## Cassia fistula 'Pierce' is a New and Improved, Sterile, Seedless Golden Shower Tree

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*Cassia fistula*, the golden shower tree, is a traffic stopper when in bloom. This 10 meter tall tree with a relaxed, graceful, tropical look produces golden yellow 7-8 cm flowers that hang in clusters 30 to 45 cm in length. Flowers are followed by an abundance of cylindrical, pendulous, malodorous seedpods up to 0.8 m long and containing up to 100 seeds each. The pods are a litter problem in managed landscapes and because of the prolific seed production, the species can be invasive in favorable environments. Invasiveness is not a concern with 'Pierce' however, because it has no ability to produce seeds or pods. It is completely sterile.



Cassia fistula fertile control



 $10^{0}$   $10^{1}$   $10^{2}$   $10^{3}$ 

DNA (PI) Fluorescence (arbitrary units)

18,843 nuclei 6.8 ± 0.62 florescence units2,282 nuclei 13 ± 1.4 florescence units

Autotetraploid (4N) plants of *Cassia fistula* were obtained from young diploid (2N) seedlings using 0.1% colchicine solution to treat shoot meristems of newly germinated seedlings for 48 h. Suspected polyploids, based on leaf thickening, distortion or color intensification, were identified and guard cells were measured. Suspected polyploids with guard cells measuring 1.3X or larger than those of the diploid controls were subjected to flow cytometry analysis to quantify DNA content as a measure of ploidy.

 $\frac{10^{0}}{10^{1}}$ 

## CFT1431,003 nucleii15 ± 1.7 florescence unitsdividing nucleii4,836 nucleii28 ± 1.9 florescence units



Cassia fistula, sterile auto-tetraploid

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