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Consumer perceptions and demand for organic food in Australia: Focus group discussions

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Abstract

In Australia, the retail value of organic food production was estimated at A$250 million, with farm-gate value at around A$90 million and exports at around A$40 million, in 2002. The current share of organic sales in total food sales in Australia is about 1%. The growth rate in organic production was forecast to continue at 10–30% per annum. Despite the positive outlook, there are consumer concerns about product recognition and product integrity. To understand how demand for organic products is changing, it is important to investigate consumer attitudes and knowledge about these issues. The objective of this study was to identify issues that may hinder or promote demand. Given the qualitative nature of these issues, we used a focus group study to probe consumers. While focus group results are a qualitative approach and not intended to be generalizable, the results suggest directions for future research. The participants raised concerns about the use of chemicals, the treatment of farm animals and the environmental impact of food production. Organic food consumers were found to be more knowledgeable about organic foods, as well as being more tolerant of higher prices and inaccessibility. The results also suggest that increasing consumers' awareness of organic farming and certification, as well as the availability of organic foods, may be the most effective way of moving organic foods into mainstream.

Key words: consumer attitudes, focus group methodology, organic food

Introduction

The demand for organic products worldwide has expanded rapidly, boosted by the heightened awareness of environmental problems, health concerns, the recent series of highly publicized food scares and the debate over genetically modified (GM) foods[1–4]. Promotion by mainstream retailers and major food manufacturers as they move into organic product lines has also been a contributing factor to demand growth. Worldwide demand for organic foods was estimated at $US23 billion in 2002[4] and growth at around 10–20% per annum in the next few years, with sales reaching $US29–31 billion in 2005[5].

In Australia, the retail value of organic food production in 2002 was estimated to be worth A$250 million, with farm-gate value at around A$90 million and exports at around A$40 million[6]. The current share of organic sales out of total food sales in Australia is about 1%, compared with about 3% in the United States[7,8]. The growth rate in organic production was forecast to continue at 10–30% per annum, with the strongest growth in beef, milk and horticulture[6]. Australia also imports some organic products, worth in the order of A$5 million annually[9]. Despite the positive outlook, there are recognized problems facing the Australian organic industry in terms of consumer confusion over organic certification and product recognition, and misleading claims and advertising[10,11]. Limited product range, high price premiums and lack of availability of organic foods in conventional supermarkets are also thought to be important factors limiting demand[9,12]. To understand demand for organic products, these issues have to be investigated. Key research questions are: Who are the organic consumers? Why do they buy organic? Are they representative shoppers or a fringe niche? How do consumers feel about the price premiums generally required of organic foods? And how important is organic certification to consumer confidence?

The objective of this study was to answer these questions via a focus group study. A focus group study was chosen because it is an appropriate method to probe consumer attitudes and knowledge. Focus group methodology is not designed to be representative, but stratified in order to target particular groups. Given the nature of our research questions, we needed to target organic shoppers. For the sake of comparison, we also needed to include a group of conventional shoppers, as well as a group of people who grow their own food. Because conventional shoppers are the predominant consumers, the study included two groups of conventional shoppers, one group of organic food shoppers and one group of consumers who garden.

The Australian Organic Market, Standards and Certification

Despite the fact that Australia has the world's largest organic area (mostly pasture and range), the Australian organic industry is rather small in terms of the number of organic farmers and the volume of outputs, compared to conventional production. The number of certified organic farmers nationally was estimated to be between 2000 and 2200 in 2003[13], making up about 1% of the total number of farmers and 1.6% of total agricultural land in Australia.

The bulk of organic food (about 80%) continues to be sold through specialty shops and supermarkets[14,15]. There are also a small number of farmers' markets, home deliveries, box schemes, and Community Supported Agriculture (CSA) projects operating around the country[16]. There is evidence that both supermarket sales and farmers' markets are experiencing growth in Australia, similar to the developments in the United States and other parts of the world[15].

Organic production generally describes farming practices that emphasize environmental sustainability and avoid the use of synthetic fertilizers and chemicals. The aim of organic certification is to help consumers to distinguish organically produced products from conventionally produced products with specific labels, hence protecting consumers against fraudulent and unsubstantiated product claims[17]. Australia, the United States, the European Union and Japan all have their own national standards for organic certification, with specific production requirements. These standards are deemed equivalent to one another in major aspects[18]. In Australia, organic agriculture is defined in the Australian National Standard for Organic and Biodynamic Produce[17] and certification is administered by the Australian Quarantine and Inspection Service (AQIS) under the auspices of the Organic and Biodynamic Program. It is based on a third-party inspection/certification model, whereby production, processing and labeling of organic produce are overseen by AQIS-accredited certifying organizations. The Australian National Standard, which was developed in 1992, applies only to exports. This means that although it is illegal to export a product labeled as 'organic' without proper certification, there is no such regulation on organic products (including imports) that are sold in the domestic market[19,20]. As such, products that claim to be organic or carry an organic label in Australia may not necessarily meet the National Standard or have been 'certified'. Currently, Australia has seven AQIS-accredited organic or biodynamic certification organizations[21]. They are:

