The effect of plant growth regulators (PGRs) or mechanical stimulation on branching was assessed on basil (Ocimum basilicum), cilantro (Coriandrum sativum), and parsley (Petroselinum crispum). The following treatments were applied to basil, cilantro, and parsley: Augeo (dikegulac-sodium) at 0, 100, 200, 400, and 800 ppm; Configure (benzyladenine) at 0, 75, 150, 300, and 600 ppm; Tourney (metconazole) at 0, 37.5, 75, 150, and 300 ppm; mechanical stimulation as brushing at 0, 10, and 40 strokes applied twice daily. Analysis of the data on basil showed no significant effect on plant growth from the Augeo, Configure, or Tourney treatments. Mechanical stimulation showed a significant decrease in plant height, plant width, number of branches, and number of leaders. Future research will determine the effect of PGRs and mechanical stimulation on branching and flavor concentration.