LADYSTHUMB SMARTWEED (*POLYGONUM PERSICARIA*) CONTROL IN COTTON WITH STAPLE

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Ladysthumb smartweed is recognized among the ten most troublesome weeds in soybean in South Carolina and in cotton in North Carolina. The distinctive identifying feature of Ladysthumb smartweed is the fringe of hairs on the tip of the ocrea. Control with currently registered herbicides has often been inadequate. Staple herbicide which was registered in 1996 for use in cotton controls Pennsylvania smartweed (*Polygonum pennsylvanicum*). Tests were conducted to evaluate the control of Ladysthumb smartweed with Staple herbicide applied postemergence, preemergence alone and at reduced rates with Cotoran, and in sequential applications.

Three small plot replicated trials were conducted in the coastal plains area of North and South Carolina. The weather conditions varied from very dry to very wet. Preemergence resutls were affected by rainfall. Preemergence applications of Staple at 0.063 lbai/ac or at reduced rates in a 1:30 ratio with Cotoran gave good to excellent Ladysthumb smartweed control when an activating rainfall occurred. Sequential treatments of Staple applied early post following Staple, Cotoran or the reduced rate combinations enhanced control particularly when no activating rainfall was received following the preemergence applications. Early postemergence applications of Staple to one to four inch Ladysthumb gave greater than 90% control at all locations. Postemergence control decreased as the size of Ladysthumb increased; mid post applications gave 59 to 80% control and late post applications to six to twelve inch smartweed gave 40% control.

Ladysthumb smartweed will be added to the Staple herbicide label in 1997. Weed size for cotnrol will be one to four inches for postemergence applications.