

NUTRITION AND HEALTHY EATING - ORGANIC FOODS

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Abstract:

The rising interest in foods that are grown organically is gaining attention in both developed and developing countries. This attention is in response to several factors such as concern about the environment, food safety, animal welfare, as well as human health. These aforementioned trepidations, together with perceived organic consumer conduct, led to identify various kinds of organic shoppers, such as food phobics, humanists and welfare enthusiasts, environmentalists, hedonists, and healthy eaters. The findings of this paper show that human health, food safety, attitudes and perceptions and willingness to pay for a price premium are some of the factors influencing consumers' willingness to consume organic foods. Therefore, there is a need to create more awareness in the food industry relating to the health benefits of consuming organic foods.

Introduction

Once found only in health food stores, organic food is now a regular feature at most supermarkets. And that's created a bit of a dilemma in the produce aisle.

On one hand, you have a conventionally grown apple. On the other, you have one that's organic. Both apples are firm, shiny and red. Both provide vitamins and fiber, and both are free of fat, sodium and cholesterol. Which should you choose? Get the facts before you shop.

What is organic farming?

The word "organic" refers to the way farmers grow and process agricultural products, such as fruits, vegetables, grains,

dairy products and meat. Organic farming practices are designed to meet the following goals:

- Enhance soil and water quality
- Reduce pollution
- Provide safe, healthy livestock habitats
- Enable natural livestock behavior
- Promote a self-sustaining cycle of resources on a farm

Materials or practices not permitted in organic farming include:

- Synthetic fertilizers to add nutrients to the soil
- Sewage sludge as fertilizer
- Most synthetic pesticides for pest control
- Irradiation to preserve food or to eliminate disease or pests
- Genetic engineering, used to improve disease or pest resistance or to improve crop yields
- Antibiotics or growth hormones for livestock

Organic crop farming materials or practices may include:

- Plant waste left on fields (green manure), livestock manure or compost to improve soil quality
- Plant rotation to preserve soil quality and to interrupt cycles of pests or disease
- Cover crops that prevent erosion when parcels of land are not in use and to

plow into soil for improving soil quality

- Mulch to control weeds
- Predatory insects or insect traps to control pests
- Certain natural pesticides and a few synthetic pesticides approved for organic farming, used rarely and only as a last resort in coordination with a USDA organic certifying agent

Organic farming practices for livestock include:

- Healthy living conditions and access to the outdoors
- Pasture feeding for at least 30 percent of livestock's nutritional needs during grazing season
- Organic foods for animals
- Vaccinations

Organic or not? Check the label

The U.S. Department of Agriculture (USDA) has established an organic certification program that requires all organic foods to meet strict government standards. These standards regulate how such foods are grown, handled and processed.

Any product labeled as organic on the product description or packaging must be USDA certified. If it is certified, the producer may also use an official USDA Organic seal.

- **100 percent organic.** This description is used on certified organic fruits, vegetables, eggs, meat or other single-ingredient foods. It may also be used on multi-ingredient foods if all of the ingredients are certified organic, excluding salt and water. These may have a USDA seal.

- **Organic.** If a multi-ingredient food is labeled organic, at least 95 percent of the ingredients are certified organic, excluding salt and water. The nonorganic items must be from a USDA list of approved additional ingredients. These also may have a USDA seal.
- **Made with organic.** If a multi-ingredient product has at least 70 percent certified organic ingredients, it may have a "made with organic" ingredients label. For example, a breakfast cereal might be labeled "made with organic oats." The ingredient list must identify what ingredients are organic. These products may not carry a USDA seal.
- **Organic ingredients.** If less than 70 percent of a multi-ingredient product is certified organic, it may not be labeled as organic or carry a USDA seal. The ingredient list can indicate which ingredients are organic.

Do 'organic' and 'natural' mean the same thing?

No, "natural" and "organic" are not interchangeable terms. In general, "natural" on a food label means that it has no artificial colors, flavors or preservatives. It does not refer to the methods or materials used to produce the food ingredients.

Other common food labels should also not be confused with organic labels. For example, the guidelines for certified organic beef include — among a number of requirements — access to pasture during a minimum 120-day grazing season and no growth hormones. But the labels "free-range" or "hormone-free," while they must be used truthfully, do not indicate a

farmer followed all guidelines for organic certification.

Organic food: Is it safer or more nutritious?

There is a growing body of evidence that shows some potential health benefits of organic foods when compared with conventionally grown foods. While these studies have shown differences in the food, there is limited information to draw conclusions about how these differences translate into overall health benefits.

