Recently, Mommy-bloggers paid by the organic industry have been hitting the scientific and corporate communities quite hard, with fear campaigns and if you love your children guilt trips. Even Hollywood stars are reading from the Organic is what good mothers do script.

Ordinarily, eco-religious feel-good pulp from the privileged classes is better left ignored until mainstream media pick up on them and the marketing managers at large food and restaurant corporations begin to bow to FoodBabeArmy email campaigns.

When I read a rather weak, low-ball piece in Mamavation (Changing Lives One Mom at a Time) called The top 10 reasons to feed your family organic, I thought: This is nonsense (albeit, made to make people feel good about themselves). It challenged me to come up with some reasons not to feed your family organic and to make the point further I used the pro-organic campaigner’s approach - like emotional blackmail, such as Are you a good mother?

Here are the Top 20 Reasons Not to Feed your Family Organic:

1. Too expensive and poor quality
   Why is organic food more expensive? Is it just because Whole Foods have spotted a vulnerable, rich market niche of aging Baby Boomers afraid of dying and willing to happily dispose of their income to rampant price gougers who help fund the scaremongering? Given the average lower yields from organic farming, the higher risk of crop failure tends to be priced into the market. Others would say organic has become a green designer label but this seems to contradict the second element, that organic is of a lower quality. Many pesticides are used to keep produce looking good and edible and preventing them from rotting on the branches. Food is emotional so for many, quality in appearance is important. Organic shoppers have other emotional stimuli which allow them to look beyond the inferior quality. I, myself, use no pesticides on the apples I grow at home and when I eat them, I core and slice them to get the wormy parts out. I accept that as part of my produce but I would not pay for such poor quality in a store.

2. Promotes child labor in Africa
   This is an endemic issue in many African subsistence farming communities. See an ILO report that breaks down child labour in Africa according to gender and type of farming. The logic is quite clear. Only 5.4% of European agricultural land use is organic, while the market for organic is growing much faster. African family farms are organic by default (due to the high cost of pesticides and fertilisers as well as pressure from EU import/export regulators to deny African agriculture the benefits of using modern technologies like GMOs). While the focus of child labour in Africa has largely been on cocoa production from West Africa, the inability of Europe to be able to feed itself (due to an absurd reliance on
medieval agricultural technologies) has led to an increase of African organic agricultural exports. The organi-gurus seem content in denying this correlation when they choose organic, pretending they are not actually supporting those little hands that are manually pulling out the weeds and breaking off pest-ridden leaves rather than going to school. They argue to choose local, but you just can't grow enough locally to meet demand.

3. **Organic uses more land with lower yields, reducing biodiversity**
Loss of natural habitat, according to the UN [4], is one of the greatest threats to biodiversity. Depending on the crop and the region, organic farming tends to yield between 19-60% less than conventional farming (see a list of recent academic studies [5]). I know that many organic lobbying organisations like IFOAM are trying to juice the numbers with their own studies (or the cute claim that more weeds are better for biodiversity), but the point is that organic yields are significantly lower in the best of situations and can be catastrophically lower during years with high pest outbreaks. If we were to convert all farms to organic, we would have to do two things prepare for less food (the organic lobby is trying to bring in the food waste trick [6] as the answer) or plough under more meadows and forests. With a growing global population, it would be advisable to rely on technology rather than eco-religion. Higher yields on less land, allowing for larger habitat restoration, seems to me a better solution.

4. **The organic industry uses unethical lobbying tactics**
In the Risk-Monger blogs, I have been cataloguing a long litany of organic industry funding of questionable activist science [7], non-transparent funding of food gurus and scaremongering [8] and the outright witch-hunts [9] that I could only describe as Neo-McCarthyism. If ever there were lobbyists who should be ashamed of their practices and code violations, it would be those acting on behalf of the organic food industry.

5. **Pesticides approved for organic farming are toxic to bees**
One very common misperception is that organic food contains no pesticides. Of course they do, otherwise organic farmers would grow food only to feed the insects and remediate the soil. In most countries, pesticides are permitted in organic farming if they come from a natural source (and thus not of a synthetic origin). In some cases, these natural substances can be synthetically manufactured although it depends from one country's standard to another's. In order to combat pest infestations, fungus and mould, organic pesticides need to be toxic (another point the organic industry lobby has not been very forthcoming on).

The eco-version of the naturalist fallacy assumes that anything natural is benign and acceptable, but many organic-approved pesticides are far worse for the environment that the well-tested synthetic substances. Pyrethrins, sulphates, nicotine] are all meant to kill, and being of a natural source does not mean they are harmless to the environment.

