Spring wheat response to timing of application of pyroxasulfone (Zidua SC).

Pyroxasulfone (Zidua SC) was applied at rates of 1.75 to 4.0 oz/A at three application timings in wheat. Application timings were at-planting preemergence, delayed preemergence (about a week after planting after wheat had germinated and coleoptiles were approximately 0.75 inches in length and had not emerged), and early postemergence (one-leaf wheat stage). Trials were conducted in 2019, 2020, and 2021 in order to evaluate over different environmental conditions. Trials were maintained weed free through postemergence application of grass and broadleaf herbicides applied to the entire trial. In all three years this trial was conducted there were no differences in wheat yield due to timing or rate of Zidua application. However, the Zidua label for spring wheat only allows for application of Zidua at the delayed preemergence or postemergence due to potential for injury to wheat.

Treatment	Rate	Application Timing	Wheat Yield 2019	2020	2021	3-Yr Avg
	oz/A		———————————— bu/acre ————————————			
1 Zidua SC[a]	1.75	PRE[b]	60.3 -	40.1 -	30.7 -	43.7 -
2 Zidua SC	2.5	PRE	63.3 -	42.0 -	29.4 -	44.9 -
3 Zidua SC	3.25	PRE	61.0 -	42.7 -	30.8 -	44.8 -
4 Zidua SC	4.0	PRE	61.1 -	37.7 -	31.3 -	43.4 -
5 Zidua SC	1.75	DPRE	58.8 -	36.1 -	32.0 -	42.3 -
6 Zidua SC	2.5	DPRE	61.4 -	40.8 -	31.0 -	44.4 -
7 Zidua SC	3.25	DPRE	63.7 -	39.5 -	29.6 -	44.3 -
8 Zidua SC	4.0	DPRE	59.8 -	43.0 -	34.3 -	45.7 -
9 Zidua SC	1.75	POST	63.9 -	39.0 -	29.7 -	44.2 -
10 Zidua SC	2.5	POST	59.2 -	44.2 -	30.0 -	44.4 -
11 Zidua SC	3.25	POST	58.1 -	40.2 -	30.8 -	43.0 -
12 Zidua SC	4.0	POST	61.8 -	45.3 -	34.2 -	47.1 -
13 Untreated Check			63.4 -	39.5 -	31.7 -	44.8 -
LSD P=.10			NS	NS	NS	NS
Treatment ProDPRE(F)			0.9978	0.3813	0.4784	0.8734

[a]Zidua SC, pyroxasulfone (4.17 lb/gal)

[b]Timing: PRE, preemergence (applied at planting); DPRE, delayed preemergence (applied after wheat seed has geminated and coleoptile is at least 0.75 inches but has not emerged); POST, postemergence (after wheat emergence, at 1-leaf stage).