- Bio-Dynamic Research Institute (BDRI) with the Demeter label
- National Association for Sustainable Agriculture Australia (NASAA), accredited by IFOAM and USDA
- Australian Certified Organic Pty Ltd (ACO)/Biological Farmers of Australia (BFA), accredited by IFOAM and USDA
- Tasmanian Organic Producers (TOP)
- Organic Food Chain of Australia (OFC)
- Organic Growers of Australia (OGA)
- Safe Food Queensland (SFQ).

These certification organizations conduct physical inspections of farms, storage and transport facilities, processors, manufacturers, input suppliers and other operators involved in the supply chain. Once certified, farmers can use the certifying organization's label and certification mark on their produce. There are two levels of certification: in-conversion and certified organic. 'Certified in-conversion' means that the produce has been produced in compliance with the organic standard for at least a year after admission to the certification program. A produce can become 'certified organic' if all requirements are met for at least 3 years.

Previous Consumer Research in Australia

Research by Wynen[22] indicates that the funds spent on organic research in Australia are much less than the amount collected from organic farmers and matched with Commonwealth contributions. Among the research that has been conducted in Australia, organic food demand and income have been shown to be linked, but no clear link appeared with age, education or gender[4]. Obstacles to organic demand included: availability, cost, quality and unclear labeling[4]. Premiums for organic foods range from 50 to 75%[4]. Previous investigation of consumer motivation has focused on metropolitan areas of Queensland and Victoria[23–25].

Focus group research in southern metropolitan Queensland revealed consumer confusion about organics, related to lack of knowledge and trust, a need for information and too many certification logos[23]. Factors that deterred consumers' decisions to buy organic were the high price of organic foods, lack of income, the lack of availability of organic foods, inconvenience and high search cost. From a marketing perspective, Turnbull[23] concluded that demand

could be increased if the price was lowered, the availability increased and presentation improved. From a policy perspective, she concluded that the key to increasing demand were: standardizing certification procedures, labels and logos; enhanced information and education programs about organic foods; and government assistance in converting to organic production.

In another study, focus group research was carried out in metropolitan Queensland and Victoria and used to design a national survey[24]. The focus groups did not find a clear linkage between concern about the environment, health and other issues and organic food consumption. However, the national survey did find that consumers of organic foods were slightly more concerned than conventional shoppers about health, animal welfare, environmental protection, weight control, fitness and political values. This discrepancy between the focus groups and the national survey is probably explained by sample size. The national survey revealed that both conventional and organic shoppers were highly concerned about these issues, but with a sample of 1200, it was possible to discern significant differences in the levels of concern. However, the in-depth nature of the focus groups did identify barriers that seemed to moderate the extent to which consumers acted on these concerns. The primary barriers were availability, convenience and cost.

Focus Group Research and the Focus Groups

A focus group is a carefully planned discussion designed to obtain participants' perceptions on a well-defined area of interest in a nonthreatening environment. It is typically comprised of 7–10 people who are purposely selected because they have certain characteristics in common that relate to the topic of the focus group study. Because of this selection process and the sample size, the focus groups do not constitute a random sample, are not intended to be representative of the general population, and the results are not suitable for making inferences or predictions[26].

In general, the focus group is repeated several times with different people to obtain diverse viewpoints on a subject. It is not designed to reach consensus. Normally, it starts with 3–4 groups and may be continued until theoretical saturation is reached, i.e., no more new information is received[26]. Although a focus group study is often used as a tool for aiding survey design, it is being used increasingly as a tool for qualitative research, particularly in social science and marketing research[27].

In this research, a focus group study was conducted in Armidale, New South Wales (NSW). Armidale is a university town, home of the University of New England, with 22,000 residents. It is located 170 km inland, in an agricultural region about halfway between Sydney and Brisbane. Armidale was chosen in part because it is both a potential major producer and consumer of organic foods, and in part because we were interested in assessing the opportunity for the development of an organic sector in rural Australia. The typical organic consumer is thought to be urban[4]; however, it may be that this is driven by availability rather than demand. Thus, one reason for investigating rural consumers was to examine whether availability is a barrier, and whether their attitudes towards organic food are similar to those of urban consumers.

