Workflow: Demand and Supply

Toolkit 2.2
Demand Planning

target audience

Packhouse managers, marketing and sales managers.

what it is

Demand planning is a cross-functional process that helps businesses meet customer demand for products while minimizing excess inventory and avoiding supply chain disruptions. It can increase profitability and customer satisfaction and lead to efficiency gains.

Sometimes packhouses incorrectly refer to demand planning as the supply of fruit, i.e., the demand that will be placed on the packhouse by the volume of supply that will have to be processed. This is not correct since the material and fruit volumes coming into the packhouse form part of supply planning. In this toolkit and throughout the handbook we use the conventional term – demand planning – to mean planning to meet client/market demand.

Demand planning may be a function of the marketing department or the export agent. However, demand planning directly determines packhouse operations: what should be selected, what should be packed, for which client/market, how much, and when?

why it is important

Citrus is increasingly a demand (market/client) driven industry. Historically, one may have been able to say that demand outstripped supply and one could usually move fruit to market, but recently, due to world events, market dynamics have shifted with an increased possibility of oversupply.

Demand driven means that it is a buyer's market. The market determines preferred cultivars, volumes, quality criteria, and price. Growers must assess trends and future market preferences as best possible and hope that their planting decisions and their cultivar mix prove to be sound. Packhouses must select, sort, and pack based on the forecasted demand of a given season.

The market is becoming increasingly discerning, defining size, sugar content, and colour in increasingly narrow ranges. This trend is supported by ever more sophisticated sorting equipment (e.g., optical readers and grading machines).

Therefore, it is very important to understand market demand, based on historical sales, supply agreements, and client/market knowledge and trends.

Demand planning links with Toolkit 2.3 – Marketing and Operations Planning and Toolkit 2.4 – Supply Planning and Workflow 5 – Logistics. For example, if you consistently over-estimate the number of containers you will fill/order but repeatedly under deliver, you may be surprised when you do deliver what you estimated that the shipping company cannot supply because they are using your track record (past actuals) to do their planning. A sound and validated demand planning process, based on accurate data and forecasting, is important.

It is also possible to shape demand or create demand. For example, new cultivars may be introduced that bring highly desirable product (e.g., soft citrus, easy peelers) to market very early or very late in the season. Therefore, where there once was no historic demand, one succeeds in creating demand.

The benefits of demand planning include:

- Good market intelligence – per market segment/geography/client and their respective product preferences. This includes historic information and trends, as well as future trends and more accurate forecasts of demand.
- A well tried and tested, validated, and standardised demand planning process that aims for maximum consensus.
- Improving customer service and satisfaction.
- A well informed and streamlined supply chain (up and downstream of the packhouse).
- A reduction in wastage, whether this is due to misinformed operational planning or marketing decisions.
- A reduction in stockholding/inventory or avoiding delays due to inadequate stock.
- Improved quality and shelf-life with fruit being picked, processed, packed, and transported in the optimal way, due to the effective integration of demand, marketing and operations, and supply planning.

success factors

Demand planning can be improved by implementing the following:

- **Process and data management** – Packhouses are process and data driven, and the ability to both well is a key organisational capability.
- **Demand planning methodology and process** – You should devise a reliable approach to demand planning methodology and process, and then apply it consistently, so that you can easily and reliably compare trends and metrics.
- **Aim for consensus demand planning** – which is **a multistep, multi-stakeholder process of integrating the future baseline demand with sales and market activities to shape demand to achieve the P&L objectives**. This research helps supply chain leaders structure a formal demand-planning process for improved financial business outcomes. Reaching adequate consensus amongst the various people, departments, product suppliers, and service providers.
- **Use both constrained and unconstrained demand forecasting:**
  - The constrained forecast is **a forecast constrained by the operations side** of the business such as capacity, materials, cash-flow, etc.
  - An unconstrained demand forecast is **focused on demand potential**. It asks – what is the total number of products your business could sell based solely on market demand,

ignoring supply-side capacity constraints? Take no consideration of any constraints to your ability to meet the total forecast market demand.

- Both constrained and unconstrained forecasts are useful. The gap between the two, and the actions you may want to take to remove some constraints, can assist you with **internal demand forecasting**, which is an understanding of the demand your operational capacity would have to meet to remove the constraints.

➢ **Use a combination of passive and active demand forecasting:**

- **Passive demand forecasting** relies exclusively on past data and trends to forecast future sales/demand. The approach has merit in cases where you have a lot of historical data to draw from and a fairly predictable market.
- **Active demand forecasting** requires information and data of a dynamic market, including economic, competitor, seasonal, and growth factors.

execution steps

1. **Set your goals** – Clarify what you wish to achieve as a business, because your demand plan will be framed within that context, and lead to several questions:
   - What varieties and how much of each are we aiming to sell, and will there be demand for these products?
   - Which markets (demand) are predictable, and which are likely to fluctuate?
   - What are the external factors that may influence demand, and how does that impact us reaching our target?
   - What do we do if demand is lower than in previous years, and maybe much lower than our target?
2. **Include key stakeholders** – Include the key stakeholders that can inform your demand forecast and who need to react to your demand forecast. This may include your clients and market/export agents, industry specialists, marketing and operational leads, and groups in your value chain (understanding your constraints).
3. **Method and process** – Decide on your forecasting and demand planning methodology, and then collect data.
4. **Analyse** – Do your analysis, and apply the experience gained from past trends and decisions.
5. **Operational alignment** – Your plan may require some changes or responses from your operations.

assessment questions

Please Note: There is no minimum / maximum number of questions you can add.

1.	Do you have an established, tried and tested demand planning methodology and process?
2.	Do you include the right people in your demand planning process?

3.	Do you achieve adequate consensus through your demand planning process so that people can buy into your forecast?
4.	Do you apply both a constrained and unconstrained forecasting approach?
5.	Do you apply both a passive (based on past trends) and active (based on knowledge of a dynamic market) approaches?
6.	Are you clear on your goals and, given the market demand and your internal constraints, how you are going to achieve them?

resources

1.	6 Types of Demand Forecasting + Projection Benefits, Methods, and More