

[54] **CYCLOTRIPHOSPHAZATRIENE-DERIVATIVES AS SOIL UREASE ACTIVITY INHIBITORS**

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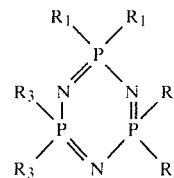
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[52] U.S. Cl. .... **435/168; 435/227; 260/927 N; 423/302**

[57] **ABSTRACT**

Tests show that 2,2,4,4,6,6-hexaaminocyclotriphosphazatriene, 2-phenoxy-2,4,4,6,6-pentaaminocyclotriphosphazatriene, 2,4-diphenoxy-2,4,6,6-tetraaminocyclotriphosphazatriene and 2,4,6-triphenoxy-2,4,6-triaminocyclotriphosphazatriene (also frequently called phosphonitrilic derivatives) of the formula



are highly effective inhibitors of urease activity in agricultural soil systems wherein

(1)  $R_1 \dots R_3 = NH_2$  or

(2)  $R_1' = R_2' = R_3' = R_2 = R_3 = NH_2$  and  $R_1 = OC_6H_5$  or

(3)  $R_1' = R_2' = R_3' = R_3 = NH_2$  and  $R_1 = R_2 = OC_6H_5$  or

(4)  $R_1' = R_2' = R_3' = NH_2$  and  $R_1 = R_2 = R_3 = OC_6H_5$

The above-mentioned compounds and mixtures of the compounds show sustained inhibition of the soil urease activity for periods of at least 21 days.

**25 Claims, 4 Sheets Drawing,**

**40 Pages Specification**

The file of this unexamined application may be inspected and copies thereof may be purchased (849 O.G. 1221, Apr. 9, 1968).