Altogether there were 36 participants in four different groups. The numbers of participants in each group varied from seven to ten. There were nine and ten participants, respectively, in two groups of non-organic consumers, seven in a session made up of mostly organic food consumers, and ten in a session for home gardeners. Due to limited supply of organic foods in the rural areas, it was of interest to find out the extent to which home-grown foods meet some of the demand for organic food. This design enabled us to investigate more diverse views and to compare results between groups. A summary of the socio-demographics of the focus groups is provided in Table 1. Compared to NSW/Australia, the focus groups were generally older, more educated and with higher incomes.

The objective of the focus group study was to find out how rural consumers feel about food consumption in general, and how they feel about organic foods in particular, as well as how much they know about organic food. We also wanted to know what factors impact food choices, whether conventional or organic foods. In addition, we asked both organic and conventional shoppers what they knew about organic certification, what organic foods people bought and why, and how they perceived the price premium for organic food, in order to identify differences in their perceptions and motivations.

Question 1. What are the Most Important Characteristics of Food that You Pay Attention to When You go Grocery Shopping?

The answers to this question varied depending on the socio-demographics of the participants, such as whether a family member had a health problem or food allergy, whether the family had young children, whether they were vegetarians and whether they were constrained by budget. Reponses are summarized in Table 2. Overall, the most important characteristics of food that people pay attention to are: sensory appeal (taste, flavor, texture, smell, look), freshness, variety, nutrition, costs, convenience and serving size, where the food come from, and how the food is produced. For those families experiencing health problems (e.g., diabetes) or food allergies/sensitivities (e.g., monosodium glutamate the (MSG) sensitivity), they needed to know what was in their food and they often checked nutrition labels (especially low fat, low sugar, low salt, and MSG-free).

Table 1. Socio-demographic summary of focus group participants.

Marital status	
Single	9
Married	12
Divorced	8
De facto (living together as man and wife but not married)	4
Others	3
Highest degree obtained	
PhD	9
Masters	5
Bachelor	9
Trade certificate/diploma	5
High school	6
Others	2
Employed	
Yes	34
No	2
Occupation	
University lecturers	8
Researchers	2
AA	3
Students	6
IT	2
Others (non-UNE employees)	15
Ethnicity/race	
/Caucasian	36
Primary food shopper in household	
Yes	28
Shared	5
No answer	3
Dietary restrictions in household	
Yes	16
No	20
Age of participant	
20–29	2
30–39	6
40–49	15
50–59	11
60+	2
Sex of participant	
Female	23
Male	13
Children under 18 living in household	
Yes	13
No	23
Annual household income (A$)	
<30,000	7
30,000–59,999	15
60,000–89,999	3
90,000+	7
NA	4
Have you ever bought organic food?	
Yes	30
No	5
Don't know	1
When was the first time?	
More than 1 year ago	4
More than 3 years ago	3
More than 5 years ago	3
More than 10 years ago	18
No answer/forgotten	8
Where?	
Armidale	2
Elsewhere	23
No answer	11
How often do you purchase organic?	
Weekly/bi-weekly	14
Monthly	2
Few times a year	7
Never	3
No answer	10
From where do you buy organic?	
Supermarkets	Most had multiple answers
Farmers' markets	
Food co-ops	
Health food stores	
Home grown	

AA, administrative assistant; IT, information technology; UNE, University of New England.

Some emphasized their preference for organic or unprocessed foods. Others preferred seasonal, locally grown or Australian-made foods. Quite a few participants grew their own vegetables, because they have more flavor and fewer chemicals. Some were hesitant to use the term 'organic' to describe their home gardens because they are not sure about the manure they used.

For those who identified themselves as organic consumers, personal health, environmental concerns, animal welfare and protecting small farms and rural communities were all part of the selection criteria.

> I like to look at the food, I like to smell it, and I like to taste it. With grapes, I like to taste a grape or something like that. I like to be informed too; I ask questions, where it's from and that aspect of it. And from an animal point of view, I'm interested in the welfare of the animals as well as the environment the food is coming from, so I'm pretty selective in that way. I don't really care too much about the cost because I believe the benefits and the health far outweigh that aspect in the long term, my health is more important in the long term than the short term economic gain.

For non-organic consumers, the main consideration for food choices appeared to be related to sensory appeal, especially taste and flavor. A majority of organic consumers in this study were vegetarians; therefore, nutrition was a very important consideration. It was clear that some participants had very strong views about the food they ate, while others were not so selective. From the discussions, it was also apparent that people often had conflicting goals concerning their food choice. Most organic consumers wanted to purchase as much organic food as possible, but were often constrained by budget,

Table 2. Food characteristics that participants valued.

