Introduction of dicamba-tolerant soybeans (Glycine max L. Merr.) will improve management of in-crop weeds, but at the risk of contaminating spray equipment which may then be used to treat susceptible soybeans. Studies were conducted to collect rinsate from dicamba-contaminated commercial sprayers and to compare four cleaning agents (water alone, ammonia, Cleanse® or Erase®) at removing dicamba from the equipment. A labeled application rate of dicamba was applied through two sprayers before the tank was drained and fresh water and one of the cleaning agents was added. Rinsate solution was then collected from the sprayer booms. This initial treatment was considered a first rinsate, and was followed by two rinses of water (second and third rinsate). A portion of rinsate solutions were applied on dicamba-susceptible soybeans in the V3 (early season) or R1 (late season) growth stage. At 14 DAT, plant height was reduced up to 48 and 3% for first and third rinsates, respectively on V3 treated soybeans. Stunting of R1 treated soybeans ranged from 16 to 33% for first rinsates at 14 DAT, and 29 to 45% by 28 DAT. First rinsates reduced yields up to 11 and 46% for V3 and R1 soybeans, respectively, compared to the untreated control. For third rinsates, V3 yields increased up to 10% compared to the untreated control, while yields ranged from 6% lower to 11% higher on R1 plants. Overall, V3 plants were able to recover more effectively than R1 soybeans. The use of cleaning agents can minimize equipment contamination damage by dicamba to soybeans, but the use of triple rinsing and exposure of soybeans before the reproductive stage are critical.