



## Notes from the Field, vol. 5, no 3

This article can be found at <http://www.tomdispatch.com/index.mhtml?pid=71299>

### My Saudi Arabian Breakfast

By Chad Heeter

Please join me for breakfast. It's time to fuel up again.

On the table in my small Berkeley apartment this particular morning is a healthy looking little meal -- a bowl of imported McCann's Irish oatmeal topped with Cascadian Farms organic frozen raspberries, and a cup of Peet's Fair Trade Blend coffee. Like most of us, I prepare my breakfast at home and the ingredients for this one probably cost me about \$1.25. (If I went to a café in downtown Berkeley, I'd likely have to add another \$6.00, plus tip for the same.)

My breakfast fuels me up with about 400 calories, and it satisfies me. So, for just over a buck and half an hour spent reading the morning paper in my own kitchen, I'm energized for the next few hours. But before I put spoon to cereal, what if I consider this bowl of oatmeal porridge (to which I've just added a little butter, milk, and a shake of salt) from a different perspective. Say, a Saudi Arabian one.

Then, what you'd be likely to see -- what's really there, just hidden from our view (not to say our taste buds) -- is about four ounces of crude oil. Throw in those luscious red raspberries and that cup of java (another three ounces of crude), and don't forget those modest additions of butter, milk, and salt (another ounce), and you've got a tiny bit of the Middle East right here in my kitchen.

Now, let's drill a little deeper into this breakfast. Just where does this tiny gusher of oil actually come from? (We'll let this oil represent all fossil fuels in my breakfast, including natural gas and coal.)

Nearly 20% of this oil went into growing my raspberries on Chilean farms many thousands of miles away, those oats in the fields of County Kildare, Ireland, and that specially-raised coffee in Guatemala -- think tractors as well as petroleum-based fertilizers and pesticides.

The next 40% of my breakfast fossil-fuel equation is burned up between the fields and the grocery store in processing, packaging, and shipping.

Take that box of McCann's oatmeal. On it is an inviting image of pure, healthy goodness -- a bowl of porridge, topped by two peach slices. Scattered around the bowl are a handful of raw oats, what look to be four acorns, and three fresh raspberries. Those raw oats are actually a reminder that the flakes require a few steps twixt field and box. In fact, a visit to McCann's website illustrates each step in the cleaning, steaming, hulling, cutting, and rolling that turns the raw oats into edible flakes. Those five essential steps require significant energy costs.

Next, my oat flakes go into a plastic bag (made from oil), which is in turn inserted into an energy-intensive, pressed wood-pulp, printed paper box. Only then does my "breakfast" leave Ireland and travel over 5,000 fuel-gorging, CO2-emitting miles by ship and truck to my grocery store in California.

Coming from another hemisphere, my raspberries take an even longer fossil-fueled journey to my neighborhood. Though packaged in a plastic bag labeled Cascadian Farms (which perhaps hints at a birthplace in the good old Cascade mountains of northwest Washington), the small print on the back, stamped "A Product of Chile," tells all -- and what it speaks of is a 5,800-mile journey to Northern California.

If you've been adding up percentages along the way, perhaps you've noticed that a few tablespoons of crude oil in my bowl have not been accounted for. That final 40% of the fossil fuel in my breakfast is used up by the simple acts of keeping food fresh and then preparing it. In home kitchens and restaurants, the chilling in refrigerators and the cooking on stoves using electricity or natural gas gobbles up more energy than you might imagine.

For decades, scientists have calculated how much fossil fuel goes into our food by measuring the amount of energy consumed in growing, packing, shipping, consuming, and finally disposing of it. The "caloric input" of fossil fuel is then compared to the energy available in the edible product, the "caloric output."

What they've discovered is astonishing. According to researchers at the University of Michigan's Center for Sustainable Agriculture, an average of over seven calories of fossil fuel is burned up for every calorie of energy we get from our food. This means that in eating my 400 calorie breakfast, I will, in effect, have "consumed" 2,800 calories of fossil-fuel energy. (Some researchers claim the ratio to be as high as ten to one.)

But this is only an average. My cup of coffee gives me only a few calories of energy, but to process just one pound of coffee requires over 8,000 calories of fossil-fuel energy -- the equivalent energy found in nearly a quart of crude oil, 30 cubic feet of natural gas, or around two and a half pounds of coal.

So how do you gauge how much oil went into your food?

First check out how far it traveled. The further it traveled, the more oil it required. Next, gauge how much processing went into the food. A fresh apple is not processed, but Kellogg's Apple Jacks cereal requires enormous amounts of energy to process. The more processed the food, the more oil it required. Then consider how much packaging is wrapped around your food. Buy fresh vegetables instead of canned, and buy bulk beans, grains, and flour if you want to reduce that packaging.

By now, you're thinking that you're in the clear, because you eat strictly organically-grown foods. When it comes to fossil-fuel calculations though, the manner in which food's grown is where differences stop. Whether conventionally-grown or organically-grown, a raspberry is shipped, packed, and chilled the same way.

Yes, there are some savings from growing organically, but possibly only of a slight nature. According to a study by David Pimentel at Cornell University, 30% of fossil-fuel expenditure on farms growing conventional (non-organic) crops is found in chemical fertilizer. This 30% is not consumed on organic farms, but only if the manure used as fertilizer is produced in very close proximity to the farm. Manure is a heavy, bulky product. If farms have to truck bulk manure for any distance over a few miles, the savings are eaten up in diesel-fuel consumption, according to Pimentel. One source of manure for organic farmers in California is the chicken producer Foster Farms. Organic farmers in Monterey County, for example, will have to truck tons of Foster's manure from their main plant in Livingston, Ca. to fields over one hundred miles away.