Sensory factors	Taste
	Flavor
	Freshness
	Texture
	Appearance (color, look)
Health factors	Health
	Nutrition
	High in protein, vitamins and minerals
	Well-balanced diet and high nutritional value (especially for children)
	Low fat, low salt, low sugar, MSG-free
Lifestyle	Convenience/serving size/variety
Cost factors	Price
	Value for money
Family preferences	Something that family or children will, or like to, eat
Level of processing	As unprocessed as possible
	Minimal packaging
	As free of preservatives and additives as possible
Social/ethical concerns	Animal welfare
	Grown with minimum chemicals
	Low impact on the environment
	Does not contain genetically modified organisms
Other criteria	Produced locally or Australian made
	What is in season

MSG, monosodium glutamate.

what was available in the market or by the time that was required of them to shop around. For families with young children, the choice was often dictated by what the children would eat, rather than the nutritional content of the food or tastes and preferences of the adult shoppers. Another potential conflict was that people wanted to have a healthy lifestyle but were often either too lazy or too busy to do the right thing.

> I've got an idealistic view of what's the most important characteristics of food for me, and then I've got a practical and real, real feeling of what's the most important characteristics of food for me. I mean I'd love to eat healthy and low fat content [*one participant laughs*], all those things that you get thrown at you as a kid and right through, but for me, the ideal and the practical, I think I'm lazy, and what's the easiest, comes, oh just this time and next time I'll do better, I mean that's just the way it is.

Some also thought that a little healthy (organic) choice was not going to offset their other bad habits (such as eating fatty food or junk food, drinking or smoking) and make any difference to their health. For students, budget was the most serious constraint on food choice because of price premiums associated with organic products.

Question 2. What Does the Term Organic Mean to You?

This question was asked to find out about the participants' perceptions of 'organic', i.e., what comes to mind when they hear the word 'organic'. In general, most participants mentioned: 'free of chemicals, pesticides and residues', 'healthiness', 'wholesomeness', and associated these with the physical attributes of food products. The answers are summarized in Table 3. However, to some it means 'growing in tune with, in harmony with nature', 'ethical', 'sustainable' and 'small-scale production', which are related to the production process.

> It's something that is grown in congruence with nature, so it's sustainable. I like the ethics behind that. To me, I guess I equate organic with healthy. And probably better for you, I feel better about eating it.

To a few, it conjured up more stereotypical images of 'home grown fruit and vegetables', 'small and imperfect', 'knobby little apples, little wormy things' and 'hippies and their alternative lifestyles'. There was also some mention of genetically modified organisms (GMOs) in the discussions, that they are unnatural and go against the concept of organically grown. There was some scepticism among the participants about organic foods, especially in one group of conventional shoppers. These concerns included lack of confidence in certification and doubts about the ability to produce sufficient food without synthetic fertilizers and chemicals.

> . . . I come from a long line of farmers and I can't see the difference much between super phosphate and chook poo. [*participants laugh*]. I think the word [*organic*] has been hijacked by marketing people to drop the idea that something is better for you. We'd probably be a fairly hungry world without some of these chemicals and fertilizers.

Question 3. What Does Organic Certification Mean to You?

We asked participants about organic certification, to understand how important it was in their perceptions, confidence and behavior towards organic foods. Most participants said that organic certification means labels, trademarks and logos, which, in turn, mean 'a stamp of approval' and 'some sort of guidelines, standards and regulation', and it's an important tool for building up faith and trust in the origins of the product (see Table 4 for a list of results).

> Organic certification means to me that the food has met the requirements, has been grown and stored and met the requirements of different organizations certifying it.

Table 3. How participants defined 'organic'.

Farming practices	No chemicals at all
	No pesticides, no chemical fertilizers, no hard chemical sprays
	Low or as little pesticides and chemicals as possible
	Chemical free and preservative free
	No artificial colors and flavors
	Not genetically modified
	Not adding nasty things that are going to be nasty to anything else and the surroundings
	Naturally ripened
	Grown as close to a natural process as possible
	Grown in tune or harmony with nature in sustainable communities
	Wholesomeness if grown in a sustainable way
	From the earth/clean earth/healthy soils
	Recycling of all farm materials
Standards	Commercially has been certified according to national standards and if home grown, as close to certified minimum standards as possible
Other associations	Small scale production
	Seasonal vegetables and fruit
	Home grown
	Grown locally
	Older varieties and non-hybrid
	Growing and producing produce in as old-fashioned a way as possible
	Small and imperfect
	Alternative lifestyle
	Knobby little apples, little wormy things
Product attributes	More nutritious
	Natural and healthier
	Natural and expensive
	Clean foods
Marketing ploy	A marketing term to drop the idea that something is better for you

> I understand there are several different organizations in Australia that you can get certification for and that [*word missing here*] the requirements that they're growing, and they've also undergone regular testing to make sure that people aren't cheating the system as well and just putting organic labels on inorganic food.

