

Table 3.14. Comparison of selective postemergence treatments and postemergence glyphosate treatments with or without residual preemergence treatment for the control of Ivyleaf Morningglory (*Ipomoea hederacea*) in New Kent county, 1999¹.

Treatment ²	Timing	Full-Season	Double-crop
		----- % control -----	
Control		0	0
Atrazine Metolachlor	PRE PRE	65	88
Paraquat Atrazine Metolachlor	PRE PRE PRE	70	90
Atrazine Metolachlor Dicamba Primisulfuron + prosulfuron	PRE PRE EP EP	96	100
Atrazine Metolachlor Glyphosate	PRE PRE EP	74	90
Paraquat Atrazine Metolachlor Dicamba Primisulfuron + prosulfuron	PRE PRE PRE EP EP	95	100
Paraquat Atrazine Metolachlor Glyphosate	PRE PRE PRE EP	79	85
Paraquat Glyphosate	PRE EP	43	71
Glyphosate	EP	50	79
Glyphosate	EP	86	89

Glyphosate	LP		
Atrazine	EP	71	100
Dicamba	EP		
Primisulfuron +prosulfuron	EP		
Paraquat	PRE	0	0

¹ Significant effect of cropping system, herbicide treatment, and of the interaction effect ($\alpha = 0.05$),

LSD ($\alpha = 0.05$) for comparison of cropping systems within individual herbicide treatments = 13.3,

LSD ($\alpha = 0.05$) for comparison of herbicide treatments within cropping system = 9.9

² Herbicide rates as described in table 8

Table 3.15. Double-crop treatment combinations with or without glyphosate for annual and perennial broadleaf control in 1998 in Middlesex County¹.

Treatment	Timing	Vigor reduction	Common Lambsquarters	Redroot pigweed	Ivyleaf morningglory	Trumpetcreeper
		----- % -----				
control		16 A	0 B	0 B	0 D	0 C
atrazine	PRE	0 D	100 A	99 A	88 C	0 C
atrazine glyphosate	PRE EP	0 D	100 A	100 A	96 A	85 B
paraquat	PRE	5 C	0 B	0 B	0 D	0 C
paraquat atrazine	PRE PRE	0 D	100 A	99 A	94 B	0 C
paraquat atrazine glyphosate	PRE PRE EP	0 D	100 A	100 A	100 A	90 A
parquat glyphosate	PRE EP	3 C	100 A	100 A	97 A	83 B
glyphosate	EP	9 B	100 A	100 A	95 B	83 B

¹ Means within columns followed by the same letter do not differ significantly at the 0.05 level, Duncans multiple range test.

A two-way factorial analysis revealed that control of *Campsis radicans* was not significantly different ($\alpha = 0.05$) in full-season as compared to double-crop, while control of all other weed species were significantly different between cropping systems.

Table 3.16. Effect of early postemergence glyphosate treatments on barnyardgrass (*Echinochola crus-galli*) control in full-season and double-crop corn following preemergence treatments in 1998 in Montgomery County¹.

Preemergence treatment		Full-season	Double-crop
		ECHCG	ECHCG
		----- % -----	
control		0	0
atrazine	PRE	0	0
metolachlor	PRE	17	40
atrazine	PRE	20	64
metolachlor	PRE		
paraquat	PRE	28	0
paraquat	PRE	53	0
atrazine	PRE		
paraquat	PRE	85	79
metolachlor	PRE		
paraquat	PRE	90	79
atrazine	PRE		
metolachlor	PRE		
glyphosate	EP	97	99
atrazine	PRE	99	100
glyphosate	EP		
metolachlor	PRE	97	100
glyphosate	EP		
atrazine	PRE	99	100
metolachlor	PRE		
glyphosate	EP		

paraquat	PRE	99	100
glyphosate	EP		
paraquat	PRE	97	99
atrazine	PRE		
glyphosate	EP		
paraquat	PRE	99	99
metolachlor	PRE		
glyphosate	EP		
paraquat	PRE	99	100
atrazine	PRE		
metolachlor	PRE		
glyphosate	EP		

¹ LSD ($\alpha = 0.05$) for 1998 Montgomery experiments for comparison of individual herbicide treatments within a cropping system = 6.03

Table 3.17. Comparison of the utility of a burndown application in full-season vs double-crop systems in 1998 in Montgomery County¹.

Cropping System	Treatment	Without	With
		paraquat	paraquat
		-----Yield (kg/ha) ² -----	
Full-season	Control	1003 B	5143 A
	Atrazine	1317 B	5205 A
	Metolachlor	2634 B	5394 A
	Atrazine Metolachlor	3825 B	5645 A
Double-crop	Control	2634 A	2697 A
	Atrazine	3387 A	4076 A
	Metolachlor	2822 A	3449 A
	Atrazine Metolachlor	4202 A	4390 A

¹ Values within a row followed by the same letter do not significantly differ, LSD, p =0.05.

