

Fresh and Salty

Recipes in Early Modern Maritime Manufacturing

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For the European settler/invasers in what we now call the Canadian Maritime provinces, survival depended, largely, on the use and manipulation of water: fresh water in the rivers, lakes, and streams; salt water in the gulfs, bays, and oceans; and water in the rain, air, and ground. In what Allan Dwyer calls “the built environment” (211), the development and use of natural resources played an important role in early modern society and its economy in Nova Scotia. Thus, despite having travelled across the Atlantic Ocean, bringing with them important boatbuilding, fishing, and trading knowledge and skills, the Europeans who attempted to establish and maintain life, business, and government on the eastern coast of North America, required scientific research and innovation, and commercial propaganda in manufacturing a variety of products. As Christopher Pastore notes in his analysis of early modern development of the American east coast, “insights into the way Early Modern people envisioned the boundary between human and nature” (x) illuminated how people shaped their communities because the natural environment, and in the Canadian Maritimes we think largely of water, dictates what can be effectively accomplished. In my paper, I consider what early modern Maritime recipes express about these settler/invasers’ use of water in local manufacturing, selling, and utilization of man-made products. I follow three streams of inquiry. The first is a question of water usage: are fresh and salt waters interchangeable in manufacturing? The second is a question of controlling water: how can one prevent water

seepage in a damp, rainy environment, and how can water damage be minimized? The third is a question of water conversion: how can salt water be converted into drinkable water? All of the receipts to which I refer here were found in English-language Nova Scotian newspapers, indicating the need for, and the providing of, a convenient form of knowledge exchange for early modern manufacturers and individuals requiring answers to these and other questions. The recipes also show that, in the early modern Canadian Maritimes, scientific experimentation aided in water-related technological development. Finally, the rhetorical strategies employed by the writers (and the newspaper editors) of these recipes demonstrate that European capitalism made its way to Canada, at least in part, through water's place in early modern manufacturing.

First, consider a letter written by Dr. Dexter to the American Academy of Arts and Sciences, reprinted in the 1st of December 1789 issue of *Nova Scotia Magazine*. Dexter claims that he has investigated pot-ash's "defects and the causes of its impurities," believing that "those defects may be easily remedied." Dexter cites the accidental inclusion of common salt, which he calls "the great evil which injures the sale, and very much reduces the value of some of the American pot-ash." To guarantee that clean, usable pot-ash is obtained, Dexter stresses that in repeated filtering "rain or river water ought always to be preferred" over salt water. Furthermore, he insists that should "the oily substance [...] exist in the pot-ash, it can be remedied only by dissolving in pure water, and boiling it down," a relatively inexpensive fix. In his conclusion, Dexter writes,

Some manufacturers may be discouraged from going through this process, by the labour necessary in shifting the lie so often. But if they consider the advantages they will obtain in fluxing their pot-ash, which will be effected in less than half the time required in the usual

way, And the great saving in the expense of kettles, by the lies being made clean and pure; they will be reconciled to the method [...] their pot-ash will find a more speedy market, and obtain a higher price [...] and the reputation of American pot-ash will be equal if not superior to any that is manufactured in Europe.

Obviously, the primary goal of the article is to demonstrate a tested manufacturing method for a quality product, but the text implies much more. Clearly, there is a need to validate locally-manufactured products, certifying them as effective as those made in Europe – which may be a form of proto-national pride and an assurance that the new colonies will be successful, self-functioning enterprises. Further, that a Nova Scotian editor chose to publish a method devised specifically for American manufacturers shows there must be some commonality between American and Canadian commerce, product need, and material availability, at least among comparable eastern coastal regions. Because the article was printed in Nova Scotia, its publication also hints that if Canadians do not produce a high-quality product, they might be forced to purchase, likely at a higher cost, American-made goods shipped up the coast.

Despite Dexter's insistence (and promise of experimental proof – which is not provided in the article) that fresh water is compulsory in the manufacture of quality pot-ash, an anonymous letter published in *Royal Gazette* on the 17th of January 1792 – three years later – contradicts this claim. The letter begins,

Please do insert in your respectable Paper, the following method of making Pot-Ash--it may be very profitable to the industrious farmers of Nova Scotia, as this method of making Pot-Ash differs materially from that process generally known and practiced, by its yielding more salts from the same quantity of Ashes--and [...] they may be able in a short time to make the sharpest and

most refined Pot-Ash, such as will sell at the London market for the highest price.

In addition to the inclusion of salt water, this method also recommends using “sea-weed, sea-thong or sea-lace, and all herb[s] or plants which abound with a good Quantity of [alkaline] salts [... including] rushes, reeds and sedge, which [grow] in marshes, pools and ditches of water” and other plants commonly found in and around Nova Scotia. This method, therefore, makes better use of readily-available materials for commercial and domestic production of pot-ash. In his analysis of early modern Atlantic commodities and ecology, William Jeffrey Bolster argues that “the value of commodities exists in light of historically contingent meanings” (37). The contingent meaning in this article is that England was a benchmark of manufacturing excellence, one to which Maritime producers should strive to meet, and can meet according to the anonymous writer.