However, there was also some scepticism about organic farming and certification. Some cast doubt on the level of guarantee, the level of packaging, the distance of transport, the emergence of large corporate organic farms, the possibility of contamination from neighboring conventional farms, the ability of organic farming to provide food security to a growing population.

> To me, there's a difference between what I understand when I go to the shop and say this is organic. I know enough that there are always criteria that farmers have got to satisfy to have the product labelled as organic or chemical free, to be grown in this way. That's what it means to me when I see it on the label, but I guess, I would hope it to mean something more, like growing in tune with, in harmony with nature and in sustainable communities, those kind of more general and utopian kind of ideas in a way.

> From what I understand a farm can be deemed organic when neighbouring farms are not adhering to organic farming practices.

One participant commented that organic certification is about the production process, not the product; therefore, there was no guarantee that the products were not treated with chemicals after leaving the farm. There were also questions about what was required to certify that milk and meat were organic. These comments confirmed previous research findings that consumers desire more information.

> It means they are producing basically something that doesn't harm its environment or the end consumer, but I don't really know how this certification is granted, as a consumer. And in fact, I wouldn't mind finding out about that.

Question 4. What Organic Foods do You Buy? Where? And Why?

In terms of what people buy that is organic, fruit and vegetables appeared to be the main category, followed by

Table 4. How participants defined 'organic certification'.

Production standards	Some sort of standards, guidelines or regulations
	Labels, trademarks or logos
	There are two or three different levels of organic certification
	Producers follow guidelines and are being monitored by certifying bodies
	Soil testing
	Strict production guidelines
	Standards or guidelines are on production process, not product
	Probation period
	Organic farmers are routinely and randomly being tested
Consumer confidence	It is a stamp of approval
	Trust and faith
	It means that the farm and the process have been tested and meet certain criteria
	It means you have jumped through certain hoops
	It is some kind of reward to organic farmers who have done the right thing and producing smaller yields as a result
	The food has been grown without chemicals, pesticides in as natural way as possible
	It means that something is more likely to be free from harm-causing chemicals
	It gives me confidence that what you are reading about is what you are actually eating
	Certified has the least extra stuff in it
	I will choose something that is labeled as certified organic over organic
	It means it is useful and convenient (for buying decisions)
Scepticism	Obviously it has been through experts and the criteria, but I am fairly cynical about certification and the process and what it actually means
	Who checks the checkers?
	I am not convinced that it is well policed
	It's been through some form of checking process, but how far has that process been?
	Organic certification is the end product of some kind of political compromise
	The organic standard is not the best but workable
Organic label	I would go into labels as much as I could, but I don't trust them 100%
	I don't trust the label completely, but it is likely to be better than something that makes no claim to be organic
Knowledge/awareness	I don't really know what organic certification really means
	I can't remember ever having seen such a description
	Well, it means nothing to me

staples such as flour, cereals, legumes (kidney beans, lentils and cannelloni beans), pasta, milk, yoghurt, tea and coffee, and juice. Soya milk and tofu were mentioned a few times as key organic purchases because of vegetarian diet or food allergies. Although a variety of organic products were being purchased, the list was still quite limited compared with conventional foods that are available in the supermarkets. Indeed, participants tended to mention only a few things that were more readily or regularly available to them. Only two of the participants were 100% organic consumers.

In general, participants acquired organic foods from a variety of outlets, including supermarkets such as Coles, health food shops, organic specialty shops, fruit and vegetable markets, farmers' markets, home delivery, box schemes and directly from local farms or friends. Some participants also grew some of their own vegetables. 'So it's basically whereever is available'. Most organic consumers tended to hunt around for organic food in different places, but some purchased only what was available at supermarkets (Coles or Bi-Lo). Since there appeared to be limited choice for organic consumers in Armidale, what was consumed was dictated by what was available.

> I find it really hard to access. If it were more readily accessible, that would be my choice for sure.

However, there were also other considerations (Table 5). For example, organic staple foods (flour, cereals, grains) were bought because they made up a major portion of food consumed and hence were expected to be most effective in terms of avoiding chemicals. Some participants bought certain organic products because of the amount of sprays that are required if conventionally produced. Bananas, broccoli, onions and soya products are some examples given. Some bought organic foods because they tasted better. For example, organic lettuce, tomatoes and carrots were said to have lot more flavor than their conventional counterparts.

For non-organic consumers, the foods that they would consider buying organic were: fresh fruit and

Table 5. Reasons given by participants for buying or not buying organic foods.

