

FRESH-LIFE EXTENSION OF PRODUCE

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STRATEGIES TO GROW YOUR BUSINESS

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In this case study, CPL Business Consultants was engaged by a crop protection company to look at the market potential for selling products for fresh-life extension of produce. CPL's report answered important questions, giving the required insights to inform its strategy.

The objective of this study was to assess the potential value of a fresh-life extension product for fruits and vegetables. CPL's client sold products for crop protection but also wanted to diversify into other markets, which added value to fruits and vegetables. Since the client's customers were growers, and since growers were increasingly involved through co-operatives and other organisations in bringing their produce to market, the client wanted to understand the potential value of a product that extends the shelf-life of produce.

The study also provided an opinion on the feasibility of developing such a product, assuming registration could be obtained. The over-arching question was, *"If it is possible to develop a product, is it worth doing so?"* The study addressed the value of extending the shelf life for one or two weeks on bananas, tomatoes, melons, leafy greens and apples. It sought to answer questions like *"Who in the value chain benefits most; who in this chain has the most to lose or gain from shelf-life extension? What is the current competitive situation? Are there any disruptive technologies in this area?"*

Part of the report was based on the personal knowledge and experiences of personnel involved in the food industry for 25-40 years. This involvement included direct participation for ~15 years in developing new methods for extending the shelf life of fresh produce. CPL gathered additional data from published literature and private communications with companies, including opinions on the potential value of this product at various points along the chain from grower to consumer.

FRESH-LIFE EXTENSION OF PRODUCE

Executive Summary

- Objective
- Methods
- Principal Findings
- Conclusions
- Recommendations

Methods for Fresh-Life Extension of Fruit & Vegetables

- Temperature control
- Atmosphere control
 - Types of Controlled Atmosphere
- Hormonal Control
- Others, Disruptive Technologies

Effects of Ethylene on Selected Produce

- Ethylene and Ripening
- Removing Ethylene Produced
- Inhibiting Ethylene Production

The Market for Fresh Produce

- Loss and Quality Deterioration in the Supply Chain
- Banana Market *e.g.*
 - Global, European and UK Markets
 - Global, European and UK Segmentation
 - Wholesale Banana Pricing
 - Implications for the Supply of a Life-extending Product
- Apple Market *e.g.*
 - Supply Chain Complexities
 - Global Apple Markets
 - EU Apple Imports and Exports
 - UK Apple Market Segmentation
- Leafy Vegetables *e.g.*
 - Wholesale Cabbage and Lettuce Prices
- Tomatoes *e.g.*
 - Retail Price Development for Loose Tomatoes
- Melons
 - Main Causes of Deterioration
 - Innovations in Melon Packaging

Economic Considerations of Fresh-Life Extension

- Added Value Steps for Three Types of Fresh Produce
- Comparison of Annual Average Retail and Wholesale Prices
- Value Added in Marketing Pathways for UK-Produced Crops
- Value Added in Production Sourced from Overseas Growers
- UK Produce Direct to Supermarkets
- Overseas Produce Direct to Supermarkets

Contacts *e.g.*:

- Fruit and Vegetable Companies
- Shelf-life Extension Product Companies
- Research Organisations

Appendices

- Storage Conditions for Fresh Life Extension of Apples
- Global Apple Supplies to the UK Market
- Fresh-Life Extension in Bananas
- EU Genetic Engineering Projects on Ethylene
- Historical Developments in Fresh-Life Extension
- New Product Case Study

In addition to this project on fresh-life extension of produce, CPL has also worked on, for example, post-harvest [antifungals in bananas](#). You can find other relevant projects by browsing this site or also using the search bar on this page. Have a look at our [Introduction](#) and [Brochure](#) for a description of our consultancy work. You can also review [eight case studies](#).