

Growing the Pasture-Grazed Dairy Sector

Research Results

The Aroma of Pasture-Grazed Dairy Products

Cooperating chefs observed a unique aroma when working with pasture milk products. Chef Kaestner states, “As standalone items, the pasture dairy products had varying degrees of more intense smells. Common adjectives used by colleagues included more dairy smell, creamier, and more buttery smell. This was also noted during handling. When mixing doughs, creams, and buttercream, more intense dairy aromas were noted for the pasture products. One example of the intense aroma was when whipping pasture-milk cream. The cream literally filled the kitchen with this incredible cream aroma. Another time, we were amazed when mixing the different butter creams. The kitchen literally smelled more like butter when the pasture butter was used, while the conventional butter cream smelled more of the added vanilla flavoring. Finished items also seem to carry the enhanced “dairy smell.” We observed this in pancakes, cookies, pastries and pie doughs.”

Anyone working with milk from a grazing dairy will most likely note the distinctive aroma. Historically this aroma has been noted most significantly in products manufactured in the spring season when cows first returned to pasture after winter confinement feeding. To some, this aroma is a great complement to dairy foods and reminiscent of grazing practices. To others, this grazing aroma competes with the clean, bland notes manifest in conventional dairy products. In general the aroma is subtle, yet distinctive and fairly consistent in intensity over the grazing season. Numerous labs have worked to identify the chemical cause of grazing aroma. Some thought was aligned with the presence of a category of naturally-occurring alkyl phenol compounds; more recent work on this subject has not been as conclusive. Nonetheless, work published on this subject has yet to definitively characterize the chemical cause of grass aroma. It remains one of several aroma mysteries.

Regardless of its elusive origins, some work has been conducted on determining the consumer response to pasture flavor in dairy foods. In general, the blander the background flavor of the product, the more significant the impact of the “grassy note.” This work is described in the section below on consumer sensory testing.



Growing the Pasture-Grazed Dairy Sector in Wisconsin: Summary of findings and recommendations

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