Potential benefits include the following:

- **Nutrients.** Studies have shown small to moderate increases in some nutrients in organic produce. The best evidence of a significant increase is in certain types of flavonoids, which have antioxidant properties.
- **Omega-3 fatty acids.** The feeding requirements for organic livestock farming, such as the primary use of grass and alfalfa for cattle, result in generally higher levels of omega-3 fatty acids, a kind of fat that is more heart healthy than other fats. These higher omega-3 fatty acids are found in organic meats, dairy and eggs.
- **Toxic metal.** Cadmium is a toxic chemical naturally found in soils and absorbed by plants. Studies have shown significantly lower cadmium levels in organic grains, but not fruits and vegetables, when compared with conventionally grown crops. The lower cadmium levels in organic grains may be related to the ban on synthetic fertilizers in organic farming.
- **Pesticide residue.** Compared with conventionally grown produce, organically grown produce has lower

detectable levels of pesticide residue. Organic produce may have residue because of pesticides approved for organic farming or because of airborne pesticides from conventional farms. The difference in health outcomes is unclear because of safety regulations for maximum levels of residue allowed on conventional produce.

- **Bacteria.** Meats produced conventionally may have a higher occurrence of bacteria resistant to antibiotic treatment. The overall risk of bacterial contamination of organic foods is the same as conventional foods.

Are there downsides to buying organic?

One common concern with organic food is cost. Organic foods typically cost more than their conventional counterparts. Higher prices are due, in part, to more expensive farming practices.

Food safety tips

Whether you go totally organic or opt to mix conventional and organic foods, be sure to keep these tips in mind:

- **Select a variety of foods from a variety of sources.** This will give you a better mix of nutrients and reduce your likelihood of exposure to a single pesticide.
- **Buy fruits and vegetables in season when possible.** To get the freshest produce, ask your grocer what is in season or buy food from your local farmers market.
- **Read food labels carefully.** Just because a product says it's organic or contains organic ingredients doesn't necessarily mean it's a healthier alternative. Some organic products

may still be high in sugar, salt, fat or calories.

- **Wash and scrub fresh fruits and vegetables thoroughly under running water.** Washing helps remove dirt, bacteria and traces of chemicals from the surface of fruits and vegetables, but not all pesticide residues can be removed by washing. Discarding outer leaves of leafy vegetables can reduce contaminants. Peeling fruits and vegetables can remove contaminants but may also reduce nutrients.

Comparison of organic and non-organic product

Identifying the attributes associated with organic foods by visual inspection alone may be difficult to ascertain. Majority of the organic food consumers buy organic produces because of a belief associated with the uniqueness of the products compared to conventionally grown ones. Viewing it in another way round, why some consumers do not buy organic produces is associated with a belief that such produces are not healthier than their conventional counterparts. As a result of these beliefs contrary to consumers' line of argument, there is, therefore, continuing interest and argument about whether foods that are produced organically are better than and or the same from conventionally grown counterparts and, if so in terms of what attributes.

Studies, such as, have assessed whether there are discrepancies between conventional and organically grown foods from the view of both the "producer" (supply side) and the "consumer". Argued that on the production side, emphases are

usually laid on profitability, yield, and producer price comparison. In contrast, studies on the demand-side have examined the differences in terms of "biophysical, and chemical features," and consumer preferences. However, the importance of this review is on consumer demand (that is the willingness to consume organic food). Therefore, it is important to have a clear understanding on why consumers are willing to consume organic foods.

Conclusion

Food safety, human health, and environmental concern influence consumer preferences. Taking into account consumer preference for organic against conventional produced products is typically centred on a comparison of consumer attitudes towards the production systems used and product characteristics. Consumer preference for organic food is based on a general perception that such organic foods have more desirable features than its conventional counterparts. In general, consumers tend to prefer locally grown produce to shipments from other areas across the world. The effect of socio-economic and demographic variables (such as income) determines organic food purchases. Based on the studies reviewed some literature reported income as a barrier for organic purchasers, while income was not a barrier as reported in some literature. Empirical evidence of the relationship between particular organic foods and consumer income not only will help to better comprehend how consumers really perceive the quality and safety attributes of organic products compared to their conventional counterparts, but also have implications for organic products demand as average income levels increase with economic growth. The gradual

increase in organic food production could also be seen in the global markets for certified organic products that have increased rapidly over the past decades. Most sales of the organic products are being generated in countries like North America and Europe, while regions like Asia, Latin America and Africa, are designated for exports.

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