Worthwhile Operational Guidelines & Suggestions

Wooden Breast – Emerging Technologies for Identification

Broiler breast fillets with the wooden breast myopathy are identified and sorted through manual palpation by processing plant employees. Several technologies for identifying wooden breast are currently being investigated. Some of these technologies include ultrasound imaging, imaging for carcass breast shape, bioelectrical impedance of breast fillets, interactance spectroscopy, 3D imaging, and Vis-NIR hyperspectral imaging.

Ultrasound imaging to predict wooden breast is being tested by imaging live birds prior to processing. Ultrasound image echogenicity is correlated to the presence and severity of wooden breast in the deboned filets allowing for prediction of the presence of wooden breast.

Using photo imaging, broiler breast shape from whole carcasses has been measured and correlated with the presence and severity of wooden breast. This technology would allow carcasses with wooden breast to be separated from non-wooden breast carcasses prior to deboning and further processing.

Technologies for identification following deboning that would allow for breast fillet sorting are also being developed. Bioelectric impedance analysis technology works by measuring the ability of an electrical signal to pass through the meat. Interactance spectroscopy measures the composition of the meat by detecting the passage of light through the meat. 3D imaging focuses on fillet factors including thickness, volume, area, weight, and density to detect wooden breast, and Vis-NIR hyperspectral imaging using very small differences in wavelengths to separate wooden breast fillets from normal fillets.