First therefore you shall understand that the principal food whereupon a running horse is to be fed most; as the very strength and chief substance of his life must be bread, for it is of all other foods most strong, clean, healthful, of best digesting, and breed the best blood.

Gervase Markham, *Cavelarice or the English Horseman*, 1607

In the summer of 1415, the Aragonese ambassadors on their way to the court of Henry V purchased horse-bread every day, spending more on horse-bread than on practically anything else. Don Quixote bragged to an innkeeper that his horse was the finest that ever ate bread. Thomas Nugent, writing about pumpernickel in 1768, relied upon his readers’ association of horse-bread with travel to introduce the still-repeated absurdity that the name was coined by a Frenchman at an inn who complained that Westphalian black bread was unsuitable for himself, though “qu’il étoit bon pour Nicole,” his horse; and the writers of the *Oxford English Dictionary*, when they published the letter *h* in the closing years of the nineteenth century, appended to their definition of “horse-bread” the factual statement, “Horse-bread is still in use in many parts of Europe.”

More refined than hay or raw grains, and thus a denser source of calories and protein, horse-breads enabled tired horses to rebound from their exertions. As an early eighteenth-century writer put it, horses “cannot so soon recover with Hay or Grass, as with Horse-breads.” For centuries, in addition to being a feed supplement for tired horses, these breads helped feed the countryside during famines and were eaten by the poor, even in times of plenty. They therefore provide a rare glimpse into the cuisine of English poverty.

In the late sixteenth century Gervase Markham (1568–1637) initiated reforms in the training of hunting and racing horses that made him famous during his lifetime and long afterwards. He was most noted for the refined leavened breads that formed a key part of his training regimen. Markham’s elite horse-breads were based on the breads of the affluent; and so, in a sense, separate from their nutritional role in a training program for equine athletes, his leavened horse-breads can be understood as elite breads for elite animals. Markham’s era was a period when the English were taking a renewed interest in the bloodlines of their elite horses. The little Arabian began entering English bloodlines around this time, and so these more refined breads were matched with horses whose profiles were becoming increasingly aristocratic.

In our own day Markham is well known among culinary historians for the bread recipes he published in *The English Housewife* (1615). These recipes stand out in the early English bread literature for their unusual clarity and specificity. The explanation for Markham’s evident expertise as an author of bread recipes is simple: by the time he wrote *The English Housewife* he had had twenty-two years’ experience writing bread recipes for an unusually demanding audience—the owners and trainers of expensive horses.

The recipes for elite horse-breads developed by Markham and his followers between 1593 and 1800 provide insights into the birth of modern ideas about nutrition and veterinary medicine. They also provide insights into aspects of the breads served to the English elite that are not found in the regular cookbook literature. For example, the elite horse-bread literature suggests that people who could afford a choice in breads viewed bread as both a food and a medicine and decided what bread should be put on the table, at least in part, by considering the consistency of their stool. During the early modern period the bread literature devoted to horses far exceeded in quantity and nuanced detail the literature devoted to breads for English bipeds. It is a literature with a wealth of information for artisan bakers, culinary historians, historians of material culture, and students of manners.

The best general introduction to “common baker’s horse-bread”—the breads fed to horses involved in transportation—is found in material Markham contributed to the 1616 edition of *Maison Rustique*, a general work on country life.
In England and other places they make a great and profitable use of this meal [bran], as namely, a certain bread which they call horse-bread, and is so general among them, that you shall not find an inn, ale-house or common Harbor, which doth want the same.8

Horse-breads were so important to the smooth functioning of the English system of horse transport9 that for hundreds of years English law recognized two broad classes of bread—man’s bread and horse-bread—and regulated the commercial production of each. Commercial horse-breads were regulated as to size, retail price, wholesale price, authorized producer, and, sometimes, composition.10

Common baker’s horse-breads were of three types: a bread made of bean or pea flour; one of wheat bran or chisel—what are now called “middlings”—separate or combined, with the addition of flour to bind the dough; and a bread of mixed pulse and grain flour.

Sieges produce famines in miniature and at an accelerated rate. In 1549 the English city of Exeter was besieged by rebels from Devonshire and Cornwall in rebellion against King Henry vi. Raphael Holinshed reports that as the siege tightened the governors commanded that bread be baked for general distribution—a bread that his readers would have recognized as an exceedingly crude bran-based horse-bread. And in the mean while, when their corn and meale was consumed, the governors of the cities caused bran and meale to be molded up in cloth, for otherwise it would not stick together.11

Describing a famine that had occurred in 1317, Holinshed addresses the consequences to the poor of high grain prices:

In this season vittles were so scant and dear, and wheat and other grain brought so high a price, that the poor people were constrained through famine to eat the flesh of horses, dogs, and other vile beasts….12

While, in the case of this famine, Holinshed does not mention the type of breads people ate as they descended into...
starvation, we can assume a progression from wheat to less expensive grains, then to horse-breads in their various forms, and then finally to horse-breads extended by wild foods such as acorns and ferns, before they finally resorted to “breads” made from whatever edible plant product they could scrounge. Seventeenth-century writers suggest that for the rural poor even times of plenty could be times of scarcity, forcing the indigent to rely on breads their more fortunate neighbors recognized as horse-breads.13

