Traceability, Productivity and Compliance Labeling Requirements are driving the seafood industry to use barcode technology—at the dockside, on the production line and in storage & shipping.

- Production Reporting
- Inventory Management
- Case & Pallet Labeling
- Lot Traceability
- Shipment Verification
- Automated Bill of Lading and Manifests

CHALLENGE

Being in the seafood business means getting short shelf-life products to market as quickly and cost effectively as possible.

Wholesalers and retailers are becoming more demanding and the processors, in order to comply with new requirements, are using bar code technology in increasing numbers.

SOLUTION

Alaskan fish processors have been using SIMBA software for over 25 years. It was designed in the late 1980’s with the purpose of reporting daily production to management and sales.

Since then, the system has expanded to include printing compliance labels, tracking inventory, shipment verification, and complete lot traceability for food safety.

FLEXIBILITY

The fresh food industry encompasses everything from fish to produce to meat and poultry to berries and citrus fruits.

Each product has its own unique challenges for production, handling and food safety.

SIMBA provides scalable solutions for seafood processors and wholesalers.

SEAFOOD PROCESSORS

A discussion of seafood processors as a whole encompasses several different methods of production: rapid, variable processing (salmon, halibut, etc.); batches of same product (such as shrimp); large fish processing (example is tuna). Each has different requirements and issues to deal with throughout the process.

RAPID PROCESSING OF VARIABLE PRODUCT:

Processors in Alaska, (as well as other areas in the world) often deal with varieties of species and grades within the same production run. If they are to label each tote or carton with unique product data it must be done quickly so the fish can get from the dock into the cooler or freezer with minimal production delay. The speed of this process makes it more difficult for a manual system to keep up—pen and paper are by nature slower and less accurate than a computerized system. However, most computer systems are cumbersome when a large volume of variable data must be entered.
One solution to this problem is touch-screen technology. Products are pre-defined and variable descriptors can be selected with just the touch of a button. A corresponding barcoded label is printed within seconds, and the production process is uninterrupted. This carton label may be used to track the location of the totes or cartons within the processing facility and accumulate shipment data using barcode scanning technology.

**PROCESSING OF QUANTITIES OF LIKE PRODUCT:**
Bulk processing of seafood such as shellfish is a bit less complex than highly variable production runs, but no less critical in the need to sort, grade and pack quickly. Shellfish and other bulk seafood may be sorted and graded at dockside. Since it’s best to affix the barcode label as soon as possible in the tracking process, there are a couple of choices in this instance:

Once the seafood is sorted and labeled, it can be transported to the processing plant. There they may be re-graded and processed. To maintain lot traceability, as the product is repacked a re-boxing or commingling feature in the software should be used.

**PROCESSING OF LARGE PRODUCT:**
Large seafood such as tuna are also handled at dockside, where the fish is either off-loaded from the processor’s own boats, or is purchased from the fishermen.

Tracking and labeling the fish at the dock may be accomplished similarly to the bulk seafood using a workstation or mobile solution. Alternately, if some of the processing occurs at the dock (such as beheading and gutting) more complex tracking and re-boxing can be handled using a tablet designed for harsh conditions and a mobile printer.

Once the product is transported to the processing plant, again, the re-boxing function will maintain traceability.

**BARCODE LABELING:**
There is more than one reason to use barcode in the seafood labeling process. First, it provides a unique identifier and allows for fast and accurate tracking from dock or receiving through the processing plant, into storage and onto the van for shipping. Barcode is 99.99% accurate and at least 80% faster than manual data entry. Another frequent reason to use barcode is to comply with customer requests. A comprehensive label printing system will include...
features that allow for printing all the data required onto the label, and for printing in foreign languages, such as Japanese and Russian.

In order to print a complex label such as the Costco label (below), the printer must have enough resident memory and a fairly high print speed.

If a simple lot tracking method is used, as lots are commingled, all the included lots are considered contaminated in the case of a recall. For example: Lot B is Commingled with a portion of Lots A&C (see carton diagram, lower left). Because there is no way in a straight-forward lot tracking scheme to differentiate which portions of Lots A&C have been commingled, if Lot B is recalled, so are Lots A&C in their entirety. This can get expensive.

A better method is by using a carton tracking scheme.

The software accumulates carton data, defining which cartons contain which Lots. Then when Lot B is contaminated, only cartons B, A/B and B/C are recalled. This tracking method (re-boxing lots by carton) would also pertain to any recalled ingredients in processed foods.

THE IMPORTANCE OF SHIPMENT VERIFICATION:
Every company has had shipment disputes. Ideally it would be possible to retain proof of what was contained in a specific shipment. Using a method of shipment verification (sometimes called “van loading”) solves this problem.

As cartons are accumulated onto pallets and loaded onto vans, each is accounted for using a barcode scanning application. Each carton number is assigned to a van and included on the manifest, which is automatically produced. When a customer claims there are cartons missing, it is now possible to prove what was loaded.
SUMMARY:
The use of barcode in a fish processing environment can be key to a well-run and profitable business. Solutions range from simple to very complex, and from inexpensive to over $1 million. It is important that you list the key elements that will be required for your system to both satisfy your customers and provide you with access to the information that you need to run your business at the highest level of efficiency, accuracy and profitability.

These features include:

• Carton-based re-boxing—Ability to track lots by carton within the re-box or commingling process. It will save you time and money.

• Mobile label printing—Ability to produce labels at dockside as well as in the processing plant if you do any sorting or grading right off the boat.

• Rapid label printing—If you process multiple species, you will need the capability to print complex and variable labels quickly. Include on the list your compliance labeling needs (foreign languages, etc.)

• Ease of use—make sure the system can accumulate attributes, print barcode labels and track cartons & lots without too many key strokes

• Speed & Flexibility—collecting that much information can take time if the data collection scheme isn’t efficient.

• Shipment Verification—record shipments by carton and van number to satisfy any disputes.

* Flow charts of the various scenarios discussed are available upon request.

LEARN MORE AT:
http://www.a-barcode.com/software/food-traceability/

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