Reasons for buying	Reasons for not buying
Healthier	Availability
To reduce having health problems later	Inconvenience
To keep away chemicals	If it is not at where I normally shop, then it won't be on my list
To avoid growth hormones and antibiotics in meats	I am lazy and wouldn't go out of my way to go and chase an organic apple across the countryside
When they are on special	I am a convenience shopper with three children
To help poor organic farmers out there	Price
Avoid allergic reactions to chemicals	Not convinced about the benefits of organic or the risks of the non-organic
Taste and flavor	Extra cost and extra effort
Environmental concerns	It is not included in my decision making criteria
As a way of making a political statement (against multinationals)	Prefer something that is grown locally and how it is grown
I am young and idealistic, so I think it would be better (for the environment) if more farms were organic	They don't look impressive
	Small
	Not fresh
As I get older, I like it cleaner	It is not a realistic way to grow food
	Don't feel the need to since we've survived all this time

vegetables (because they felt they would be unprocessed and hence more likely to be truly organic, and because conventional strawberries and tomatoes for example, were perceived as huge but with no taste); staples (flour, rice, cereals, etc.); oils (because of how they are processed); eggs (for concern over animal welfare); chickens (because of the use of growth hormones and antibiotics); and meats (because of biomagnification of chemicals in the food chain).

> I think oil, I'd like to know more about organic oil, because I remember reading something about how oil is produced, and I think it's something like detergent that goes in it, to then extract the oil, and that concerned me, so I'd like to know more about organic oil, and would consider purchasing that. And strawberries and tomatoes, I'm sick of strawberries that are really big but have no taste [*several participants laugh*], and tomatoes that are huge but floury inside or don't have much pulp or juice. So if someone could produce good quality strawberries and tomatoes that are organic and don't have to be enormous, I would buy them.

By comparing the reasons given by organic consumers for buying organic foods with the reasons given by non-organic consumers for considering purchase of certain organic foods, it is clear that they are basically the same. That is, they are all concerned about the level or concentration of chemicals in the food, flavor and animal welfare. It is interesting that concern about the environment was mentioned only once as a reason for buying organic foods, although it was indicated several times as one of the food choice criteria.

> ... we grow vegetables at home and grow them organically, so yes I've had organic at home but I don't go and buy, or I don't seek out, I mean I might if I like the look of something buy it, but I do not seek out or choose to buy organic food. I don't particularly value it. And to me I can't see the demonstrated benefit enough for the cost of it. And I don't think it's a realistic way to grow because I do not think the society can be fed by growing organically. But I would prefer to grow my own farm and grow organically because I think it's healthier. I don't like to have pesticides. It's the pesticide issue rather than herbicides or fertilizer.

Most organic consumers indicated a strong preference to get everything organic, but often felt they could not do that because these goods were simply not available in Armidale, and when they could not get organic foods, they bought conventional food. They felt they needed to be practical and flexible. This highlights an important issue facing organic consumers in rural towns such as Armidale, i.e., the availability and the quality of organic foods. For an organic consumer, the amount of effort and time that is required to meet their daily needs is tremendous, and because of the lack of supply, substitution between organic and conventional products is frequent and often necessary.

> But just because, you don't want to go running around to a hundred different places, so I tend not to shop very much, and when I do, I just run around Coles and get as much as I can.

Given the demand on people's time in a modern society, it is not hard to see why some people believe that organic is better in many aspects, but are not organic consumers—they cannot afford to shop around. Lack of availability appears to be a main deterrent for further demand. During the discussions, it became clear that supply sources were

becoming even more limited with the disappearance of home delivery services, box schemes and closing of a local produce market. Supermarkets such as Coles, on the other hand, have increasingly stocked more organic food. For non-organic consumers, since they did not seek out organic products, they were hardly aware of any supply sources of organic produce.

Question 5. Do You Think There is a Price Differential Between Organic and Non-Organic Food? Is it Justified?

Most participants agreed there is a price differential between organic and non-organic food, but most of them did not know how much. Several reasons were given for the price differential: lower yields, extra costs associated with certification, small-scale production, labor intensive (because of strict production guidelines and difficulties in controlling pests and diseases without chemicals), higher risks and scarcity (Table 6). Most participants thought the price differential was justified since it cost more to grow organic food (Table 7).

> I think there is a price difference, not as much as it used to be 10 years ago. It used to be phenomenal when I consumed in Sydney. I think now, it's probably, to me it feels like about 15% difference, and I think it is justified because I think getting back to certification and guidelines and strict regime that is required to have your soil certified and have your production costs a little bit higher to meet that standard.

Others thought it was justified because they perceived organic food as healthier, more nutritious and more delicious. Some felt it was justified because they believed organic food was more ethical or environmentally sustainable. However, one participant pointed out that although the price differential might be justified, it did not

Table 6. Reasons given by participants for a price differential between organic and non-organic foods.

