice Acreage, 2004)*100

⁷Revised Percent Crop Treated with Fluometuron Estimate

⁸Percent Rice Crop Rotated with Fluometuron-Treated Cotton = Percent of Rice Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

Table 7. Estimate of Percent of National Rye Crop Rotated with Fluometuron-Treated Cotton

State ¹	Rye Acreage, 2002 ²	Cotton Acreage, 2004 ³	% Cotton acreage rotated to small grain ⁴	Calculated Rotated Acreage ⁵	Maximum Feasible Rotation ⁶
AL	5,985	550,000	0.07	38,500	5,985
AZ	0	243,000	0.16	38,880	0
AR	32	910,000	0.04	36,400	32
CA	949	775,000	0.04	31,000	949
FL	4,905	89,000		0	4,905
GA	34,713	1,290,000		0	34,713
KS	15,017	85,000		0	15,017
LA	n/a	500,000		0	
MS	0	1,110,000		0	0
MO	1,839	380,000		0	1,839
NM	2,679	78,600		0	2,679
NC	13,094	730,000	0.01	7,300	7,300
OK	61,150	220,000		0	61,150
SC	9,774	215,000		0	9,774
TN	99	530,000		0	99
TX	13,143	5,871,000		0	13,143
VA	5,445	82,000		0	5,445
National	285,366	13,658,600			163,030
Percent of Rye Acreage Rotated to Cotton ⁷					57%
Percent Cotton Crop Treated with Fluometuron ⁸					10%
Percent Rye Crop Rotated with Fluometuron-Treated Cotton ⁹					5.7%

¹Only cotton growing states included

²USDA 2002 Census of Agriculture; Acres harvested

³USDA NASS Agricultural Statistics, 2005

⁴Padgett, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; See Appendix A in *Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D30056*

⁵Calculated Rotated Acreage = Cotton Acreage, 2004 * % Cotton Acreage Rotated to Small Grain Crops

⁶Maximum Feasible Rotation = Calculated Rotated Acreage, or the lesser of Rye Acreage, 2002 and Cotton Acreage, 2004

⁷Percent of Rye Acreage Rotated to Cotton = (National Maximum Feasible Rotations/National Rye Acreage, 2002)*100

⁸Revised Percent Crop Treated with Fluometuron Estimate

⁹Percent Rye Crop Rotated with Fluometuron-Treated Cotton = Percent of Rye Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

Table 8. Estimate of Percent of National Sorghum Crop Rotated with Fluometuron-Treated Cotton

State ¹	Sorghum Acreage, 2004 ²	Cotton Acreage, 2004 ²	% Cotton Acreage Rotated to Row Crops ³	Calculated Rotated Acreage ⁴	Maximum Feasible Rotation ⁵
AL	10,000	550,000	0.46	253,000	10,000
AZ	20,000	243,000	0.24	58,320	20,000
AR	60,000	910,000	0.09	81,900	60,000
CA	28,000	775,000	0.29	224,750	28,000
FL	0	89,000		0	0
GA	45,000	1,290,000	0.53	683,700	45,000
KS	3,200,000	85,000		0	85,000
LA	85,000	500,000	0.25	125,000	85,000
MS	20,000	1,110,000	0.11	122,100	20,000
MO	150,000	380,000	0.23	87,400	87,400
NM	140,000	78,600		0	78,600
NC	17,000	730,000	0.5	365,000	17,000
OK	270,000	220,000		0	220,000
SC	7,000	215,000	0.45	96,750	7,000
TN	20,000	530,000	0.1	53,000	20,000
TX	2,210,000	5,871,000	0.34	1,996,140	1,996,140
VA	5,000	82,000		0	5,000
National	7,486,000	13,658,600			2,784,140
Percent of Sorghum Acreage Rotated to Cotton ⁶					37%
Percent Cotton Crop Treated with Fluometuron ⁷					10%
Percent Sorghum Crop Rotated with Fluometuron-Treated Cotton ⁸					3.7%

¹Only cotton growing states included

²USDA NASS Agricultural Statistics, 2005

³ Padgett, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; See Appendix A; Row crop estimate obtained by adding "Continuous Row Crops" + "Mix of Row Crop and Small Grain"

⁴Calculated Rotated Acreage = Cotton Acreage, 2004 * % Cotton Acreage Rotated to Row Crops

⁵Maximum Feasible Rotation = Calculated Rotated Acreage, or the lesser of Sorghum Acreage, 2004 and Cotton Acreage, 2004