The link between poverty and famine is well established and continues to this day, as does the link between poverty and foods of lesser social status. Literary references right up to the seventeenth century reflect the common knowledge that horse-breads were a food of the rural poor and that anyone falling into abject poverty would turn to horse-bread as a food of last resort.14

In William Langland’s poem “Piers Plowman” (1377–1379), Hunger suggests that recalcitrant workers could be made to work if threatened with a diet “of hounds-bread and horse-bread” accompanied with beans to “boil their womb.”15 While it is impossible to know which style of horse-bread Langland had in mind, in 1378, when the poem was being written, the City of London issued an edict to bakers mandating that no “horse-bread be made except of pure beans and peas, without mixture of other grains or bran”—a clear indication that Langland could have had any type of horse-bread in mind. One of the two horse-bread recipes Markham published in Maison Rustique was one of these formerly prescribed breads:

[T]ake two bushels of Bran or Chissell, and add unto it one bushel of bean or pease meal, and so knead it up with water scalding hot, and after the loaves are molded, to roll them in spelted beans crushed and bruised in a mill, and so bake it well.16

Restoration comedies played with the idea that when the going got tough, horse-bread was the last food grasped as one descended into hunger and the first food grasped as one escaped its clutches. From the comedy Gammer Gurtons Needle (1550–1553), we see the former:

[S]ave this piece of dry horsebread,
Ch'a bit no bit this livelong day; no crumb come in my head;
My guts they yawl, crawl, and all my belly rumbleth;
The puddings [intestines] cannot lie still; each one over other tumb leth.17

And in Jacob and Esau (1568), we see the latter:

In what grievous pain they die, that die for hunger.
O my greedy stomach, how it doth bite and gnaw?
If I were at a rack, I could eat hay or straw.
Mine empty guts do fret, my maw doth even tear,
Would God I had a piece of some horsebread here.18

Ben Johnson’s Every Man out of His Humor associates horse-bread with a certain strata of vagrant with the insult, “You thread-bare horse-bread eating rascals.” In Christopher Marlowe’s Dr. Faustus, Ralph promises his friend Robin, if he really can procure the kitchen maid for him, to “feed thy devil with horsebread as long as he lives, of free cost.” A period audience, understanding horse-bread as a bread associated with famines, beggars, and field hands, would have seen Ralph’s offer as both insanely contemptuous of the devil’s status and as a marker of his own.

The relationship between poverty, horse-bread made from bean flour, and social status is explicitly addressed by Thomas Cogan, an influential author of the late sixteenth century. In The Haven of Health (1584), writing about the eating habits of workers at the bottom of the Leicestershire social ladder, he notes that fava beans “are meat for Mowers, as the Proverb is, and for ploughman, but not for students.”19 When he mentions that in Leicestershire these people baked bean-flour breads, a method of preparation that further lowered the already low social status of beans, he feels the need to clarify that “I mean not horse-bread (which is commonly done throughout England) but for their family….” Perhaps, he had tasted the bread himself and found it pleasant, for he acknowledges that people who were used to eating this type of bread liked it. While Cogan took bean-bread in stride, he could not abide pea-bread. He notes that this bread, too, is “much used in Leicestershire” but adds that “I leave it to rustics, who have stomachs like Ostriches, that can digest hard iron, and for students I allow no bread but that which is made of wheat….” It is perhaps inevitable that people who eat foods identified with animals will themselves be seen as part animal.

Writing one hundred years later in his weekly newsletter, A Collection of Letters for the Improvement of Husbandry and Trade (1681–1683), John Houghton, one of his era’s most inquisitive observers of rural life, notes that when sifting flour the next coarsest product after bran is chisel and that it “makes dry short bread or horse-bread, but is usually mixed with rye…and if leavened, makes good bread for the poorer sort.”20 Houghton’s bread is described by multiple authors in texts about horses. The following description by Thomas de Grey was published in 1654 and is thus contemporaneous with Houghton’s own writing:
Horse-bread... being made of bran and chisel for the most part with a little coarse Rye-meal, to make it stick together, and so made up and kneaded with cold water and after the outside of the Loaves or Rolls are rolled in ground or rather bruised peas.21

In essence, what Houghton suggests in his remark about a bread made of middlings and rye is that when baking this horse-bread for people, to be sure to let it ferment. In my own experiments with this recipe, I find it makes delicious bread when allowed to sour (hot water speeds up the process), and rolled thinly, it produces crisp crackers.22

The indigent and the working poor had long eaten breads whose association with animal feed marked their low social status. With Markham’s innovation of refined leavened breads for elite horses, a hierarchy of breads was established within the horse world that more or less replicated the social stratification found in the human bread world—coarse meal-based unleavened flat breads at the bottom and refined yeast-leavened breads at the top. The leavened horse-breads elevated the status of the horses to which they were fed, both in regard to other horses and also, subtly, in regard to people as well.

In The English Housewife Markham provides a recipe for a bread intended for field workers. It is a brown bread that he describes as “the coarsest bread for man’s use.”23 His readers understood that this identified the bread as being in the horse-bread family, just as they understood that Markham’s fancy horse-breads were in the family of breads for the more socially privileged, referred to in the period literature as “French bread,” “manchet,” and “fine cheat.” In modern terms these breads are a lightly enriched white bread like challah, white bread, and a bread that is slightly brown and for which there is no modern equivalent, although the more rustic versions of pain de compagnie fill the same social niche. Markham’s brown bread for field workers had the look, texture, and taste of social debasement. His readers would also have been aware of how ideas of breeding— nouements of coarseness and refinement in both people and horses—were reflected in the breads placed on one’s table. Only by comparing Markham’s brown bread with his elite horse-breads can we fully appreciate what his readers understood the bread’s cultural meaning to be.