Scarcity
Cost of certification
Problems in controling pests and diseases without chemicals
Lower yields
Higher risks
Small-scale production
More labor intensive
More wastage if not spraying
Organic-grown chickens need more space
It costs more to get from producer to the market
Mark-ups by middlemen/shops
Extra packaging/wrapping

Table 7. Is the price differential justified?

Yes	No/not sure
Personal benefits	It preys on people's fears
For what you get per benefits that you get	Over-priced
It is more nutritious	Ripped-off by middlemen
It is better quality	Only a certain strata of society (the middle class) can afford it
It is good for the environment	Don't know
It is more ethical	Don't think that the regulation is strict enough
It is more delicious	I don't think it is sustainable, I think it is a boutique, fashionable industry
It is healthier	No one has proven to me that it is better for me
It makes you feel good for contributing to sustainability and not contributing to soil erosions	It is a marketing thing for more profits
Growers should be rewarded for hard work	We would not be able to feed ourselves
Reflection of real costs	
It is close to the real cost of production (considering hidden costs of soil degradation in conventional farming)	
Mass production of food is a false thing (lower cost but poor quality)	
It is cheap compared to processed, packaged or take-away food	
It is cheap if environmental and social benefits are factored into	
It is cheap compared to taking vitamin supplements	
Paying higher prices now may encourage supply and eventually lowering prices	
BUT only if the growers get it	
BUT I don't think many people would be willing to pay double or triple	
Only if we can prove that organic is indeed healthier and better for the environment	
It is justified but 200% more is just too much. It should not cost as much	

necessarily imply that people would be willing, or could afford, to pay more.

> I assume that there is, I'm not sure how much it is. I notice with eggs, free-range eggs really have got a huge premium on them compared to the battery hens but I'm willing to pay that kind of premium because I know, well just ethically I wouldn't want battery eggs. I think it is justified because I've known farmers who have grown organic and I know they're not getting rich, so whatever premium they can get is justified for them. On the other hand, it's up to me to decide whether or not I'm willing to pay.

> I don't think that many people, many farmers, take into full account the cost of producing whatever you want, a kilo of wool or a kilo of wheat. The full cost of the environment, of top soil degradation, of putting [*word missing here*] chemicals on, of somewhere where you've taken those chemicals out, you're digging up countries for super phosphate so you can apply it to your soil, that has to be taken into account in the farm price. So there is a price differential, from my experience. I would only probably pay maybe twenty to thirty percent, so I think you'd find it hard to sell much volume if there's that much price premium, double or triple, I don't think many people would be willing to pay that, but I think it's justified.

Some participants thought that organic foods were elitist and only the middle class could afford them. Others argued that organic products were actually cheaper compared to processed food or fast food. They also felt they were cheaper than conventional foods if sustainability and costs of soil degradation were taken into account. Others wanted proof.

> Is it justified? Yes, if we can prove, like I'm getting in my head organic and non-organic, if we can prove that organic means healthier, better for the environment, if we can prove that it's better on our landscape as against non-organic, of course it's justified. But that, I don't know if it's just a perception with me or whether it's real, that organic is, yes, healthier, better for the environment, that non-organic is actually doing this vast damage to the environment and it's doing bad things to me too, to people. Is it justified? I don't really know.

Another point of view is that price premiums, as a result of scarcity, might be necessary in the short term in order to encourage more production, and would eventually lead to lower prices, making it more affordable to more people. Another comment worth mentioning was that 'I'd like to see the government subsidise organic farmers, help them along, make it more accessible to people'.

Concluding Remarks

A focus group study was conducted in Armidale, NSW to investigate consumer attitudes and knowledge of organic food in rural Australia. The study consisted of four focus groups and five structured questions. A group of organic shoppers was compared to two groups of conventional shoppers and a group of gardeners. All the individuals in each group were asked to identify the most important characteristics of food when shopping, what 'organic' and 'organic certification' signified to them, whether and what kind of organics food they buy, whether they thought there was a price differential for organic foods, and if it were justified.

The overall results suggest that: (1) sensory appeal is the overriding factor in food choice; (2) there are different levels of awareness and understanding of 'organic' and 'organic certification' among participants; (3) the lack of availability of organic food in rural Australia is a limiting factor in demand; (4) concerns over dietary and health restrictions motivate many organic food buyers; (5) concerns about the level or concentration of chemicals, the environment and animal welfare, as well as taste, are the same motivations behind the consumption of organic foods by organic consumers and potential motivators for non-organic consumers; and (6) both organic and non-organic consumers believe the price premium for organic food is generally justified because of higher production costs, but the differential does restrict purchasing behavior. In addition, it appeared that the market for organic food in rural towns such as Armidale may remain limited, due mainly to its short growing season and long distance from major distribution centers in Sydney, Brisbane and Melbourne.