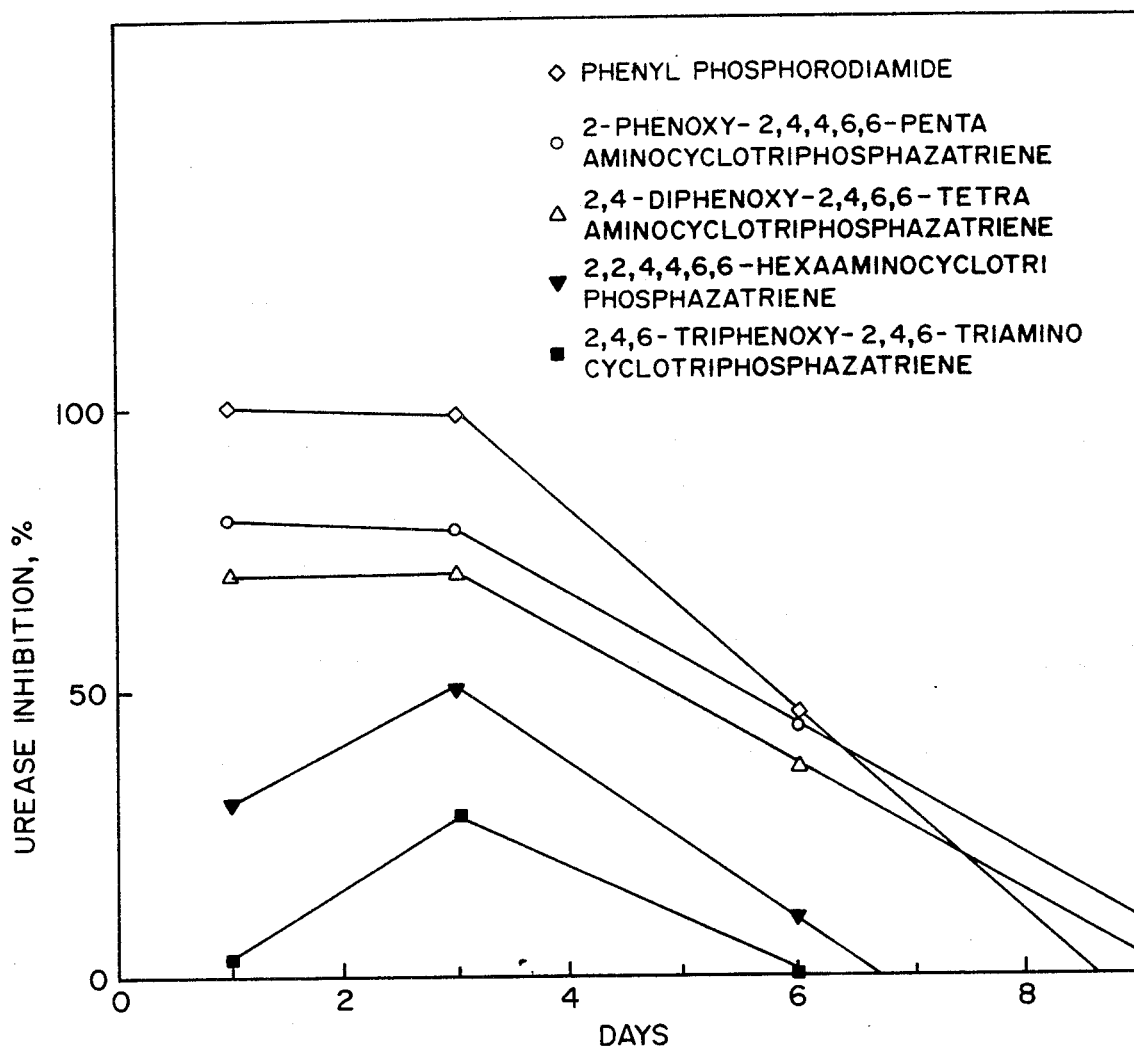
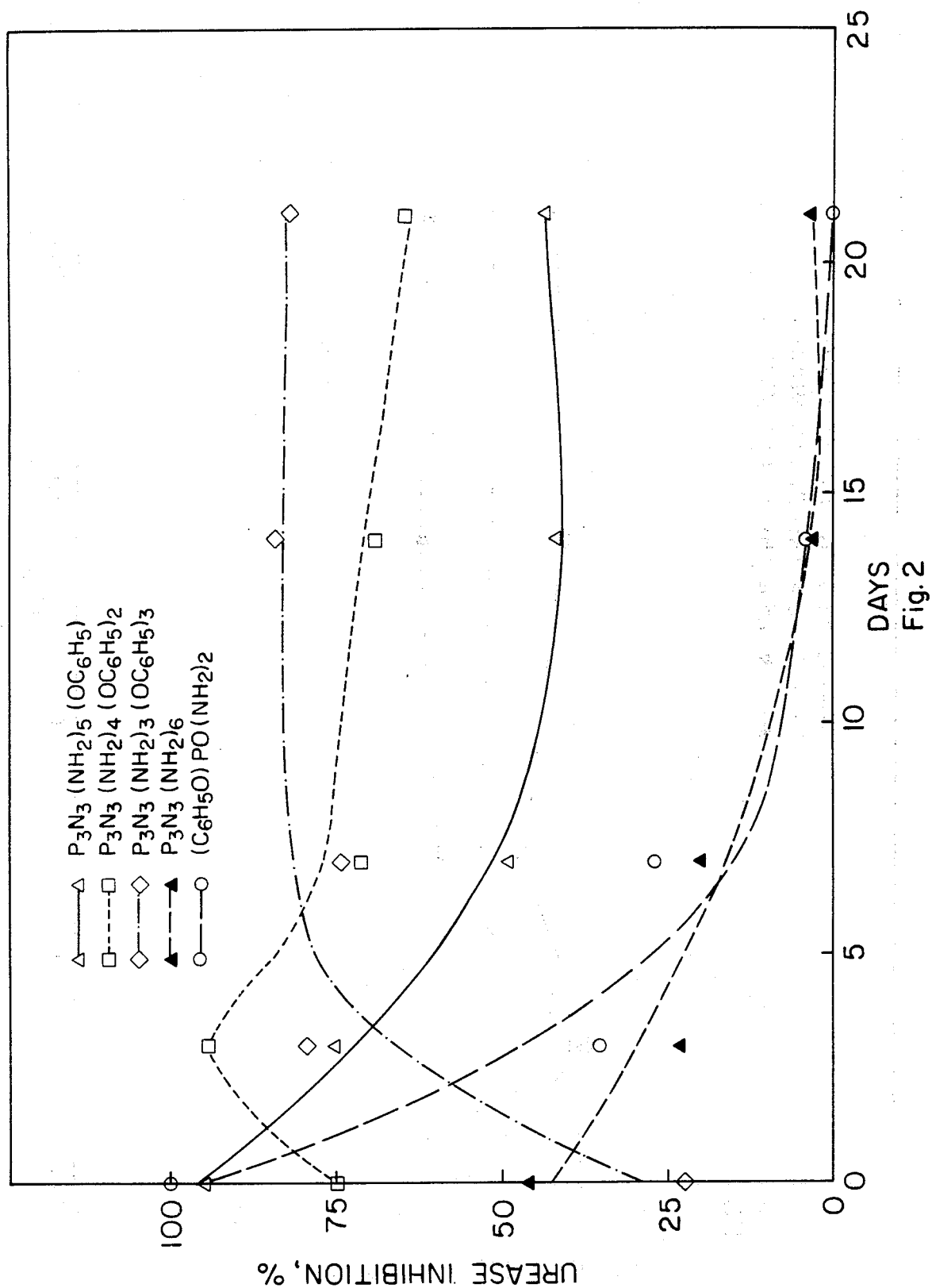