⁶Percent of Sorghum Acreage Rotated to Cotton = (National Maximum Feasible Rotations/National Sorghum Acreage, 2004)*100

⁷Revised Percent Crop Treated with Fluometuron Estimate

⁸Percent Sorghum Crop Rotated with Fluometuron-Treated Cotton = Percent of Sorghum Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

Table 9. Estimate of Percent of National Triticale Crop Rotated with Fluometuron-Treated Cotton

State ¹	Triticale Acreage, 2002 ²	Cotton Acreage, 2004 ³	% Cotton acreage rotated to small grain ⁴	Calculated Rotated Acreage ⁵	Maximum Feasible Rotation ⁶
AL	0	550,000	0.07	38,500	0
AZ	0	243,000	0.16	38,880	0
AR	0	910,000	0.04	36,400	0
CA	551	775,000	0.04	31,000	551
FL	0	89,000		0	0
GA	0	1,290,000		0	0
KS	6,588	85,000		0	6,588
LA	0	500,000		0	0
MS	0	1,110,000		0	0
MO	n/a	380,000		0	
NM	351	78,600		0	351
NC	n/a	730,000	0.01	7,300	
OK	858	220,000		0	858
SC	n/a	215,000		0	
TN	0	530,000		0	0
TX	2,032	5,871,000		0	2,032
VA	n/a	82,000		0	
National	20,292	13,658,600			10,380
Percent of Triticale Acreage Rotated to Cotton ⁷					51%
Percent Cotton Crop Treated with Fluometuron ⁸					10%
Percent Triticale Crop Rotated with Fluometuron-Treated Cotton ⁹					5.1%

¹Only cotton growing states included

²USDA 2002 Census of Agriculture

³USDA NASS Agricultural Statistics, 2005

⁴Padgitt, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; See Appendix A in *Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D30056*

⁵Calculated Rotated Acreage = Cotton Acreage, 2004 * % Cotton Acreage Rotated to Small Grain Crops

⁶Maximum Feasible Rotation = Calculated Rotated Acreage, or the lesser of Triticale Acreage, 2002 and Cotton Acreage, 2004

⁷Percent of Triticale Acreage Rotated to Cotton = (National Maximum Feasible Rotations/National Triticale Acreage, 2002)*100

⁸Revised Percent Crop Treated with Fluometuron Estimate

⁹Percent Triticale Crop Rotated with Fluometuron-Treated Cotton = Percent of Triticale Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

Table 10. Estimate of Percent of National Wild Rice Crop Rotated with Fluometuron-Treated Cotton

State ¹	Wild Rice Acreage, 2002 ²	Cotton Acreage, 2004 ³	% Cotton acreage rotated to small grain ⁴	Calculated Rotated Acreage ⁵	Maximum Feasible Rotation ⁶
AL	0	550,000	0.07	38,500	0
AZ	0	243,000	0.16	38,880	0
AR	0	910,000	0.04	36,400	0
CA	13,871	775,000	0.04	31,000	13,871
FL	0	89,000		0	0
GA	0	1,290,000		0	0
KS	0	85,000		0	0
LA	0	500,000		0	0
MS	0	1,110,000		0	0
MO	0	380,000		0	0
NM	0	78,600		0	0
NC	0	730,000	0.01	7,300	0
OK	0	220,000		0	0
SC	0	215,000		0	0
TN	0	530,000		0	0
TX	0	5,871,000		0	0
VA	0	82,000		0	0
National	38,007	13,658,600			13,871
Adjusted Wild Rice Acreage ⁷					7,022
Percent of Wild Rice Acreage Rotated to Cotton ⁸					18%
Percent Cotton Crop Treated with Fluometuron ⁹					10%
Percent Wild Rice Crop Rotated with Fluometuron-Treated Cotton ¹⁰					1.8%

¹Only cotton growing states included

²USDA 2002 Census of Agriculture

³USDA NASS Agricultural Statistics, 2005

⁴Padgitt, M., D. Newton, R. Penn, and C. Sandretto, 2000, USDA ERS Production Practices for Major Crops in U.S. Agriculture, 1990-97, Statistical Bulletin Number 969; See Appendix A in *Refined Fluometuron Percent Crop Treated and Percentage of National Soybean, Corn, and Wheat Crops Rotated with Fluometuron-Treated Cotton, D30056*

⁵Calculated Rotated Acreage = Cotton Acreage, 2004 * % Cotton Acreage Rotated to Small Grain Crops

⁶Maximum Feasible Rotation = Calculated Rotated Acreage, or the lesser of Wild Rice Acreage, 2002 and Cotton Acreage, 2004