So the next time we're at the grocer, do we now have to ask not only where and how this product was grown, but how far its manure was shipped?

Well, if you're in New York City picking out a California-grown tomato that was fertilized with organic compost made from kelp shipped from Nova Scotia, maybe it's not such a bad question. But should we give up on organic? If you're buying organic raspberries from Chile each week, then yes. The fuel cost is too great, as is the production of the greenhouse gases along with it. Buying locally-grown foods should be the first priority when it comes to saving fossil fuel.

But if there were really truth in packaging, on the back of my oatmeal box where it now tells me how many calories I get from each serving, it would also tell me how many calories of fossil fuels went into this product. On a scale from one to five -- with one being non-processed, locally-grown products and five being processed, packaged imports -- we could quickly average the numbers in our shopping cart to get a sense of the ecological footprint of our diet. From this we would gain a truer sense of the miles-per-gallon in our food.

*cont. overleaf*

**In your share**  
**Scallions**  
**Lettuce (2 Heads)**  
**Carrots**  
**Beets**  
**Salad Turnips**  
**Dill Plant**  
**Basil Plant**

(There may not be enough Carrots, Beets  
 and Salad Turnips for everyone, but you  
 will be able to choose two.)

### Avocado Buttermilk Dressing

|         |  |
|---------|--|
| 1/2     | ripe avocado, cut into chunks                        |
| 1/2     | cup buttermilk                                       |
| 1/4     | cup sour cream                                       |
| 1 tsp   | Dijon mustard  |
| 2 tsp   | lemon juice  |
| 1       | scallion, including greens, chopped                  |
|         | Additional seasonings to mix and match<br>(optional) |
| 1 tsp   | minced fresh chives                                  |
| 1/2 tsp | grated garlic  |
| 1 tsp   | minced fresh cilantro                                |
| 1 tsp   | grated peeled fresh ginger                           |

Combine the avocado, buttermilk, sour cream, mustard, lemon juice, and scallion in a food processor or blender. Process until smooth. Add any of the seasonings you'd like and process again.

Makes 1 1/4 cups.

Refrigerate up to 4 days.

Note: Enjoy over greens or as a dressing for chilled, steamed vegetables such as broccoli, potatoes, snap peas, or corn. Taste the mixture before you decide which of the optional ingredients to add.

**Reminder!** Effortless, costless fundraiser for LESSON May 13 at 1 pm, followed by **Steering Wheels meeting**. Location: the farm (or Bivalve Community Center if it rains). We have an opportunity to raise up to \$1000 for LESSON—all you have to do is show up and fill out a survey! Contact Lori with any questions—[llilly@ezy.net](mailto:llilly@ezy.net)/410 572 2785. See you then!

*cont. from overleaf*

What appeared to be a simple, healthy meal of oatmeal, berries, and coffee looks different now. I thought I was essentially driving a Toyota Prius hybrid -- by having a very fuel-efficient breakfast, but by the end of the week I've still eaten the equivalent of over two quarts of Valvoline. From the perspective of fossil-fuel consumption, I now look at my breakfast as a waste of precious resources. And what about the mornings that I head to Denny's for a Grand-Slam breakfast: eggs, pancakes, bacon, sausage? On those mornings -- forget about fuel efficiency -- I'm driving a Hummer.

What I eat for breakfast connects me to the planet, deep into its past with the fossilized remains of plants and animals which are now fuel, as well as into its future, when these non-renewable resources will likely be in scant supply. Maybe these thoughts are too grand to be having over breakfast, but I'm not the only one on the planet eating this morning. My meal traveled thousands of miles around the world to reach my plate. But then there's the rise of perhaps 600 million middle-class Indians and Chinese. They're already demanding the convenience of packaged meals and the taste of foreign flavors. What happens when middle-class families in India or China decide they want their Irish oats for breakfast, topped by organic raspberries from Chile? They'll dip more and more into the planet's communal oil well. And someday soon, we'll all suck it dry.

*Chad Heeter grew up eating fossil fuels in Lee's Summit, Missouri. He's a freelance writer, documentary filmmaker, and a former high school science teacher.*

### That Japanese Dressing

|       |                             |
|-------|-----------------------------|
| 2 tsp | low-sodium soy sauce        |
| 1 tsp | rice vinegar                |
| 1 tsp | light sesame oil (see note) |
| 1 tsp | sugar                       |
| 1 tsp | grated fresh ginger         |

In small bowl combine all ingredients. Mix until well blended. Refrigerate up to 1 month.

Note: Don't use dark sesame oil, the flavor will dominate.

More recipes from the first four years of Provident Organic Farm CSA may be found on our website:

[www.providentfarm.org](http://www.providentfarm.org)

Recipes are indexed by individual vegetable.

Please email your recipes to Theresa Connelly ([MightyTeaOne@cs.com](mailto:MightyTeaOne@cs.com)).



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### Comments & Contributions

We welcome your comments and contributions, including recipes! Please send to [ubuubok@comcast.net](mailto:ubuubok@comcast.net) or Provident Organic Farm CSA, PO Box 62, Bivalve, MD 21814.