Almond growing is increasing in Spain. The rise of almond kernel price and the technical orchard management are making this crop more profitable and attractive. On the other hand, the release of more productive, extra-early blooming and fully autogamous almond cultivars, are allowing the introduction of this crop to inland areas with cold climate.

The release of new cultivars is a great responsibility and the final decision has to be based on the results of agronomic trials under different climatic conditions. In this work the performance of the last commercial CITA almond cultivars ('Guara', 'Soleta', 'Belona', 'Mardía' and 'Vialfas') and some breeding selections ('G-3-3', 'G-3-4', 'G-5-25', 'G-2-22' and 'l-3-67') in a trial in the "Afrucas Experimental Fruit Farm" near Caspe, (Zaragoza, Spain) is shown. The trial was established in 2005 at a distance of 6 x 7m with the peach x almond INRA GF-677 rootstock. Scions were grafted in 2006 and the trees are trained at free open vase and managed under drip irrigation conditions according to the commercial requirements. Phenology, vigor, production, fruit and orchard parameters are being controlled to ascertain the agronomical performance of each cultivar. The success of a commercial variety not only depends of the precision of the breeder selection, but also the variety resilience has to be determined to ascertain the convenience of the variety to a specific area, and finally, the training of the farmers on the new variety management is essential.