What is Chametz

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This week, I'm doing one of those monologue things, where I try to tell a story about some research I've been doing that, frankly, would be too difficult to do as interviews.

It all started with the previous episode, on some of the ritual foods of Easter and Passover. While I was working on that I became quite intrigued by the Jewish laws about unleavened bread and Passover. The standard story about unleavened bread, of course, is that God didn't give the Jews enough time to let their bread rise before they had to get out of Egypt, and so when they recall the Exodus, during Passover, they eat only unleavened bread.

The details, however, go a lot deeper, and are tied up in an idea known as chametz. Roughly speaking, chametz is leavening, and Jews are not supposed to eat, or own, or benefit from chametz during the week of Passover. That means clearing out any possible trace of chametz from your house and getting rid of any sourdough starter. But while the starter itself is obviously chametz, because it is leavening, there's still a question of what else might be considered chametz.

Five grains and 18 minutes

This is where it starts to get tricky. The Hebrew Bible refers to chametz in the rules governing Passover, but nowhere does it actually define chametz. Like much of halakha — Jewish law — it has been up to scholars down the ages to decide what exactly made something chametz.

And they generally agreed that two things had to be true. First, it had to involve one of five species of grain, one of which is obviously wheat. And second, the grain had to be in contact with water for more than 18 minutes. That 18 minute is its own story, but my concern here is the five grains.

As an aside, only bread made from one of the five grains is considered "real" bread, worthy of a special blessing. And only unleavened bread

made from one of the five grains can be used to celebrate the first night of Passover. Those five grains are really the heart of the problem, and I'll get to them in a minute

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Chametz foods

OK, back to chametz.

Bread, pasta, cookies and crackers are all fairly obviously chametz, because they are usually made from wheat flour that has been mixed with water for more than the 18 minutes. But there are lots of other foods that are much less obvious.

Somewhere, I read that whisky and beer are chametz, because the barley they are made from is moistened and allowed to sprout into malted barley. No matter that the whisky was distilled, incapasble of being leavening. It is chametz by virtue of the process by which it was made.

All this I picked up online from a variety of sources, but one of them brought me up short. Quite apart from the hidden products, like whisky, beer, even vinegar and some dietary supplements and vitamins, it had a section headed Chametz Grains, which offered a list of foods "from the 5 grains that can become chametz".

The list was: Wheat, Barley, Spelt, Oats, Rye, Kamut, Farro, Freekeh, Bulgur, and Semolina.

Maybe I'm overthinking this — actually, no maybe about it — but by listing the final five separately — Kamut, Farro, Freekeh, Bulgur, and Semolina — I thought perhaps they were trying to tell people, who maybe didn't know, that these were also all kinds of wheat or made from wheat. But if that was the case, and they had farro, spelt and semolina, where were the other wheats, like einkorn and emmer?

And given that those were among the first wheats to be domesticated, in the land of Israel, surely they would be among the five species?

The five grains

Naturally, I turned first to Wikipeda, which didn't let me down. "These species," it told me, "are commonly considered to be wheat, barley, oats, rye and spelt". But you can't always look to Wikipedia for clarity,

because in the very next sentence, it coyly says: "However, some of these identifications are disputed".

That's a bit of an understatement.

The Talmud, the collected learnings of the earliest Biblical scholars, helpfully lists the five grains. Two of them have names that are readily translated into English. Wheat, and barley. The other three are known only by their names in Aramaic, and nobody knows exactly what they are. So, back to the scholars.

If you're a bread nerd like me, you may already be thinking, how did oats and rye get into the list? Both species are much happier cooler and wetter than anything they'd find in the Near East. Turns out, their presence in the list of five grains dates back only about 1000 years and is mostly the result of Ashkenazi scholars, who were living in Central and Eastern Europe at the time. Colder and wetter than Israel, for sure, but oats and rye were widespread there. Prohibiting them, as a reminder of affliction, probably seemed like a good idea.

More modern ideas

Looking around, it isn't hard to find alternative opinions on the five grains. As one Rabbi actually says in her commentary on the five grains, "Wherever you have two rabbis, you have at least three opinions". Most of these alternative opinions focus on grains that were native to the Near East. In addition to wheat and barley, the generally accepted version is that the other three are emmer wheat, two-row barley and spelt.

