

CASE STUDY

Freshness Unlocked: Revolutionising Grape Packaging for Global Trade



► Introduction

India is amongst the world's largest producers of fruits and vegetables, with Indian grapes being highly sought after in the Middle Eastern and European markets. However, exporters faced significant challenges with the traditional corrugated box packaging used for grapes. The packaging was neither durable nor aesthetically appealing, raising concerns about its ability to maintain product freshness during long transit cycles.

Exporters were actively seeking a more reliable, visually appealing and functional solution that could enhance the quality of exports.

► Key Challenges

Sturdiness: Corrugated boxes lacked the durability needed for long-distance transit, often resulting in damaged produce.

Freshness: Maintaining the freshness of grapes over extended periods, especially for international shipping, was a critical issue.

Aesthetic Appeal: The unattractive appearance of traditional packaging did not meet the premium expectations of export markets.

Cost Concerns: Exporters were sceptical about adopting alternative solutions due to perceived higher costs compared to corrugated boxes.

Market Scepticism: Convincing exporters about the reliability and practicality of a new packaging solution required significant effort.

► Solutions

In 2002, K. K. Nag Private Limited developed an innovative Expanded Polystyrene (Thermocole) packaging solution to address these challenges. The following steps were taken:

Design and Prototyping: The team designed a durable, lightweight and aesthetically pleasing Thermocole box. Prototypes were created and tested to refine the product.

Stakeholder Engagement: The Sales team engaged with key stakeholders, including exporters, members of the Maharashtra Rajya Draksh Bagaitdar Sangh (MRDBS) and the National Research Centre for Grapes (ICAR, Pune). They also visited growers and traders during industry summits to understand specific needs.

Pilot Testing: A pilot order of 500 boxes was executed with a leading exporter in Sangli, Maharashtra. The boxes were tested in the Gulf markets during Ramadan, a period of high demand for grapes.

Feedback Integration: Feedback from stakeholders and the export market was used to optimise the packaging design further.

► Results

The introduction of Expanded Polystyrene boxes resulted in significant benefits:

Enhanced Durability: The sturdy design ensured minimal product damage during transportation.

Freshness Retention: Because of the superior insulation properties of EPS, grapes remained fresh for longer periods, meeting export quality standards.

Market Acceptance: The aesthetically appealing design helped exporters present a premium product to international buyers.

Industry Standard: K. K. Nag Private Limited's Thermocole boxes became the benchmark for grape exports from India, maintaining their relevance for over 20 years.

► Conclusion

By addressing the challenges faced by exporters with an innovative solution, K. K. Nag Private Limited not only transformed grape packaging but also elevated the perception of Indian agricultural exports in global markets. This case highlights the importance of customer-centric innovation, stakeholder engagement and iterative design in solving complex industry problems. The success of Thermocole packaging serves as a testament to how focused efforts can create lasting industry standards.