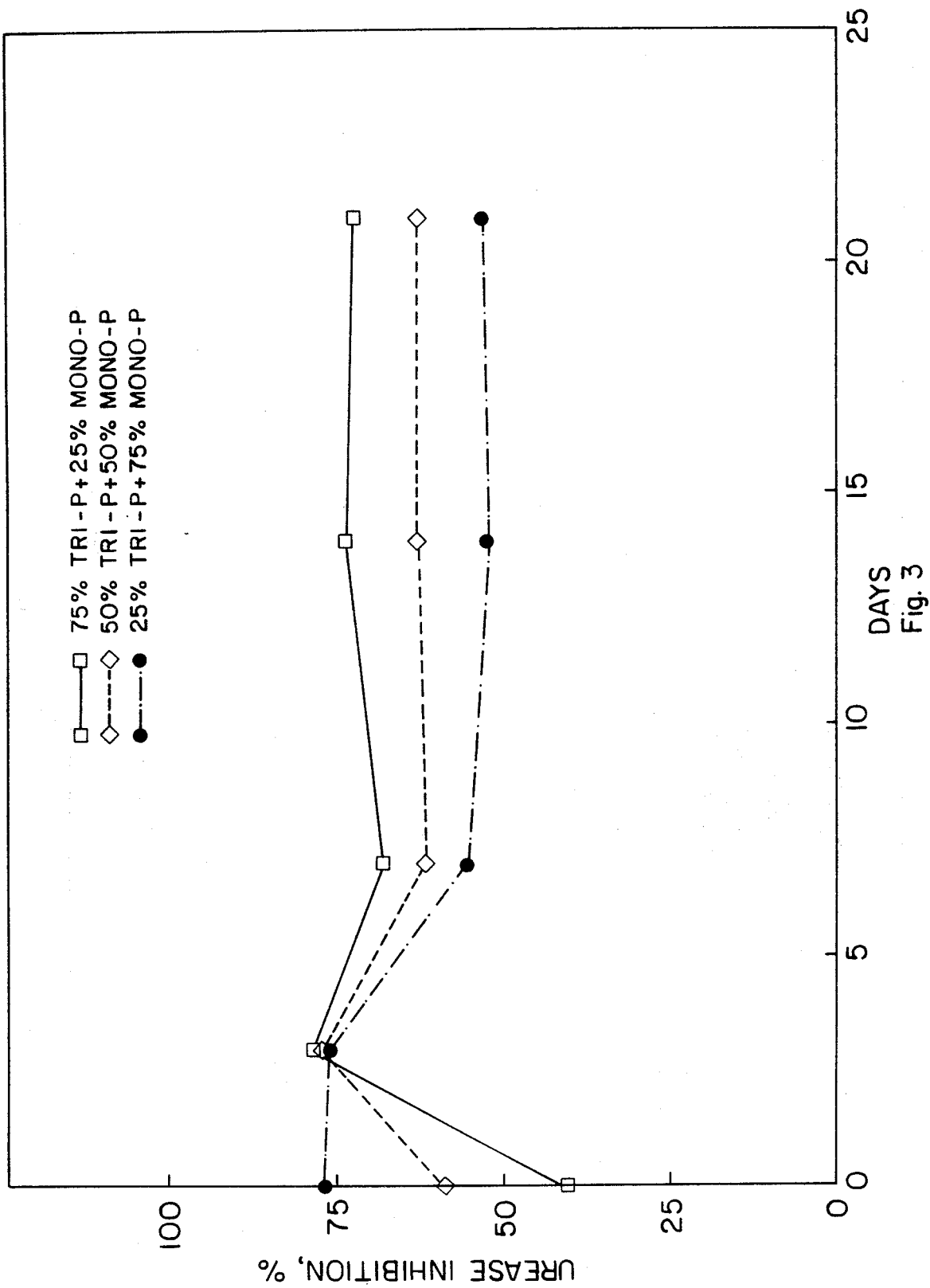


