Large Pot Greenhouse Trial with Clopyralid-Sensitive Garden Plants,
Final Report, June 6, 2002

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We used a large pot greenhouse study to simulate a raised-bed garden amended with varying amounts of compost containing clopyralid. A fine sandy loam soil was mixed with yard waste compost at rates of 0, 10, 20, 30 and 50% compost by volume, and packed into 10-inch plastic pots. Three replicate sets of pots were prepared for each rate of compost. The compost contained 25 ppb clopyralid. We transplanted tomato, lettuce, zinnia, marigold into the pots, and seeded snap beans.

In general, plant growth and vigor improved with increasing rate of compost, because of nutrients supplied by the compost (Table 1 and Figure 1 below). Lettuce, zinnia, marigold, and beans showed no symptoms of clopyralid damage (Figure 2, right).

Tomato plants grown with compost amendment showed some curling of the leaves and more compact growth, but it is not clear if the curling or growth habit was caused by clopyralid. Plants in the pots containing 0 and 10% compost grew more slowly than the other plants until we added supplemental nitrogen. All plants flowered and produced tomatoes. Tomatoes in the first cluster in all treatments had blossom end rot and were not harvestable. Quality of tomatoes on the second and third clusters was adequate, and we saw no negative effects of compost on the tomatoes.

These results are encouraging, and suggest that the potential for clopyralid damage to sensitive crops from western Washington compost is much less than has been observed in Pullman and Spokane. Applications of one inch of compost to soil should provide a net benefit to garden plants.

Table 1. Fresh weight of lettuce plants grown in pots containing 0, 10, 20, 30, and 50% compost by volume. Compost contained 25 ppb clopyralid residue.

Treatment	Fresh weight (g) (mean of 3 plants)
Unamended soil	134
10 % compost	253
20 % compost	340
30% compost	451
50 % compost	473

Fig 2. 50% compost, marigolds, zinnias.

Fig 1. Left: Lettuce growing in unamended soil, Right: lettuce growing in 50% compost.

For more information and printout source go to: **http://www.soils1.org**.
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Bary, A., E. Myhre, and C. Cogger. 2002. **Large Pot Greenhouse Trial with Clopyralid-Sensitive Garden Plants, Final Report, June 6, 2002**. Online Research Brief.