TITLE: Sorption, mobility and degradation of triclopyr and 2,4-D on four soils.

AUTHORS: JOHNSON WG; LAVY TL; GBUR EE

AUTHOR AFFILIATION: Dep. Agron., Univ. Arkansas, Fayetteville, AR 72701, USA.

SOURCE: WEED SCIENCE; 43 (4). 1995. 678-684.

SECONDARY SOURCE ID: BIOSIS/96/03012

ABSTRACT: BIOSIS COPYRIGHT: BIOL ABS. Laboratory studies were conducted to determine the relative sorption, mobility, and degradation rates of triclopyr and 2,4-D on two surface soils and two subsoils from the rice-producing areas of Arkansas. Triclopyr sorption was slightly greater than 2,4-D sorption. However, mobility of the herbicides on a given soil did not differ. Sorption of both herbicides was greatest and mobility lowest on a subsoil with the lowest pH. Triclopyr degradation rates were lower than 2,4-D degradation rates in a dark incubator. The average half life was 138 d for triclopyr and 21 d for 2,4-D. High soil moisture content (0 versus 100 kPa water tension) increased the rate of 2,4-D degradation. Triclopyr degraded more rapidly at 30 C than at 15 C. The dissipation rates of both herbicides were lowest on the soil on which sorption was greatest.

MAIN MESH HEADINGS: GRASSES/*GROWTH & DEVELOPMENT
*SOIL

ADDITIONAL MESH HEADINGS: BIOCHEMISTRY
SOIL
FERTILIZERS
SOIL
HERBICIDES
PEST CONTROL
PESTICIDES

CAS REGISTRY NUMBERS: 55335-06-3; 94-75-7

LANGUAGES: ENG

KEYWORDS: Biochemical Studies-General
Agronomy-Weed Control
Soil Science-Physics and Chemistry (1970-)
Soil Science-Fertility and Applied Studies (1970-)
Pest Control, General; Pesticides; Herbicides

National Library of Medicine: IGM Full Record Screen