Markham’s brown bread was a huge loaf—crusty, dark, dense, and sour—a mixture of unknocked, lightly sieved pea and grain flour that was leavened the lazy way, by just letting the dough sit until it soured. At every point of comparison with his elite horse-breads, his brown bread is cheaper, coarser, and more carelessly worked. The flour was sieved only to remove the coarsest bran, while for his best horse-bread the grain was milled on the highest-quality black millstones24 and sifted through a fine bolting cloth to produce a flour that was either white or nearly so. Markham shared Cogan’s distaste for pea flour, considering it too crude a feed for high-status horses,25 though it was used in common baker’s horse-bread, a fact that Markham’s readers, and the field workers who ate it, would have known.

But it is in the recipe’s handling of ingredients, more than in the ingredients themselves, that its association with animal feed is made explicit. The bread isn’t kneaded. It is really nothing more than a baked sour mash. In contrast, Markham’s elite horse-breads shared with the elite breads of his era the use of the best ale yeast as leavening, and even when they included substantial amounts of bean flour, his elite horse-breads were carefully kneaded to develop dough structure.

Markham’s first work on horses, Discourse on Horsemanship (1593), was a manifesto that established him as the intellectual force in the world of English hunting and running horses. While Markham acknowledged having read foreign authors, unlike those of Thomas Blundeville and other sixteenth-century writers his works were explicitly informed by experience and driven by personal opinion.26 Markham is Markham’s authority.

Until Markham, trainers had fed horses common baker’s horse-bread as part of their regular feed and specially formulated spiced flat breads as part of a horse’s special training for the hunt or course.27 These spiced breads were part of an oral tradition shared by farriers, the men who cared for and trained horses, and the trainers of fighting cocks.28 In 1684 Thomas de Grey, a holdover from this earlier tradition, claimed that his spice-filled bread would “give [the horse] strength of body, be very helpful to his wind, keep him from fainting in his labor and exercise, be it never so sore.”

Take Wheat meal, Oat meal, and Beans all ground very small, of each one peck, Aniseeds four ounces, Gentian, and Fenugreek, of each one ounce, Licorice two ounces, let all these be finely powdered, and one peck, Aniseeds four ounces, Gentian, and Fenugreek, of each one ounce, Licorice two ounces, let all these be finely powdered, and seared, and add the whites and yolks of twenty new laid Eggs, well beaten together, and put to the other ingredients, and so much strong Ale as will knead it up, then make your Loaves like to Horse bread, but not too thick, and let them be well baked, but not burned....29

Markham categorically rejected the concept that either physical stamina or intangible qualities like courage could be imbibed through drugs. He insisted that the only efficacious preparation for the hunt or the course was disciplined physical training paired with a diet to match the horse’s evolving physical condition. Markham placed formulated leavened breads at the center of that diet.30 Drugs such as aniseed, gentian, and fenugreek were for sick animals,
not healthy ones. As the horse became more fit through exercise, Markham and his followers advised feeding them breads of increasing refinement. Near race day, the bread had minimal fiber content and increased fat content in the form of egg whites, butter, and sometimes milk. In modern terms, as the horses became more fit, the feed supplement became denser with what we think of as "energy" and what Markham thought of as "spirit." As yeast-leavened breads become more refined and lighter and increase in fat content, they also increase in social status within a hierarchy that places brioche at the top and unleavened whole grain horse-breads at the bottom.

What makes the elite horse-bread recipes found in the early modern English horse literature so unusual, and so uniquely useful, is that the recipes were presented in the dynamic context of the horse’s life as it was being physically prepared for a high-stakes athletic contest. It was assumed that the breads offered were for the purposes of general example and that they would be modified, as needed, to take into account the nature of the actual horse being trained and its progress through the program. The authors of these recipes provided ancillary information so that owners and trainers of expensive animals could make informed decisions as they brought their horses to peak condition. Markham and his followers drew upon nutritional ideas found in the medical literature and then explained to their readers how to apply these ideas so that they could formulate bread recipes and modify bread service to maintain their horses’ health and, specifically, good digestion.

Horses are animals with which many people had close physical and emotional relationships. In pre-Darwinian England one could believe that horses were the smartest of the animals and in many senses, including medically, the most closely related to people. The medical remedies for horse and human diseases were often interchangeable. When most closely related to people.32 The medical remedies for the animals and in many senses, including medically, the England one could believe that horses were the smartest of physical and emotional relationships. In pre-Darwinian terms, as the horses became more fit, the feed supplement became denser with what we think of as “energy” and what Markham thought of as “spirit.” As yeast-leavened breads become more refined and lighter and increase in fat content, they also increase in social status within a hierarchy that places brioche at the top and unleavened whole grain horse-breads at the bottom.

What makes the elite horse-bread recipes found in the early modern English horse literature so unusual, and so uniquely useful, is that the recipes were presented in the dynamic context of the horse’s life as it was being physically prepared for a high-stakes athletic contest. It was assumed that the breads offered were for the purposes of general example and that they would be modified, as needed, to take into account the nature of the actual horse being trained and its progress through the program. The authors of these recipes provided ancillary information so that owners and trainers of expensive animals could make informed decisions as they brought their horses to peak condition. Markham and his followers drew upon nutritional ideas found in the medical literature and then explained to their readers how to apply these ideas so that they could formulate bread recipes and modify bread service to maintain their horses’ health and, specifically, good digestion.