⁷Less than 51 percent of the wild rice production occurs in counties that grow cotton. Adjusted Wild Rice Acreage was calculated by adding the acreage of wild rice grown in the California counties that also produce cotton, using data from USDA 2002 Census of Agriculture

⁸Percent of Wild Rice Acreage Rotated to Cotton = (Adjusted Wild Rice Acreage/National Wild Rice Acreage, 2002)*100

⁹Revised Percent Crop Treated with Fluometuron Estimate

¹⁰Percent Wild Rice Crop Rotated with Fluometuron-Treated Cotton = Percent of Wild Rice Acreage Rotated to Cotton * Percent Cotton Crop Treated with Fluometuron

DATA PACKAGE BEAN SHEET

Date: 15-Sep-2005

Page 1 of 2

*** Registration Information ***

Registration: RED-0049-19044 - Fluometuron

Company: -

Risk Manager: RM 53 - Michael Goodis - (703) 308-8157 Room# CM-2 604B

Risk Manager Reviewer: Kylie Rothwell KROTHWEL

Sent Date:

Calculated Due Date:

Edited Due Date:

Type of Registration: Project

Action Desc:

Ingredients: 035503, Fluometuron

*** Data Package Information ***

Expedite: Yes No

Date Sent: 08-Sep-2005

Due Back:

DP Ingredient: 035503, Fluometuron

DP Title: BEAD rotational crop request

CSF Included: Yes No

Label Included: Yes No

Parent DP #:

Assigned To

Organization: BEAD / EAE

Team Name:

Reviewer Name:

Contractor Name:

Date In

9/8/05

Date Out

Last Possible Science Due Date:

Science Due Date:

Sub Data Package Due Date:

*** Studies Sent for Review ***

No Studies

*** Additional Data Package for this Decision ***

Printed on Page 2

*** Data Package Instructions ***

Att'n Nicole Zenn - Please provide %crop rotation data for fluometuron including barley, wheat, buchweat, rye, wild rice, rice, peanuts, oats, and millet. Please send the information to Sam Ary. Thank you. Kylie Rothwell 308-8055

DATA PACKAGE BEAN SHEET

Date: 04-Oct-2005

Page 1 of 2

*** Registration Information ***

Registration: RED-0049-19044 - Fluometuron

Company: -

Risk Manager: RM 53 - Michael Goodis - (703) 308-8157 Room# CM-2 604B

Risk Manager Reviewer: Kylie Rothwell KROTHWEL

Sent Date:

Calculated Due Date:

Edited Due Date:

Type of Registration: Project

Action Desc:

Ingredients: 035503 Fluometuron

*** Data Package Information ***

Expedite: Yes No

Date Sent: 08-Sep-2005

Due Back:

DP Ingredient: 035503 Fluometuron

DP Title: BEAD rotational crop request

CSF Included: Yes No

Label Included: Yes No

Parent DP #:

Assigned To

Date In

Date Out

Organization: BEAD / HIB

08-Sep-2005

21-Oct-2005

Last Possible Science Due Date:

Team Name:

Science Due Date:

Reviewer Name: Zinn, Nicole

08-Sep-2005

21-Sep-2005

Sub Data Package Due Date:

Contractor Name:

*** Studies Sent for Review ***

No Studies

*** Additional Data Package for this Decision ***

Printed on Page 2

*** Data Package Instructions ***

Att'n Nicole Zenn - Please provide %crop rotation data for fluometuron including barley, wheat, buckwheat, rye, wild rice, rice, peanuts, oats, and millet. Please send the information to Sam Ary. Thank you. Kylie Rothwell 308-8055

DP#: (321510)

*** Additional Data Package for this Decision ***

Decision#: (341156)

DP #	Division/Branch	Date Sent	Date Due	Instructions?		CSF		label	
300563	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
300563	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
300564	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
300564	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
300565	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
300565	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
300566	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
300566	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
300567	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
300567	SRRD / RRB3			Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
321661	SRRD / RRB3	14-Sep-2005		Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No
321661	BEAD / SIAB	14-Sep-2005		Yes	No	Yes	<input checked="" type="radio"/> No	Yes	<input checked="" type="radio"/> No



13544



R136581

Chemical: Fluometuron

**PC Code:
035503**

HED File Code: 71000 BEAD Usage Data Report

Memo Date: 9/21/2005

File ID: DPD321510

Accession #: 000-00-0116

**HED Records Reference Center
1/8/2007**

