Purple nutsedge (Cyperus rotundus L.) can be controlled by paper mulch in tomato crop

A. Cirujeda^{*1}, J. Aibar², and C. Zaragoza¹

¹Unidad de Sanidad Vegetal, Centro de Investigación y Tecnología Agroalimentaria (CITA), Avda. Montañana 930, 50059 Zaragoza, Spain; acirujeda@aragon.es;

³Universidad de Zaragoza. Escuela Politécnica Superior, Ctra. de Cuarte s/n, 22071 Huesca, España. jaibar@unizar.es

Purple nutsedge (*Cyperus rotundus* L.) is a serious weed capable to pierce polyethylene (PE) plastic mulch used in horticulture. A biodegradable plastic, PE and five different papers were tested 2 years each in drip irrigated processing tomato fields highly-infested with *C. rotundus* from 2005 to 2010 in Zaragoza (Spain). Three papers were brown, two were black; the density of the papers ranged between 50 and 200 g/m²; some papers were made out of recycled fibers, others were made directly out of wood fibers. All five papers were able to withstand *C. rotundus* and the other weed species. Most *C. rotundus* plants emerged from the biodegradable plastic mulch possibly because this material had lowest strength to withstand slow perforation. Commercial paper used as mulch without any special additives can satisfactorily control *C. rotundus* in processing tomato provided that climate is appropriate to maintain the paper dry during most of the time.