

**Flavour expert Thornton Mustard tells Judith Woods why we garnish turkey with cranberry sauce and prefer plum pudding to prunes**

Several years ago, on Christmas Eve, I realised I had forgotten to buy cranberries. When I broke the news to my husband and wider family who had pitched up, there was near mutiny.



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When I lamely protested that we could have raspberry jam instead, I feared they might have me certified. Turkey and cranberries belong together, I was told in no uncertain terms, as I scuttled out to the corner shop for a couple of jars.

They were right, of course, but the question still persists: why is it that we eat turkey with cranberries, or pork with apple? And, for that matter, why does my family get sick of turkey after two days, when they would quite happily eat bacon, at every meal, for ever and ever? According to the felicitously named flavour expert Thornton Mustard, my family was perfectly justified in rejecting my raspberry jam suggestion.

"Some apparently disparate foods go well together and others don't," says Mustard, whose client list has included Coca-Cola, Mars Confectionery and Whitbread and Bass breweries. "Turkey is quite a firm, strong-tasting meat and the taste builds up in the mouth, which means we tire of it relatively easily. The reason cranberries work so well with it is that they have an acidic, hard and very cleansing taste, which refreshes the tastebuds between mouthfuls."

The same principle applies to pork and apple, or indeed gammon and pineapple: our conviction that certain flavours belong together isn't all in our minds. None the less, emotions do play a pivotal role in our food preferences. Just as we re-read a favourite book or watch a favourite film again and again, even though we know the ending, so we eat foods in anticipation of the feelings they will generate.

There is also a certain cultural dimension: yogurt is eaten as a savoury food in Russia, but a sweet food in Britain. But there are certain flavours that most people in the world enjoy. Vanilla is redolent of childhood; babies enjoy it because it has milky connotations, and adults associate it with comfort, security and homeliness. Another such food is chocolate.

"Everyone thinks it's the taste of chocolate they are enjoying, but it's actually the way it melts," says Mustard. "Its melting point is virtually the same as the temperature in your mouth, so it flows through the mouth and sends sensuous messages to the brain. Because it's sticky, there's a lingering aftertaste, and the effect is to relax you and slow your heart rate."

Come Christmas time, most of us indulge in rich food. As we get stuck into mince pies and brandy butter, there's no denying the feelings of wellbeing that are generated (the guilt bit tends to come later). Why is it that calorie-laden plum pudding is so much more irresistible than a zingy lemon sorbet? The answer, needless to say, lies in the fat.

"Fat is the best carrier of flavour, so you enjoy the food more, because it quite simply tastes better. Sugar is also a carrier, but not as good as fat. Salt has an effect on the taste buds, so they're more receptive," says Mustard. "If a manufacturer is designing a product and wants it to win taste tests, it's a simple matter of putting more fat, sugar and salt in it. If they want it to be healthy and still taste good, they have to be much more creative."

Mustard, 60, is married, has two sons and lives in Dartmoor and the Cayman Islands. In 1970, early in his 36-year long career, he launched the Curly Wurly while at Cadbury. Subsequently, he has worked as a consultant on names as diverse as Mr Kipling, Bacardi, Red Bull and Ribena.

His unique area of expertise is understanding the emotional and physiological needs that drive our food preferences, and advising manufacturers on how best to meet these needs. His most recent work has been to advise on the creation of Altu, a range of healthy cereal bars, made from fruits, vegetables, nuts and seeds.

**"The perfect Christmas taste needs are dried fruit, long, rich fats from nuts and warm alcohol"**

"From an early age, we learn about flavours with healthy messages. Bite into an apple and there's a crunch, the run of the juice, the acidity. Fruit extracts therefore give off a 'natural' message to our brain," says Mustard. "Building in 'deliciousness' to a product means giving it succulence, which ensures that the mouth waters. The presence of saliva slows down the passage of the food and so we enjoy it more, but there should be no aftertaste, because we expect healthy food to leave the mouth clean and invigorated."

Our food expectations are established at an early age. The attitude of our parents to any particular food is crucial: babies read faces and can easily differentiate between the genuine excitement of a mother proffering a first spoon of ice-cream, and her slightly serious expression as she serves up broccoli.

"Babies are given bland food to begin with because their mouths are filled with taste receptors, over the roof of the mouth and along the sides of the cheeks," says Mustard. "That means they are getting the taste message with the volume turned up full blast. This explains why they are often reluctant to try new foods."



Mustard: 'a lot of teenagers will experiment with cider in the park, but by their twenties, they won't have more than a single glass'

By their early teens, children are drawn to foods that were restricted by their parents when they were younger. They are much more influenced by their peer group and there is a tribal element to the way they emulate each other's – often unhealthy – eating habits.

"A lot of teenagers will experiment with alcohol in the park, by drinking a lot of cider which has a simple, sweet taste, and throwing up," says Mustard. "By their twenties, if you offer them cider in a pub, they may drink it, but they will feel foolish and won't have more than a single glass. They might not be able to put their finger on exactly why they feel this way, but they know it's not a grown-up drink and will reject it."

As adults, we actively "develop a taste" for foods, because we perceive them to be sophisticated. Few people relish their first ever dram of whisky, but with persistence, a sense of appreciation and enjoyment follows. Similarly, in my mid-twenties, I consciously forced myself to eat olives until I liked the taste. As a result of my enthusiasm, my two-year-old now regards them as a delicious party treat and this Christmas, she will have plenty of opportunity to feast. As, indeed, will the rest of us.

"The perfect Christmas taste needs are dried fruit, long, rich fats from nuts and warm alcohol," says Mustard. "Those tastes trigger feelings of hearth, home, warmth and security."

### **What tickles the palate**

Babies have many more tastebuds than adults. The impact of flavour is much greater for a child than an adult, so simple, unchallenging foods are preferred.

The strong taste of some ethnic foods confuses the brain into believing the stomach is full. For this reason, a person eating a meal may feel initially satisfied but then experience hunger again shortly afterwards.

The male palate tolerates bitterness better than the female, hence the difference in food preferences.

Trials have shown it takes six months for young drinkers to acquire a taste for bitter, but only six weeks to learn to drink lager - hence the success of lager. As drinkers grow older, they prefer more complex drinks, and may regard some of the most popular lagers as tasteless and devoid of personality.