

Title Agronomic factors including variety, days to harvest and crop nutrition affect the shelf life of fresh cut salads

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Abstract

The lettuce industry has rebounded worldwide in the past decade, with consumers wishing to eat healthier, fresher food and demanding convenient access to it. The U.S has seen a 16% increase in demand over the past decade, all of which can be attributed to ready-to-use salad mixes. Similar increases in demand have been seen in Australia. One of the limitations for expanding this category in Australia is the lack of a year round supply of good quality product. Recent research has provided some agronomic opportunities to improve the quality of lettuce supplied to the processor and in turn improve the shelf life. A key area is variety selection; different "types" of lettuce should be selected over the growing season to minimise the impact of seasonal temperatures on yield and quality. Crop scheduling is also important for providing a predictable supply. The days from transplanting to harvest can vary from 49 days to 100 depending on the variety and season and can have a significant impact on the final shelf life of the product. For example, baby leaf spinach that has a longer time from transplanting to harvest maturity also has a longer shelf life. Interestingly, leaf thickness measurements show some promise as an objective measure of the potential shelf life of the product. Another issue to consider is the impact of crop nutrition on yield and quality, excessive nitrogen has been shown to reduce both yield and shelf life.