The Queensland Cloud Seeding Research Project (CSRP) was conducted in southeast Queensland near Brisbane during the 2008 and 2009 wet seasons (December – March) in response to (the then) severe drought. The predominant method of seeding utilised was hygroscopic seeding whereby potassium chloride aerosol particles were introduced at cloud base. Several observational platforms were used to measure the effect of seeding on the drop size distribution (DSD), including a research aircraft and the Bureau of Meteorology's dual-polarised, dual-wavelength CP2 radar. Here we report on radar-derived DSDs in seeded and non-seeded clouds. The parameters examined are the median volume diameter ($D_0$) and the drop concentration ($N_w$). Bringi (2002, 2003, 2009) has shown that these variables can be accurately derived when the DSD follows a gamma distribution function and the methodology has recently been employed to examine rain rates and DSDs in different climatic regimes (Thurai, 2010). Furthermore, May et al. (2010) applied the technique to storms with similar dynamic and thermodynamic characteristics thereby isolating the effects of aerosol on a deep convective storm. Preliminary results indicate that there is a statistically significant difference between the seeded and non-seeded DSDs with the seeded DSDs containing a greater number of larger drops.