² Yields calculated at 12.5 percent moisture.

Table 3.18. Full season yield differences due to rainfall amounts in 1998 and 1999 in Amelia County¹.

Treatment	Timing	1998	1999
		----- kg/ha ² -----	
paraquat	PRE	5833 A	6460 A
atrazine	PRE		
metolachlor	PRE		
paraquat	PRE	5833 A	6335 A
atrazine	PRE		
dicamba	EP		
nicosulfuron	EP		
paraquat	PRE	6021 A	6586 A
atrazine	PRE		
glyphosate	EP		
paraquat	PRE	5896 A	6460 A
metolachlor	PRE		
glyphosate	EP		
paraquat	PRE	5770 A	6523 A
atrazine	PRE		
metolachlor	PRE		
glyphosate	EP		

¹ Values within a row followed by the same letter do not differ significantly differ, LSD, p = 0.05.

² Yields calculated at 12.5 percent moisture.

Table 3.19. Double-crop yield differences due to rainfall amounts in 1998 and 1999 in Amelia County¹.

Treatment	Timing	1998	1999
		----- kg/ha ² -----	
paraquat	PRE	1443 B	5770 A
atrazine	PRE		
metolachlor	PRE		
paraquat	PRE	1004 B	4453 A
atrazine	PRE		
dicamba	EP		
nicosulfuron	EP		
paraquat	PRE	1317 B	3889 A
atrazine	PRE		
glyphosate	EP		
paraquat	PRE	1568 B	3763 A
metolachlor	PRE		
glyphosate	EP		
paraquat	PRE	1505 B	3889 A
atrazine	PRE		
metolachlor	PRE		
glyphosate	EP		

¹ Values within a row followed by the same letter do not differ significantly differ, LSD, p = 0.05.

² Yields calculated at 12.5 percent moisture.

Table 3.20. Minimum-till corn production budget for 6900 kg/ha yield in Virginia¹.

Item	Unit	Price	Quantity	Total
Preharvest expenses				
Seed corn	Unit	\$89.13	0.62	\$55.26
Nitrogen	Kgs	\$0.53	134.00	\$71.02
Phosphate	Kgs	\$0.53	34.00	\$18.02
Potassium	Kgs	\$0.33	67.00	\$22.11
Fertilizer application	Ha	\$12.97	1.00	\$12.97
Lime	907 Kg	\$25.00	1.24	\$31.00
Insecticides	Ha	\$51.57	1.00	\$51.57
Chemical application	Ha	\$13.86	1.00	\$13.86
Fuel, oil, lube	Ha	\$14.41	1.00	\$14.41
Repairs	Ha	\$61.82	1.00	\$61.82
Preharvest labor	Hour	\$6.00	1.57	\$9.44
Production interest	A.P.R.	9.00%	184.41	\$8.30
Total preharvest expenses		\$0.05/ Kg		\$369.78
Harvest expenses				
Fuel, oil, lube	Ha	\$4.30	1.00	\$4.30
Repairs	Ha	\$35.81	1.00	\$35.81
Harvest labor	Hour	\$6.00	0.39	\$2.33
Hauling	Kg	\$0.005	6900.00	\$34.50
Total harvest expenses		\$0.01/Kg		\$76.94
Total variable cost		\$0.06/Kg		\$446.72

¹ Budget provided by Virginia Cooperative Extension, 2000.

Table 3.21. Barley grain production budget for 3700 kg/ha yield in Virginia¹.

Item	Unit	Price	Quantity	Total
Preharvest expenses				
Seed barley	Unit	\$7.02	4.90	\$34.39
Nitrogen	Kgs	\$0.24	78.00	\$41.34
Phosphate	Kgs	\$0.24	45.00	\$23.85
Potassium	Kgs	\$0.15	45.00	\$14.85
Fertilizer application	Ha	\$5.25	2.00	\$25.94
Lime	907 Kg	\$25.00	1.24	\$31.00
Herbicides	Ha	\$7.02	1.00	\$17.34
Chemical application	Ha	\$5.61	1.00	\$13.86
Fuel, oil, lube	Ha	\$3.52	1.00	\$8.69
Repairs	Ha	\$8.35	1.00	\$20.63
Preharvest labor	Hour	\$6.00	0.88	\$5.26
Production interest	A.P.R.	9.00%	99.19	\$4.46
Total preharvest expenses		\$0.06/kg		\$241.61
Harvest expenses				
Fuel, oil, lube	Ha	\$4.30	1.00	\$4.30
Repairs	Ha	\$34.81	1.00	\$35.81
Harvest labor	Hour	\$6.00	0.29	\$1.75
Hauling	Kg	\$0.005	3700.00	\$18.50
Total harvest expenses		\$0.01/kg		\$60.39
Total variable cost		\$0.07/kg		\$302.00

¹ Budget provided by Virginia Cooperative Extension, 2000.