Horses are animals with which many people had close physical and emotional relationships. In pre-Darwinian England one could believe that horses were the smartest of the animals and in many senses, including medically, the most closely related to people.2 The medical remedies for horse and human diseases were often interchangeable. When Markham, in *Discourse on Horsemanship* (1593), prepares the horse to run a match, he gives the horse as its last meal a piece of toast dipped in muscadine wine. The passage calling for this food demonstrates affection and empathy for the horse, feelings that permeate the horse literature. These horsemen thought of their horses as biologically and socially very much like themselves. Nobody who is close to a pet will fail to understand the emotional context in which Markham and his followers developed breads for their horses.

Take a big penny white loaf, and cut the same all into toasts, and toast them against the fire, then steep them in Muscadine, and lay them between hot cloths, and being laid before the fire, dry them again, and so give them to your horse.

These be so pleasant and comfortable, that your horse’s emptiness (for he must be wonderful empty when he goeth to the course) shall little aggrieve him.

This toast is a medicine intended for humans. Cogan prescribes it to “cleeneth the teeth, sharpeneth the fight, digesteth that which is undigested, and reduceth superfluous digestion to a mean.” With the exception of teeth cleaning, these were the medical purposes for which Markham recommended the toast.

As elite horse-breads were modeled on elite human breads and as, in many ways, these horses were thought of as similar to humans, the feeding of horses can shed light on customs surrounding bread in the early modern period. Until recent times the practice of removing the bread’s crust by chipping it away with a knife or scraping it off with a rasp was one of the purest class markers. Miss Tox, in Charles Dickens’s novel *Dombey and Son*, signifies that she is associated with the upper crust—or at least wants you to think she is—by eating breakfast rolls from which the crust had been removed. For students of manners, the most direct, if poignant, explanation of chipped bread is the one published in the first English edition of *Maison Rustique* (1600).

The crust of bread notwithstanding it be of better taste and relish than the crumbs, and that the common people do think that it maketh a stronger body, yet it engendereth a colerick, adust and melancholic juice, and this be the cause why in houses of great personages they use to chip their bread.31

When cookbook authors mention chipping, as Robert May does in his recipe for French bread (1654), all he says is “being baked in a quick oven, chip it hot.”32 But how deeply should one chip it? What, exactly, does chipping entail? How is one to think of chipping: might it be decorative? Here is the guidance Markham offers to his farrier readers in *Cavelarice* (1607):

Lastly, you shall observe after your Horse begins to eat bread, whether upon that food he be quick or slow of digestion, as before in the first fortnight: and if you find that he be quick of digestion, that is, that he keeps his bread but a little while in his body (as for the most part your fiery and free Horses do) then you shall but only lightly chip your bread, and give unto your horse crust and crumb together: but if he be slow of digestion, which is, that he keeps his meat long in his belly, then you shall clean your loaves in the middle, and give unto your Horse nothing but the crumb only; for the crust is slow of digestion. And the crust is slow of digestion, and asks (by means of his hardiness and dryness) a double time before it be concocted.33
Chipping bread served a medical function: to remove from the bread of the elite diner that portion considered difficult to digest by a person of high social standing. The crust may taste better—may even be the best part of the bread—but for the better sort of diner, not having the stomach of an ostrich like a common laborer, it had to be forgone. The treatment of chipping in elite horse-breads suggests that when setting the period table, servants might have taken into account what they knew of the intimate health of the family’s guests—or at least of their master’s family—and thus modulated their chipping to cater to the diner’s digestion.

The belief that the best-tasting bread, and the bread that is best for you, is found in breads that include at least some bran is not new. One should not assume that the English elite ate only white bread. It is evident from Markham’s The English Housewife bread recipes that while he assumed that his readers’ “principal bread” was manchets, he also assumed that at least sometimes they would eat bread that included at least some wheat bran and also bread that included rye or barley flour. While Americans have become trained to see flour as either completely refined or completely unrefined, Markham stocks his English housewife’s bake house with “bolters, searcers, ranges, and meal sieves of all sorts both fine and coarse.” Between the choice of sifters and the choice of grains, Markham offers his English housewife a nearly infinite variety of possible breads. How might she have made her choices?

In his horse books Markham instructed farriers to think of every grain in terms of its medical or biological function. In Markham’s first horse-bread, in Discourse on Horsemanship (1593), he explains that he included some rye flour because it “is altogether loosening and scowering, [and] that being joined to the former [wheat], it keepeth the horse cool and in good temper in his body.” Markham and his followers created recipes in which the type of flour and its fiber content is purposely manipulated to match both the horse’s health and its level of training. Taken as a group, the horse-bread recipes and supporting texts published between 1593 and 1800 are alive with nuance—and argument—with respect both to grain choice and the degree of appropriate refinement. It is clear that bakers had a range of sifting options. They must have been connoisseurs of sifted flour and fully engaged with horse owners and farriers in the formulation of the perfect bread for a given horse on a given day.