These days, cultivated barley — two-row and six-row — are considered to be the same species. A couple of thousand years ago, without benefit of DNA analysis, two-row barley, wild and cultivated, probably looked different enough to be thought of as something separate.

So that makes sense to me. And yet, even with the benefit of DNA analysis, it is possible to come up with a different list for the five grains. Remember, two Rabbis, three opinions.

Back to rye

So one modern group of scholars says that the wheat of the ancient sages "includes everything in the biological genus Triticum," so all wheats. And yet, they also say that the ancient sages were wrong on the one they called barley, and that that should be spelt, which they describe as "a subspecies of wheat". So, taxonomists, they're not.

And when it comes to the three mystery species, the first, they say, is all varieties of domesticated barley.

The second? They are confident it is rye, dismissing as a "small dispute" anyone who thinks it is not rye. As evidence, they publish a cladogram, a kind of family tree, based on the analysis of one important piece of DNA, which places rye between barley and Triticum, meaning that all wheats and ryes share a common ancestor with all barleys, so in some sense they belong together.

And the third, the one identified by medieval Ashkenazi sages as oats? That, they agree, is probably two-row barley.

Oats

Now again, if you're a bread nerd, like me, you may be wondering about oats being one of the five grains for a different reason. The others — wheat, barley, spelt and rye — contain gluten. Oats does not. And that might matter to observant Jews who are also coeliacs, because it means they can properly celebrate the Passover with a matzo — unleavened bread — made of oats without suffering any undue gastric distress. If oats is not one of the five grains, then they have to force themselves to eat at least a little matzo that would contain gluten.

On the other hand, if oats is not one of the five grains, then observant Jews would be able to eat it any way they choose during Passover which, I don't know, might be quite welcome. One modern thinker agrees that this would be, "reasonable, but not mainstream".

Legumes

I've already managed to avoid a few enticing detours, but here's another. Many of the scholars agree that legumes — specifically the lentils, peas, chickpeas and chickling vetch that were cultivated in the Land of Israel — are not chametz, because when you wet them and leave them a while, they don't become leaven, they merely spoil.

Nevertheless, especially according to Ashkenazi Rabbis, most legumes may be forbidden under yet another set of rules. And as far as I can find out, the terrific leavening power of a starter based on chickpeas does not enter into the discussions.

Conclusions

Where does that leave us, as far as chametz and other Passover prohibitions are concerned?

The modern view — enshrined in the Encyclopedia of Jewish Food — is that the five grains are einkorn, emmer, and spelt, and two-row and six row barley. But not everyone is ready to accept that.

One Rabbi — Rachel Safman, who provided the two rabbis three opinions quote — puts the restrictions in the context of the event they recollect, the Exodus from Egypt and slavery. So, as she says, "it's not that we can't eat wheat – we can't eat leavened wheat". On lentils and the other prohibited legumes, she says that they represent poor food, subsistence food, and that they're often eaten as part of mourning. Despite the tendency of previous Ashkenazi Rabbis to ban more and more foods, she says that Passover is a joyous time, which should be celebrated with more elevated food, and there's even a duty to see that all members of the community have the means to enjoy this kind of elevated eating.

In my opinion, the customs and restrictions are all about obedience and trust, just as the Exodus itself depended on obedience and trust. And given that the Hebrew Bible is in many ways maddeningly imprecise, the continuing discussion is trying to work out the boundaries between the permissible and the forbidden. But when science and scholarship bring something new to the table, which is what has been happening with oats and to a lesser extent rye, what happens then?

Another Rabbi, Dov Linzer, tackles this head on.

"When science and halakha" — Jewish law — "collide," he asks, "which do we follow?"

"In the end," he concludes, Jewish law "may diverge from the historical or scientific truth. Nevertheless, halakha is what books,

authorities, and interpretations have been accepted as binding by the Jewish people committed to halakha."

There's also a very pervasive idea that "the customs of our ancestors remain binding upon us," so if the scholars of 1000 years ago thought that the five grains included oats and rye, and observant Jews went along with that view for a thousand years or more, then that remains the religious truth to be obeyed.

As Rabbi Linzer concludes, "When conflicts between halakha and science or experience become blatant and incontrovertible, greater reassessment might take place. That is a discussion for another time."

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