How to reduce moisture uptake?

Water uptake is an avoidable consequence of water immersion chilling of broiler carcasses. In addition to carcass weight, chilling duration, water temperature, and extent of agitation are important factors in moisture uptake. Excessive moisture is not desirable on packaged whole or cut-up poultry, as it distracts from the appearance and, unless it is declared, can be considered a type of economic adulteration. Most plants use screens, shaker tables, rollers and extended drip lines to reduce moisture uptake, as it is not easy to modify the chiller parameters. After all, the primary purpose of chilling is to reduce carcass temperature to < 4C. Here are some other considerations to reduce moisture uptake:

- Scalding/picking (cuticle removed > intact)
- Type of evisceration cut (horizontal > vertical)
- Skin integrity (excessive cuts, tears, trims > intact)
- Pre-chill inside/outside washers (high pressure > low pressure)
- Pre-chill temperature (higher > lower)

Most of the water taken up by the carcass is held loosely by the connective tissue under the skin. Limiting water access to the subcutaneous tissue (for example long vertical or horizontal opening cut) is likely to help in this respect…

Contact: S. F. Bilgili, PhD.

Phone: (334) 844-2612
E-mail: sbilgili@auburn.edu
Poultry Science Department
Auburn University, Auburn,
AL 36849-5416
www.ag.auburn.edu/dept/ph/