

Water Quality Protection: Best Management Practices for Cropland

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Best Management Practices for Cropland Pollutants									
Potential to Reduce Pollutant Loss									
Best Management Practice	Pestie Alachlor	cides Atrazine	Soluble Phosphorus	Nutrients Total Phosphorus	Nitrogen	Suspended Solids			
Preplant incorporate into the top 2 inches of soil	High	High	High	Negative	High	Negative			
Use postemergence herbicide applications	N/A	High	No Effect	No Effect	No Effect	No Effect			
Use alternative herbicides	High	High	No Effect	No Effect	No Effect	No Effect			
Use in-season cultivation to minimize herbicide use	Low	Medium	No Effect	Negative	No Effect	Negative			
Band herbicides, nitrogen, or phosphorus prior to or at planting	High	High	High	Medium	High	No Effect			
Band herbicides or nitrogen at cultivation or sidedress	N/A	High	N/A	N/A	Medium	N/A			
Apply atrazine in fall for next year's row crop	N/A	High	No Effect	No Effect	No Effect	No Effect			
Apply herbicide in early spring, prior to May 1	Medium	Medium	No Effect	No Effect	No Effect	No Effect			
Use split applications of herbicide, e.g. $1/2$ to $2/3$ prior to May 1 and 1/2 to $1/3$ at planting	Medium	Medium	No Effect	No Effect	No Effect	No Effect			
Use reduced soil-applied herbicide application rates followed by a postemergence application	N/A	Medium	No Effect	No Effect	No Effect	No Effect			
Crop rotations	Medium	Medium	Medium	Medium	Medium	Medium			
Establish vegetative buffer strips	Medium	Medium	Medium	High	Medium	High			
Do not spray / apply herbicides or nutrients near streams or near where runoff enters a stream	High	High	High	Medium	High	No Effect			
Do not apply herbicide/phosphorus/or nitrogen to saturated or wet soil	Medium	Medium	Medium	Medium	Medium	No Effect			

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	Nutrients						
	Pesticides		Soluble	Total		Suspended	
Best Management Practice	Alachlor			Phosphorus	Nitrogen	Solids	
Retain and reuse application equipment rinse waters	Medium	Medium	Medium	No Effect	Medium	No Effect	
Read and follow herbicide label directions	Low to High	Low to High	No Effect	No Effect	No Effect	No Effect	
Use weed scouting / integrated pest management	Low	Low to High	No Effect	No Effect	No Effect	No Effect	
Use nonchemical cultural weed control methods to minimize herbicide use	Low to High	Low to High	No Effect	No Effect	No Effect	No Effect	
Avoid overspray and drift, back siphoning, and do not mix, load, or clean equipment near wells and water bodies	Medium to High	Medium to High	Medium to High	Low	Medium to High	No Effect	
Conservation tillage farming	Low to Medium	Low to Medium	Low to Medium	High	Low to Medium	High	
No-tillage farming	Low to Negative	Low to Negative	Low to Negative	High	Low to Negative	High	
Contour farming	Medium	Medium	Medium	High	Medium	High	
Contour strip farming	Medium	Medium	Medium	High	Medium	High	
Terraces with tile outlets	Low	Low	Low	Medium	Low	Medium	
Terraces with grass waterways	Low to Medium	Low to Medium	Low to Medium	Medium	Low to Medium	Medium	
Use lowest soil-applied herbicide rate necessary to control weeds	Low	Low	No Effect	No Effect	No Effect	No Effect	
Soil sampling and testing	No Effect	No Effect	High	High	High	No Effect	
Use optimum phosphorus / nitrogen fertilizer rate	No Effect	No Effect	High	High	High	No Effect	
Spill response plan for pesticides and fertilizers	High	High	High	High	High	No Effect	

Potential to Reduce Pollutant Loss

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