The consistency of excrement as it related to bread was a common subject in dietary texts for both people and horses. Cogan, for example, recommends eating a bread that includes at least some bran if one becomes costive. It was thought that both bran and butter would lubricate one’s system. I have known this experience of it, that such as have been used to fine bread, when they have been costive, by eating brown bread and butter have been made soluble.

The current American discussion of the importance of whole grain breads is the continuation of a centuries-old discussion in which bread is viewed as both a food and a medicine. The horse training books of the early modern period provide a link between the cookery books and medical literature to suggest more precisely how and why a mother might have chosen the bread she did for the family meal; they also offer principles that might have been used by bakers for recipe improvisation.

Bread styles change over time. The American culinary elite currently favors breads with an open crumb and irregular holes, which are achieved by making breads with a relatively high water content. Markham and his followers usually specified a stiff dough, one that produces bread with a regular crumb and small evenly-sized eyes, or no eyes at all. This style of bread was favored by the English elite. Before the advent of mechanized baking equipment, the finish kneading for stiff dough was accomplished with a brake—a stick attached to a wall that could be worked over the dough—or with one’s feet.

In Cavelarice (1607) Markham recorded the basic structure for handling a bread dough that begins stiff and then stiffens further as it is worked. He instructed one to “work [the dough] together exceedingly, first with hands, after with feet by treading, and lastly with the brake...” These instructions were elaborated in a different recipe where he advised that cloth be placed over the dough prior to treading. A cloth was used only when working with stiff dough. For softer dough that is too sticky to go through the brake, Markham instructs in Cavelarice that

After the dough hath been well knodden with hands, you shall then cause the Baker, having his feet clean scowered and washed, to go into the trough and tread it exceedingly.

Dough hydration and the amount of kneading are central to a bread’s character. The elite horse-bread recipes demonstrate that between kneading with feet and working dough with a brake the preindustrial baker had the technical vocabulary to effect subtle manipulations of dough structure, regardless of dough stiffness.

John Halfpenny, whose three bread recipes from The Gentleman’s Jockey and Approved Farrier (1674) were widely referenced (if without attribution) for the hundred years following its publication, adds his own color and focus to his
description of kneading stiff dough. Halfpenny helpfully specifies that the dough be mixed “with as little water as may be” and then instructs that we “labor it in the Trough with all painfulness, tread, break it, and after cover it warm.” The call for minimal water to create a dough that is hard to knead by hand recalls the instruction to “temper all these together, without any more liquor, as hard as ye can handle it” from the anonymously written *The Good Housewifes Handmaide for the Kitchen* (1594). While “painfulness” can be interpreted as “with all care,” the author who penned *The Complete Jockey* (1681), a work attributed to Gervase Markham but apparently a reworking of Halfpenny’s book, took “painfulness” literally. In an indication of how important these elite horse-breads were thought to be, the author of *The Complete Jockey* put effort into reexplaining, in his own language, Halfpenny’s bread recipes. Among other changes, *The Complete Jockey*’s author does not seem to be addressing the horse owner orfarrier who will in turn tell a baker what to do. Instead, he seems to write the recipes for a person who will actually be doing the baking, someone he imagines might not be strong enough to knead the bread. Thus, refreshingly, he introduces into the early English bread literature the idea of human frailty. He says to add “as much water as will just make the Meal up into Dough, which must be kneaded with all your strength in a Trow, or some such like thing for that purpose. If you are not strong enough to knead it with your hands, you may tread it with your feet, being sure to leave no nobs in it.” It was probably obvious to the reader of the *Handmaide for the Kitchen* that she could scrub her feet and jump right into the tub, with or without a cloth placed over the dough. This step is no longer obvious to artisan bakers. I have spoken with an American baker who does all his mixing by hand. He has injured his hands from kneading. We are at a disadvantage as we take up the ways of the past, whether as bakers or historians, because the details of those ways were often either not written down or not written down in the most obvious places.

I have focused on the link between common baker’s horse-breads and the bread of the poor and elite horse-breads and the breads of the affluent. But the horse-bread literature, taken in its entirety, also helps us better understand breads baked by households that were neither rich nor exceedingly poor, households that may have used ingredients associated with low-status breads, such as pea flour, but employed baking methods associated with higher status breads, such as leavening the dough with yeast. Working between our libraries and our kitchens, and keeping the horse-bread literature in mind, we should be able to reconstruct a substantial piece of the English bread culture in the centuries prior to the industrial revolution.

### Recipes

Here follow six bread recipes, three by Gervase Markham (1594 and 1607) and three by John Halfpenny (1671). These breads were intended for specific stages in the training of the hunting or running horse. The stages were typically divided into fortinights, with each fortnight having its own training and feeding program. John Halfpenny’s recipes are interesting for their use of “lightning,” leaven, in addition to yeast. They are stylistically interesting because they are nested. The first recipe serves as the master recipe, so steps that have been described in the first recipe are not repeated in the subsequent two. This is the style of the recipes published by Nicolas Bonnefons in *Les Délices de la Campagne* (1654). It is curious that Halfpenny uses Bonnefons’s unusual recipe style, that he includes leaven, which is not common in English bread making, and that, of all English bread recipe authors of his period, he is the only one to mention that the bread should be cooled “bottom upward,” an instruction found in Bonnefons and that is essential if one is to preserve the crust’s crispness, even if only to chip it off.