Connected to the manufacture of pot-ash, is its use in an oily compost by Maritime farmers. In *Nova Scotia Magazine* dated the 2nd of April 1790, Mr. Roxbuck, identified as a York gardener, pens a method of making oil compost from North American potash. However, Roxbuck initially notes, in his experimental trials, that this compost is inferior “to rotten dung,” a fertilizer readily available on any farm: “The plants in general flowered very well, but those to which I applied the compost, sprung up hastily with small stalks, and produced very poor flowers.” However, Roxbuck’s second experimental trial shows the superiority of the pot-ash compost, once it has aged. He writes, “[t]he necessity for meliorating the compost was in this trial fully confirmed, for the cabbages that grew up the alley, which in May had received the compost, were larger, and in all respects, finer than the others.” In the same article, James Stovin of Doncaster also claims to have experimented, successfully, with the oily compost on his

barley in 1769. In addition, his continued use of the compost shows that it “retains its vigour longer” than manure does. Richard Townley of Belfield also confirms that this oily compost is preferable, stating, “those [onions] that were fed by the oil-compost plainly distinguished the advantage they had over the rest, by their luxuriance and colour; and, at the end of the summer perfected the finest crop that I had ever seen, being greatly superior to the others both in quantity and size.” This early modern recipe demonstrates the dissemination of important information for commercial manufacturers and for individual farmers, as well as grassroots scientific experimentation and technological development in Maritime agriculture.

As for controlling water, a letter by E. F. to the editor of *Nova Scotia Magazine*, dated the 5th of November 1791, provides a recipe for making mortar, a much-needed building material, expressly for use in the damp Maritime environment; it is, allegedly, impenetrable to moisture. Once poured, the author claims, the mortar

will then ferment for some days in drier places, and afterward gradually [...] set and become hard. But in a moist place, it will continue soft for three weeks or more; though it will at length attain a firm consistence, even if water have such access to it, as to keep the surface wet the whole time. After this it will acquire a stone like Hardness.

In a damp climate, such a product is essential in ensuring safe, sturdy, and long-lasting construction. The author also makes claims about the mortar’s ability to reduce moisture within buildings, writing, “while it is fermenting and setting, [the mortar] is extremely beneficial for preventing the oozing of water through the floors [and] walls of houses, where the common method used would have no effect.” Despite the author’s failure to provide evidence of his claims about the mortar’s efficacy, the recipe would be attractive to those hoping to minimize water damage to

property, and, as we now know, to prevent the growth of waterborne molds within buildings.

Along the same lines, a recipe for the manufacturing of coal tar for use in waterproofing boatbuilding lumber was published in the 24th of November 1789 issue of *Royal Gazette*. The article begins,

It is universally allowed, that to judge of the value of anything, the most certain, just, and impartial way is to do it by comparison. Such has been the mode practiced by the friends as well as the enemies to that valuable article of British Manufacture, the Coal Tar, and is not one instance has the result failed of being highly and most decisively in its favour.

It is unclear whether “British Manufacture” means “made in England” or “made by British people” in the Canadian Maritimes, but the writer may be expressing some national pride mixed with salesman bravado. Experimenting, as indicated – by comparison – with the coal tar, vegetable tars, mixtures of brimstone, oil and rosin, and mixtures of other substances, ships were allegedly sent to the West Indies “with the express view, whether the Coal Tar really possessed the extraordinary and peculiar quality of preventing the bite of the Sea Worm, which is so destructive.” It seems unlikely that ships would be sent to test the tar, despite the author’s claim – perhaps made to convince consumers that the product has been experimentally shown effective. Similarly, the insistence that impartial witnesses have, “with a generosity and candour that will ever do them honour, come spontaneously forward, [and] given a public testimony of the great superiority of the Coal Tar,” seems, to modern readers, too overstated, almost to the point of a con. To solidify his claims, the author cites the positive result from an earlier experimental trial conducted on Captain Steele’s ship *Louis* in September, 1788 (note the attention to detail that is missing in the other experimental account) in which

half of the bottom of the boat was sealed with Coal Tar and the other with the scientifically-named “white stuff.”

Additionally, “A cheap Method of making a Watch-Coat for Soldiers, chiefly those in America,” appeared in *Nova Scotia Gazette* on the 20th of August 1767. The waterproofing agent is linseed oil, boiled “gently till one half is diminished” to which is added “a small quantity of litharge of gold” (an oxidation product). Once coated, “the garment is an effectual preservative from the rain; it is very light to carry, and being pretty full on the back, will not only keep the man dry, but also his pack and ammunition.” This waterproofing recipe has been devised to combat a specifically North American east coast environment during wartime. It reminds its readers that scientific and technological advancement is often, as it is today, the result of military necessity. And like other products designed for use by the military, this waterproofing compound can find its way into industrial, commercial, and domestic use. The author writes, “[t]his Watch-coat will be equally serviceable to sailors at sea, in rainy weather, and if generally used, would save many lives.” Surely, everyone in the early modern Maritimes can appreciate this recipe.

Finally, regarding the conversion of water, I refer to “A new and easy method” to preserve drinking water on sea voyages and “purifying it when stinking,” which appeared in *Nova Scotia Magazine* on the 5th of November 1797. The author, of course, not knowing about bacteria and viruses, indicates that river water (that is, fresh water) becomes putrid because “it contains animal and vegetable substances” in varying quantities. Furthermore, the author continues, the casks holding the water may also contribute to putrefaction because of impurities adhering to the wood. Citing a Mr. Lowitz, the author states that “from a great variety of experiments” (of which he gives no specific account), he can deduce that the best agent for preserving and purifying water “is charcoal dust,” a

product that still contributes to water filtration today. Although this method may be useful for supporting life at sea and reveals a chemical treatment for water, it seems unlikely that such a method of water purification would be of use in a domestic, or even business, setting in the early modern Maritimes, given the availability of fresh water.

This preliminary examination of a handful of early modern Canadian Maritime recipes indicates their potential as a rich source of information about the period and its people. In particular, the manipulation of water and scientific experimentation in manufacturing essential products proves vital to the development and maintenance of life in New Scotland. But never far behind the necessities of life, come social and economic considerations that clearly motivate the publication of these recipes.

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