Fig. 1





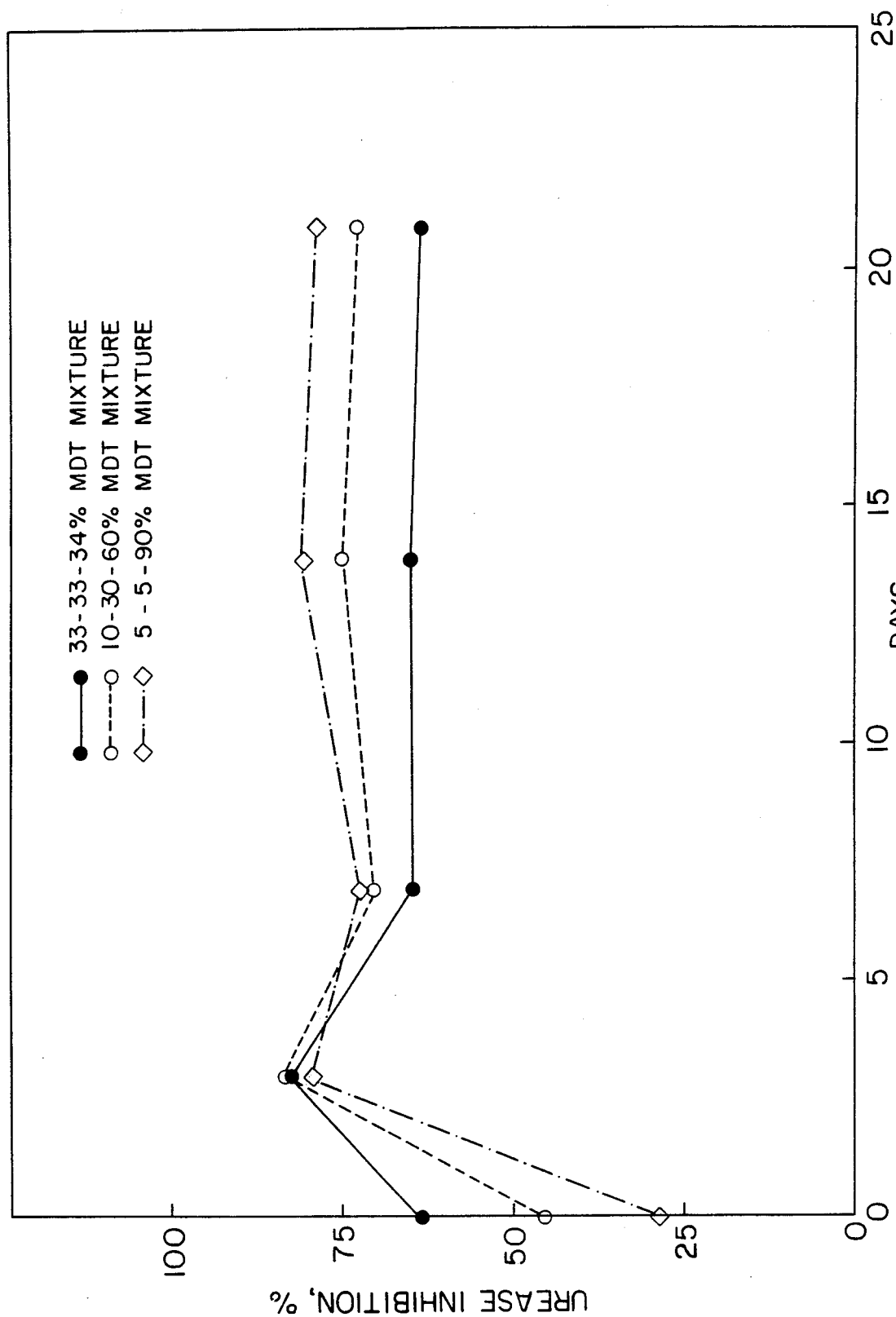


Fig. 4