#### Three Breads by Gervase Markham

**Gervase Markham’s First Horse-bread Recipe**

*From Discourse on Horsemanship (1593)*

Take a strike of beans, two pecks of wheat, and one peck of rye, grind these together, sift them and knead them, with water and Barm, and so bake them thoroughly in great loaves, as a peck in a loaf: and after they are a day old at the least, your horse may feed on them, but not before.

**Ordinary Bread**

*From Cavelarice (1607, Book 3, p. 35)*

Take a strike of clean beans, two pecks of wheat, and a peck of Rye, grind these together, and then sift them through a tempse, then knead it with good store of barm and water, but let your water be scalding hot, that it may take away the strong savor of the Beans, when you have knodden it well, then lay a cloth over it, and let it be also well trodden, then mold it up into great loaves like Household loaves, having as near as you can guess, about a peck in a loaf; then bake as you bake good household bread, and no otherwise, and let it be at least two days old before your horse taste any of it. But if your horse for whom you make this bread, be exceedingly soluble and much subject to looseness in his body, then you shall put in no Rye at all: but if he be of a hot body, and subject to more than ordinary dryness, then you shall over and besides the Rye, put to the former proportion of corn, about two pounds of sweet butter.
The Last Bread (fed to the horse during the last fortnight training before the race)
From Cavelarice (1607)

Take three Pecks of fine Wheat, and put one Peck of clean Beans, grind them to powder on the black stones, and bolt them though the finest Bolter you can get; then knead it up with very sweet Ale Barm, and new strong Ale, and the Barm beaten together, and also the Whites of at least twenty Eggs, in any wise no water at all, but instead thereof some small quantity of new milk. Then work it up, and labor it with all painfulness that may be, tread it, break it, and after cover it warm, and let it lye a pretty space in the Trough to swell: then after knead it over again, and mold it up into big Loaves, and so bake them well, and them soak soundly; after they are drawn from the Oven, turn the bottoms upward and let them cool.

Three Breads by John Halfpenny

The First Bread

Take three Pecks of clean Beans, and one Peck of fine Wheat, and mix them together, and grind it to pure meal.

Then searce and bolt it through a reasonable fine range, and knead it up with great store of barm and lightning, but with as little water as may be; labour it in the Trough with all painfulness, tread it, break it, and after cover it warm, and let it lye a pretty space in the Trough to swell: then after knead it over again, and molt it up into big Loaves, and so bake them well, and let them soak soundly; after they are drawn from the Oven, turn the bottoms upward and let them cool.

At three days old you may adventure to give this bread, but hardly sooner, for nothing doth occasion surfeit, or is more dangerous than new bread....
The Second Bread

You shall take two Pecks of clean Beans, and two Pecks of fine Wheat, grind them on the Black stones, scare them through a fine range, and knead it up with a fine store of Barm, and great store of Lightning [sic]; working it in all points, and baking it in the same sorts as was shewed you in the former Bread.

With this Bread, having the Crust cut clean away, and being old (as was before shewed) with clean sifted Oats, and with clean drest spelt beans, you shall feed your Horse this Fortnight....

The Last Bread

Take three Pecks of fine46 Wheat, and put one Peck of clean Beans, grind them to powder47 on the black stones, and bolt them through the finest Bolter you can get; then knead it up with very sweet48 Ale Barm, and new strong Ale, and the Barm beaten together, and also the Whites of at least twenty Eggs, in any wise no water at all, but instead thereof some small quantity of new milk. Then work it up, and labour it, with all painfulness that may be, as was shewed, in the first Bread; then make it and order it, as was declared, in the other.

GLOSSARY

*barn:* the sediment left over after ale is brewed; the source of yeast in preindustrial bakeries.

*bolt:* a verb that applies to the action of sifting out the finer grades of flour from a coarser meal

*bolter:* a cloth or cloth bag used to sift out the finer grades of flour; fineness

*bolted through:* a devise used to knead a stiff bread dough

*bran:* the outermost husk of wheat

*brake:* a devise used to knead a stiff bread dough

*brack:* a term for sourdough or leaven, the modern French levain

*chisel:* an older term for middlings

*middlings:* after the bran the next set of impurities removed from flour; usually includes small pieces of bran and some flour, but in a well-cleaned form they are sold as a breakfast cereal in the United States and Canada under the name Cream of Wheat.

*peck:* there are four pecks in a bushel; a bushel of the best unmilled wheat weighs sixty pounds, so a peck weighs fifteen pounds. Beans also weigh sixty pounds per bushel. After sifting and bolting to remove bran and other impurities, the weight of the beans and flour used in these recipes would have been significantly reduced.

**searce:** a hair sieve that could be as fine as a bolter but could also be coarser; flour bolted through a searce ranged from white to a medium whole wheat, appropriate for breads ranging from white to "coarse cheat." “Searce” is also a verb meaning "to sift."

**tempse and range:** types of sifters and probably synonymous; at their finest they are appropriate for making coarse cheat.

**strike:** unit of measure often used for beans that varied in size from half a bushel to four bushels; in Markham’s recipes it was probably equal to two bushels.

**notes**

I would like to thank Ken Alhala, Ivan Day, Rachel Landau, and Barbara Wheaton for reading this article in manuscript form and for their valuable comments and suggestions.


5. The way in which Markham explains his leavened breads in his first horse training book suggests that he is either the inventor or an early adopter of a new feed for high-performance horses. Gervase Markham, A Discourse of Horsmanship (London: for Richard Smith, 1615), chap. 3. Horse-bread recipes for race horses were published throughout the eighteenth century, and well into the nineteenth, but the innovative period was over by the close of the seventeenth century. After this date the recipes are repetitive. The best of the eighteenth-century recipe collections is found in Gibson, The Farriers Dispensatory, 194–199.

