

Weighing and packing for birdnest in the factory

This smart bird's nest packaging solution automates quality control and sorting to maximize efficiency. By linking a precision weighing scale directly to a centralized computer system and a label printer, each edible bird's nest is instantly logged with its exact weight and a unique ID.

The system tracks individual weights (ranging from 6.8g to 8.3g) on a digital dashboard, effortlessly solving the complex puzzle of manual sorting. This takes the guesswork out of combining 6 pieces to hit the perfect total box weight of 45g, streamlining production from scale to final box.



Solution Step 1 – weighing and recording of the birdnest

Once the cleaning and drying process is complete, every single premium bird's nest



transitions to the critical phase of quality logging. As demonstrated in, each piece is individually placed on a high-precision digital scale. The data is instantly transmitted to a centralized computer system, which assigns a unique identity tracking code. Simultaneously, a smart label printer generates a custom sticker containing QR code, the precise weight, and the unique ID. This step ensures flawless traceability, standardized quality control, and effortless inventory management before the final packaging phase.

Step 2 – Vision data capturing of QRcode with weight understanding

This process uses an automated vision inspection system to capture and verify the identity of each product through its QR code before the next production stage. As products pass beneath the industrial camera, the system scans and compares the QR codes against the production database to ensure the correct product, batch, and packaging configuration. Any mismatch or missing code is immediately detected,



preventing incorrect processing and improving product traceability, quality assurance, and process gate control while reducing manual inspection effort and human error.

Step 3 – Software guild and picking indicator

The smart sorting monitor, as seen in picture, displays a visual map of bird's nest weights for the operator. The operator uses this interface as a direct guide to pick specific items from the tray. Cells color-coded pink signify items being actively selected for the current order, while green cells indicate items available for the next selection. Yellow and grey cells provide real-time status of remaining items, ensuring the operator can efficiently retrieve and confirm the correct bird's nest for each order based on the monitor's visual cue.



Step 4 – Putting birdnest into the dedicated packing box.

This is the next packing process, perfectly curated box ready for market. By utilizing the smart picking system, six individually tracked bird's nests (ranging from 6.8g to 8.3g) are paired to achieve an exact total net weight of 45.0g, as verified by the digital scale.

Each premium piece features its own unique QR code label for consumer transparency. This allows customers to seamlessly scan and verify the authenticity, origin, and precise weight profile of their purchase using a smartphone, ensuring flawless quality control.



Step 5 – Packing completed pack into the carton box



The integrated "Shipping Module" software automatically computes the cumulative weight and logs the unique contents of the entire batch. Once packed, the connected desktop system commands the label printer to generate a comprehensive shipping label—complete with specialized QR codes, logistics tracking, and destination data—to be applied directly onto the carton, completing a seamless seed-to-shelf traceability pipeline.

Summaries

The smart bird's nest packaging system completely automates the traditional sorting process. By linking a precision scale, a centralized computer dashboard, and a custom label printer, every processed piece is logged with a unique ID and QR code.

The software maps out optimal weight combinations from a 25-piece tray, providing a color-coded visual guide on-screen for the operator. This eliminates manual guesswork, allowing the operator to instantly pick and pack six varying pieces (6.8g–8.3g) to hit a precise total box weight of 45.0g, ensuring absolute traceability and quality control.