The same questions were used in a focus group study in the US[28]. The results revealed that sensory appeal was also the primary factor in food choice among US participants. However, there was generally more understanding of 'organic' and 'organic certification', especially among organic food shoppers. Lack of familiarity, especially for organic products other than fruits and vegetables, lack of trust in organic labels, and price were the primary barriers in purchasing organic foods among US participants. The motivations were similar among the US organic shoppers: diet, health, the environment and animal welfare. One issue that an all African-American focus group raised, which was not raised either in the Australian focus groups or by the other US focus groups, was social justice. In general, the US focus groups concurred with their Australian counterparts that a price premium is justified, although a few individuals among the US groups did not agree.

Expanding upon the Australian findings, the focus group discussions revealed that consumer preferences and food choices appear to be influenced by socio-demographic factors such as income, family structure, lifestyle, dietary restrictions (due to health problems or food allergies, or

whether they are vegetarians) and some social values and beliefs. Some of these results are consistent with previous findings[1,3,29,30].

The focus groups revealed that, while organic means 'free of chemicals', 'wholesomeness' and 'sustainability' to most participants, organic certification was not as familiar to the participants. While certification is understood to involve standards, guidelines, regulations and enforcement, there was not widespread understanding, even among organic shoppers, of the different certification marks and labels. Not having a unified logo clearly adds to the consumers' confusion and lack of interest.

In terms of availability, it is clear that organic consumers would like to buy as many organic products as possible, but they are often constrained by what is available in the market and the time required to hunt around for it. As such, it is often necessary to substitute conventional food for organic food or to grow one's own produce. The latter is not a viable option for most consumers.

In terms of the price differential that exists between organic and conventionally produced foods, most participants thought it is justified because organic farming means more work and lower yields, and many felt it was also more sustainable and more ethical. Many thought price premiums are also justified because they perceived organic products to be healthier, more nutritious and more delicious. Many participants were willing to pay for the price premiums associated with organic food. However, there were some reservations. For one thing, the higher price may be unaffordable to those on low incomes (such as students). Further, some suspected that organic food was overpriced due to unscrupulous middlemen.

The focus groups suggested some differences between organic and non-organic consumers. The main difference was the set of criteria they use in choosing food. In most cases, the list of criteria was much more extensive for organic consumers than for their conventional counterparts. Consistent with findings by other researchers[1–3,29,31,32], organic consumers tended to consider the effect of their food choice on personal health, the environment, animal welfare and other social issues, while non-organic consumers tend to focus more on sensory appeal (e.g., taste and appearance). Indeed, a few non-organic participants indicated that they would like to try some organic fruit and vegetables just to see whether they tasted better than conventional food. Moreover, availability was a main constraint to increasing consumption of organic food by those who purchased organic foods. Thompson and Kidwell[33] found store choice a main factor affecting organic purchases, but this was in a metropolitan area of the US where organic foods were widely available at health food stores and a food cooperative. As with Goldman and Clancy[34], price was not the main constraint for organic shoppers. However, price and negative attitudes were the main deterrents for non-organic consumers. These findings need to be validated using larger, random samples.

If these findings hold up in a larger sample, several policy implications could be drawn. First, given the generally low levels of consumer awareness and understanding of the meaning of organic, and especially organic certification, there is a need for consumer education and information. It is clear from the focus group discussions that the skepticism over organic farming and certification, and hence negative attitudes towards organic foods, is often a result of lack of knowledge. Education and information programs, if implemented, could try to address consumer concerns over: the level of guarantee, the level of packaging and processing, the distance of transport, the emergence of large corporate organic farms, the possibility of contamination from water, air and neighboring conventional farms, and the ability of organic farming to provide food security to a growing population. Many of these concerns were also identified by other resesarch[24,35].

Secondly, consumers do have different motivations in making food choices, and often these choices are competing or conflicting. For example, the participants identified that their desire to eat healthily often competes with their desire for convenience or flavor. For them, healthy food involved more preparation, while prepared or convenience foods were viewed as quick and tasty but not healthy. Marketers could find ways to resolve these conflicts facing consumers, with products that combine both convenience and healthy ingredients.

Thirdly, while availability is the main problem for organic consumers, price is a key obstacle preventing non-organic consumers from trying organic foods. Given that higher prices of organic food are attributable partly to small-scale production and limited supplies, increasing supply and improving supply-chain coordination appear to be the major challenges facing the Australian organic industry in its attempts to increase market size. However, more research is needed to address both the demand and supply side issues in the Australian organic market.

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