6. Everyone who considers the “rougheage” in whole wheat bread to be good is doing the same thing—looking at bread as both food and medicine.

7. Markham, A Discourse of Horsmanship, chap. 3.

8. In England, under the assize laws of Markham’s time and for hundreds of years previous to his era, the baker was given the bran “to his advantage.” Bran was not defined and seems to have been anything not considered flour by the baker, including the middlings. John Penkethman, A Collection of Several Authentick Accounts of the History and Price of Wheat, Bread, Malt, G.C., from the Coming in of William the Conquerour to Michaelmas 1745 (London: W. Warden, 1756), 52–53. Charles Estienne et al., Maison Rustique, or, the Country Farme (London: Printed by Adam Islip for John Bill, 1661), 58.

9. As an example of horse-bread used by carters, Edwin Miller writes, “[T]he Willingborough (Northants ) carters, taking grain the twenty-three miles to Yaxley in 1532, were allowed ad [4 pence] to buy horsbread; and in another example mentions carters hauling stones spending 5s 9d for horsebread, more than three times what they spent on hay. See F.M. Page, ed., Willingborough Manorial Accounts,” in Edwin Miller, The Agrarian History of England and Wales, (1249–1530) (Cambridge: Cambridge University Press, 1993), 350–351.

10. For example, in the assize of January 1604, as recorded by John Powell, several regulations were promulgated regarding horse-breads, including this item: “[Bakers] shall sell and deliver unto Inholders and Victualers in horse bread, but only three...
leaves for a penny, and yel most for 12d. (as aforesaid) every one of same three
Loaves weighing the full weight of a penny white Loaf, whether Wheat be good,
cheap, or dear: In which Assize of horse-bread, the Inholder gaineth
Loaves weighing the full weight of a penny white Loaf, whether Wheat be good,
Wheat be good,

William the Norman. Continued to the Year 1586 (London: J. Harrison, 1575); 1585–1600. Holinshed explicitly identifies as horse-bread a famine bread made of
“puffins and bran” and “mouled up in clothes” when describing a siege-induced

12. Ibid., 325.

13. Holinshed refers to the poor making bread from “fern root” in times of
famine, as well as from other substances. See Holinshed, The Third Volume of
Chronicles, 466. William Harrison addresses the everyday conditions of want in
the English countryside. Raphael Holinshed et al., The First and Second Volumes
of Chronicles, Comprising the Description and Historie of England, the Description
and Historie of Ireland, the Description and Historie of Scotlond. (London: I.
Leland, 1567), 688. Andrew Boorde, an influential author of a dietary book,
provides an inadvertent record of horse-bread as human food when he writes that
a certain bread “shall never do good to man, no more than horse bread or bread
made of beans and peas shall do, though this matter doth go much by the educa-
tion or the bringing up of the people, the which have been nourished or nutrified
with such bread.” Andrew Boorde, Hereafter Followeth a Compendyous Regyment
or a Dyetary of Helth, Made in Mountspiller. (London: Robert Wycr, for John
Gowghe, 1542), bread chapter.

14. If a penny white loaf weighed seven pounds, a penny household loaf would
weigh fourteen, and a penny’s worth of horse-breads, twenty-one pounds. Thus,
in the seventeenth century for the price of the coarsest bread sold in bakeries, one
got 33 percent more horse-bread by weight. Powell, The Assize of Bread, 1593.

15. William Langland, Pierre Plowman (Cambridge ms 8.15.17 [w]) (Piers
Plowman Electronic Archive, 1777–1797); available at
http://www.uath.virginia.edu/secure/piers/windows/index/record.html?

16. Estienne et al., Masion Rustique, 1666, 582. The instruction to scald the
water is found whenever pease meal is used. See the “Ordinarie horse-bread,” in
Markham, Cavelaric, 3.35, and Markham, The English Housewife (1615), 127.

17. William Stevenson, A Rych Pithy, Pleasant, and Merry Comedy (London: T.
Johnson, 1666), scene 1, act 1.

18. A Newe Merie Comedie or Enterlude [in Five Acts and in Verse]. Tparing
Upon the Historie of Jacob and Esau, Taken out of the XXIV. Chap. Of. Genesis.


Improvement of Husbandry and Trade, 2nd ed. (London: Printed for Woodman
and Lyon in Russel-street, 1725), 1:278–279. “Chisel” is synonymous with the
modern term “muddlers.”


22. Sift whole wheat flour through one or more graduated sieves to separate the
bran and middlings from the flour. Mix the bran and middlings in a bowl with
an equal weight of hot water. Let this mixture hydrate, and then knead for a few
minutes. Cover and let the dough ferment, which can take as long as twelve
hours. The addition of even a small amount of yeast speeds up fermentation.
Salt is optional. Form into a flat loaf, and let it rise for a couple hours before baking
or roll thinly to make crackers.

23. The English Housewife (1615), 127. I think it is worth noting, given the status
of whole grain bread in our culture, that the meal was put through a “meal
sieve,” and so even this low-status bread was not made with whole grain flour.