I did a blog earlier this year where I looked at how two organic pesticides (Rotenone and Azadiractin) were extremely toxic to bees [10] and how the organic lobby was fighting to keep them on the market (see Reason 4).

6. **Pesticides approved for organic farming are toxic to humans**
There are two ways to explain this. As in Reason 5, pesticides derived from a natural source are also toxic, in some cases much less tested because we rarely test natural chemicals [11]. Rothenone, a nasty organic farming pesticide, has been clearly linked to Parkinson's disease [12].
I cannot begin to underline all of the health risks from ingesting pyrethrins [13].

More interesting perhaps is the level of toxicity of naturally occurring pesticides, toxins and carcinogens that evolution has brought about. Bruce Ames has highlighted the difference of the health risk from exposure to naturally occurring pesticides as opposed to the much more benign exposure we risk from synthetic pesticides. Have a look at Ames article [14] and ask yourself what all of the fuss is about.

About 99.9 percent of the chemicals humans ingest are natural. The amounts of synthetic pesticide residues in plant food are insignificant compared to the amount of natural pesticides produced by plants themselves. Of all dietary pesticides that humans eat, 99.99 percent are natural: they are chemicals produced by plants to defend themselves against fungi, insects, and other animal predators.

I keep reminding myself that Ames was the darling of the environmental movement in the 1970s.

7. **Research shows no difference, at all, in taste, health or safety**
   This one gets to the organi-gurus the most, especially as taste is an emotional sentiment and thus based on purely anecdotal perception. But in blind taste-tests [15], time and time again, people could not spot the difference. As far as health [16] and safety [17] issues are concerned, people will believe what they want to believe, but any studies not done by the organic industry lobby simply cannot ground that in evidence. As religion, it is fine to believe that, but don’t call it science.

8. **Higher tillage releases more CO2**
   There is a lot of debate among conventional farmers on whether no-till farming is better (I grew up on a disking farm!), but given that organic farmers do not use herbicides, they need to till the land more frequently to control weeds. This of course consumes more tractor fuel (although we want to believe organic farmers use solar-powered tractors), but also, increased tillage separates microorganisms in the soil, releasing them into the atmosphere (see a list of studies on carbon challenges for organic farming [18]). I am going to get into the emissions from cow manure in another point, but few would argue with me that more CO2 is emitted per production unit from organic tillage than from conventional farming (no matter how scary organic industry lobbyists try to portray the factory farm).

9. **Anti-GMO / anti-pesticide research is based on poor activist science**
   Last year I coined the term activist science [19] to describe a research malpractice. A traditional scientist gathers the evidence and draws a conclusion. An activist scientist starts with the conclusion and searches for evidence. In the last year we have seen, and I have exposed, some very ethically challenged activist science accepted into the mainstream, including scandals around the neonicotinoid /bee health research [20], the IARC glyphosate debacle [21] and of course, the celebrated Séralini study. All of these were funded or influenced by organisations tied to the organic industry (see reason 4).

10. **One year of pesticide residues is less toxic than one cup of coffee**
    Once again, back to Bruce Ames (although he is in his 80s, someone should introduce him to the FoodBabe!). In an interview [22] over 20 years ago, he stated:

    A cup of coffee is filled with chemicals. They’ve identified a thousand chemicals in a cup of coffee.
But we only found 22 that have been tested in animal cancer tests out of this thousand. And of those, 17 are carcinogens. There are 10 milligrams of known carcinogens in a cup of coffee and that's more carcinogens than you're likely to get from pesticide residues for a year!

But I like coffee! The point is that the risk from synthetic pesticides at the maximum residue exposure levels is practically meaningless. It is no surprise that caffeine is ten times more toxic than glyphosate a lot of other natural chemicals are far more toxic but the organi-gurus are too busy scaring us to make us get this point.

One little addendum to make today's anti-pesticide campaign seem even more ridiculous: Ames made this statement 21 years ago, so considering that synthetic pesticides were much more toxic then than they are today, we might need to radically revise Ames comparison downwards (perhaps to the equivalent of a sip of coffee today).

11. **GMOs save lives**
   In September, the BBC entered the debate on whether the genetic modification [23] of human embryos should be allowed. They made the argument quite clear, GM saves lives. Anyone who takes medicines every day or injects insulin to fight diabetes with the hope of enjoying more good quality years appreciates the achievements of biotechnology.

Plant biology is no different, no matter how the opportunists try to scare it up with the M word or calling them chemicals. We have a technology that can increase food supply, reduce hunger, fight diseases like Vitamin A Deficiency that kills half a million children a year, and neo-Luddites are going around shouting slogans, destroying test fields and spreading falsehoods in their witch-hunts. History will look back and scoff at this period (which I call the Age of Stupid).

The most ridiculous element of the organic lobby's big jump into the GMO debate is that GM technology is a tool for reducing both organic and conventional pesticide use. It should be welcomed as a scientific advance for organic farming. Instead they have created a fiction, to milk the anti-Monsanto crusade, that GMOs lead to more pesticide use, and that glyphosate causes all sorts of diseases. It does not. [24] A shameful pack of Luddites with blood on their hands.

12. **Hormone scaremongering is overplayed**
   There has been a lot of fear about conventionally farmed livestock being given growth hormones and for many, the amount of hormones does not matter, but rather that it is not natural and hence is not supposed to be there. The organic industry lobby uses this chapter of the naturalist fallacy to get nervous consumers to act against conventional livestock farming, but the numbers are so ridiculously insignificant as to make this argument embarrassingly overplayed. See a clear example [25] comparing levels of hormones in beef compared to potatoes, peas and cabbage. If you choose to eat beef and you are concerned about hormones, then stop eating \(\text{everything!}\)

This of course is nowhere even on the scale when one considers the level of endocrine disruptors found naturally in coffee, soybeans and chick peas [26] (and we are not even talking about hormones from birth control pills and HRTs flushed into the water systems). See a useful table [27] that puts stupid into its place.

13. **Higher levels of pollutants in groundwater found from organic fertilisers**
Organic farmers only use cow, pig and poultry manure and other natural composts to fertilise their fields. This runs off into surface and groundwater, increasing nitrate and acidic levels which can have enormous consequences on local ecosystems. See an EPA supported study [28]. As organic farming increases to meet the growing demand, are we prepared for the onslaught to the environment? As well, creating a larger market for livestock manure at a time when we need to reduce meat consumption is counter-productive to our goal of reducing CO2 emissions to combat climate change.

Conventional farmers have the option to use synthetic fertilisers which, when used precisely, are more efficient for direct nutrient management, emitting far fewer pollutants and reducing CO2 emissions. It is pure madness to reject this technology just because it is not natural, given the dire environmental consequences organic fertilisers are causing. And yet the organic lobby continues to tout the environmental benefits of their medieval farming practices.

14. Organic farming has led to serious E. coli outbreaks and fatalities
The over-emphasis on cow manure in organic farming has led to many serious human health crises, including most importantly, E. coli outbreaks due to fecal contamination from manure. In the US, E. coli affects thousands each year in everything from mild stomach discomfort to fatalities particularly among the vulnerable, elderly and disabled. A study [29] comparing organic and conventionally farmed vegetables found E. coli traces on 10% of organic but only 2% of conventionally farmed vegetables. Indeed, bacteria are natural and organic consumers need to understand that natural is not always desirable.

The worst recent case of E. coli occurred in Germany in 2011. The public panic and regulatory mismanagement created headlines during an outbreak that affected almost 4000 consumers, 800 with long-term illnesses, killing 53. [30] Months later, after so many conventional farmers were falsely put under suspicion and had lost markets and international exports, the source of the outbreak was found to be an organic sprout farm (growing produce directly in fresh cow manure).

15. Organic food causes increased cancer susceptibility
If you want to prevent cancer, eat at least five servings of fruit and vegetables per day! We hear this often but what does it mean in an economy or region where a significant part of the population cannot afford to buy five fresh servings? Organic is a luxury brand for the wealthy or aspiring populations (why Hollywood celebrities have jumped onto the Bash conventional farming bandwagon). Organic has no health benefits (outside of psychological) see reason 7 but rather, by artificially interfering with the agricultural marketplace and campaigning to handcuff conventional farming, the organic lobby is putting price pressure on the availability of fresh fruit and vegetables. While this does not affect the arrogant, affluent FoodBabes of the world, it denies a significant part of the population from access to cancer-fighting micronutrients. Bruce Ames did a study [31] on this, finding that the lowest 20% income bracket in the US had the highest cancer rates. Excluding lifestyle issues like smoking, diet and the lack of access to fruit and vegetables was the highest contributing factor to cancers. Ames conclusion [32] is to increase access to fruit and vegetables for the poorest population.

I just think all this business of organic food is nonsense basically. We should be eating more fruits and vegetables, so the main way to do that is to make them cheaper. Anything that makes fruits
and vegetables more expensive may increase cancer.