24. Markham, Cavelaric, 615. The use of these black stones to produce flour that
is “white as snow” is explained in Markham’s contribution to Masion Rustique.
Estienne et al., Masion Rustique, 1666, 573. Markham explains that the best flour
is produced from stones that minimize bruising and are set to produce the coarse-
est bran. We can infer from this explanation that the “great black Cullen stones”
is produced from stones that minimize bruising and are set to produce the coars-

25. Markham, A Discourse of Horsemanship, chap. 3.

26. Thomas Blundeville, The Four Chiefete Offices Belongying to Horsemanship,
Etc. (London: Printed by Henrie Denham, being the assigne of William Seres,
1568). Markham felt emancipated from the force of tradition. He explains that
while he had read the ancient writers, he “did ever read more for knowledge than
practice.” Markham, Cavelarice, 5.7.

27. While Blundeville speaks against horse-bread because, he says, bakers were
making it badly, it is clear that it was fed to the high-status horses he is writing
about. Thomas Blundeville, “Diety of Horses,” in The Four Chiefete Offices
Belongying to Horsemanship, Etc., 10. Markham’s own attacks on the practice of
feeding bran bread to high-performance horses imply that its use was a common
practice. See, for example, Markham, A Discourse of Horsemanship, chap. 3.

28. Markham, Cavelarice, 3.57. See also Robert Howlett, The Royal Pastime of
Similarities between cock-breads and the horse-bread of de Grey quoted in this
text as well as the horse-breads and cock-breads by other authors suggest a shared
tradition. I did not, however, find published cock-loaf recipes in books prior to
1593, so I don’t have texts to fully support this speculation.

29. De Grey, The Compleat Horse-Man, 2.188. If you want to make this bread, then
reduce the recipe as follows: use 1/3 cups each finely ground whole grain flour
made of wheat, oat, and beans. Use a total of 1/3 ounce spices and two large eggs.
While de Grey doesn’t mention it, when ale was intended for use in bread dough,
it was usually specified as stale ale, and that is what I had to use in this recipe.

30. Markham could not have been clearer. His horses win. Drugged horses lose.
Referring to herbs spiked with licorice and aniseeds he wrote, “nor have I seen
any horse win, but I have seen many Horses horse [sic], which have been kept
with such dyet.” Markham, Cavelarice, 6.19.

31. See the discussion of bran and wheat in Markham, A Discourse of
Horsemanship, chap. 3. Markham’s nutritional concept was that the “nutriment”
and “spirit” of the wheat was in the flour, not in the bran and chisel. It was his
belief, and that of his peers, that what remains after the flour is extracted is a
“dry huske thing” that is “beredt” of “virtue.” Thus, in a sentence that reveals the
emotion that underpins Markham’s diet, he challenges his reader: “And what
[how—WR] can that [spiritless bran—WR] I pray you prevail with a horse that
must endure extreme labor.” In fact, Markham was wrong. Bran is low in calories,
but it is high in protein and is, in fact, very good for high-performance horses.
Fat-enriched breads were also fed to fighting cocks near the day of the fight.
These more enriched breads given to racehorses close to race day may have
derived from the cock breads, the primary difference being that the breads for
the elite horses were leavened.

32. A Gent S, introduction to The Gentleman’s Compleat Jockey: With the Perfect
Horseman, and Experience’d Ferrier, vol., London (London: Printed for Henry
Nelme, 1696), 1–2.


34. A recipe for rasped rolls is included in the popular American cookbook by
Fannie Farmer. Fannie Merritt Farmer, The Boston Cooking-School Cook Book

35. I am citing the first English edition of Maison Rustique rather than the 1666
edition Markham worked on, to emphasize the currency of this idea at the time
Markham was writing his most important works on horses. Charles Estienne,
Maison Rustique, or the Countrie Farme, Richard Surlet, trans. (London, 1600),
720. “Adust,” like choleteric and melancholic juice, has negative associations in
the humoral medical system.

36. Robert May, The Accomplisht Cook, or, the Art and Mystery of Cookery
(Tobens: Prospect Books, 1904), 239.

37. Markham, Cavelarice, 3.32.

38. For a medical source, see Thomas Tryon, The Way to Health, Long Life and
Happiness (London: Andrew Sowle, 1685), 197. For a nonmedical source,
Houghton lends his enthusiastic voice in praise of country-style bread. Houghton
and Bradley, A Collection for Improvement of Husbandry and Trade, 242.
were calibrated to create a single integrated sifting system. In their finest iterations the bolter and the sifter were probably equivalent, both were capable of refining meal into white flour (see Estienne et al., *Maison Rustique* [1661], 577). The coarsest sifter was equal to the finest range or tempe (ibid.), by extension, the coarsest range or tempe was probably functionally equivalent to the finest meal sieve, which Markham specifies for the coarsest brown bread (*The English Housewife*, 175). In *Maison Rustique* Markham lists the sifters that could be used to produce flour for three breads—white (manchet) and two grades of brown bread (fine cheat and coarse cheat). Markham further specifies the following range for each type of sifter: the bolter refined flour from white to fine cheat; the sifter, from white to coarse cheat, and the range or tempe was used for coarse cheat. The sifting terminology itself is confusing. Finer flours were produced by “bolting,” while coarser flours were produced by “sifting” or “searcing.” The verb chosen by period authors to describe the processing of the meal suggests the quality of the final product. Finer grades of flour were produced in a two-stage process. The flour was first sifted or searced and then sifted again more finely in a...