16. **Animals suffer when denied medicine**

This is the barbaric face of the organic lobby. Fearing the overuse of antibiotics in livestock management, organic activists like the FoodBabe are demanding that large retail and restaurant business source only drug-free meat. Animals, like people, get sick, and when a child is suffering from an illness, most parents would want to ease that suffering with medicines (including antibiotics if serious). So too with animals. That organic requirements or standards in many countries forbid such interventions means animals will suffer for some rich person’s narrow self-indulgence in steak purity. Let Vani Hari raise her own cows and pigs.

Bottom line, if you choose organic because you think it is healthier and better for the environment, what the hell are you even doing eating meat??? The hypocrisy of the watermelon-type environmentalists is outrageous. If people want to eat and enjoy meat, that is perfectly fine. Just don’t go about drawing lines where you are better than others because of your organic pretentiousness.

17. **Reduction in agricultural yields creates more global food insecurity**

This is a no-brainer and perhaps the strongest reason we should prevent the selfish endeavour of encouraging organic farming. With a growing global population, yields per hectare need to be going up, not down. We have had the good fortune of not having any significant crop failures in the last few years there has been little impact on global food reserves. But as more extreme weather conditions are expected in the coming decade, the idea that we can be complacent about food production levels is troubling.

Besides weather and disease outbreaks, there are also man-made stresses that play havoc with global food security. A decade ago, environmentalists had pushed for increased biofuels production and as agriculture recalibrated for the new energy opportunities, food stocks decreased dramatically, prices soared and many poor economies faced crises. I have argued that the Arab Spring phenomenon was due to the fall-out from the food price increases that had affected most middle and lower income countries at that time.

Rising demand for lower-yielding organic food production will irresponsibly add stress to the global food production levels. The organic lobby’s reply is smug and cynical: there is no problem, we just need to reduce food waste (and lower population levels). But here is an issue to ponder. Consider tomorrow what would happen if Coca-Cola bowed to activist pressure and committed to sourcing only organic, non-GMOs. It would be impossible to produce sufficient maize for this one global client and prices in poor countries would go through the roof. What a great victory that would be!

18. **Organic accentuates social exclusion**

Organic is just one piece of a nasty fabric I have referred to as the economic injustice of environmentalism. The Green Movement has influenced policies to help the rich, aristocratic class do well at the cost of the poor, working class. Whether it is subsidies for solar panels (paid in the form of higher rates on those who could not afford panels) or electric
cars, the affluent do not think about the consequences of their actions on the poorer classes. As prices increase on food and choices go down, will the FoodBabe feel sorry for those without? As Vivienne Westwood said: poor people should eat less \[37\] so they can afford organic food.

19. **Exporting anti-technology ideologies on poor economies is immoral**
Many of the angrier comments I have read on the Risk-Monger Facebook page have been narrow and locally based. My critics only buy locally, don’t worry how their food demands affect global food security, they shun large global food companies, and expect that everyone in the world will do just fine making the same food decisions they make in their isolated economic wonderland. But putting organic, anti-GMO demands on poor, developing countries is immoral. I have lashed out regularly at Greenpeace for its environmental colonialism \[38\] and attacks on the capacity of developing countries to try to have access to modern food technologies. Their campaigns against Golden Rice \[39\] exemplify the moral vacancy of that horrid organisation.

20. **Organic campaigns create an unfair prejudice of conventional farmers**
Pro-organic groups like Pesticides Action Network or Friends of the Earth are trying to portray conventional farmers as industrial farming or faceless factory farms. They have created a public villain, indiscriminately pouring chemicals down the throat of Mother Nature, mistreating poor animals and not caring about nature or our health, but only big, Monsanto-sized profits. This is contrasted by the saintly, bucolic image of the organic farmer, who loves the land, is concerned for our health and earns just enough to support his children who will lovingly take over the homestead some day. I have given examples in what I refer to as the vulgar vilification of farmers \[40\], and as someone who grew up on a small family farm, I resent the arrogance of these cosmopolitan zealots.

Food is a very personal, and very emotional issue for each individual. Concerns multiply when, as parents, we struggle with decisions that affect those precious to us. I totally get that, so I do not expect you to agree with all 20 of these reasons. But if you accept even 5 of the 20 reasons, then you should reconsider your position before you decide to share or retweet some feel-good argument from someone paid by the organic food industry.

You are perfectly free to choose to eat organic if that makes you feel good and you can afford it or live with the consequences and contradictions that is why we have religion. But if you want to influence others to do the same, then you have to address these 20 points, not with feelings, anecdotes and stories, but with facts. It would be more intellectually honest to realise flaws in arguments than to continue to push bad ideas that have enormous consequences for the sake of fundamentalist purity.

Note: This is an edited version of two articles that appeared on the Risk-Monger site in September 2015.
