

## 1 **Appendixes**

### 2 **Appendix 1.** The respective organizations and job positions of the experts.

Organizations	Job positions	Number of respondents	Persons/educational backgrounds	Years of experience
University	Scholar	4	3 PhD in agronomy 1 PhD in plant protection	22–30
Government (Agricultural Ministry)	Expert	3	2 PhD and Master of Science in agronomy 1 PhD in extension research	15–22
Inspection body (certifier)	Expert	1	1 Master of Science in Agronomy	10
Organic Association of Iran	Expert	3	1 PhD in agronomy 2 Master of Science in organic farming and plant protection	10–20
Organic farmers	Farmer	5	3 high school and 2 diplomas	15–25
Total		16		

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### 5 **Appendix 2.** Variables and their sources (conceptual framework of the study).

Section	Variable	Source of variable	References
<b>Socio-demographic characteristics</b>	Age	Literature	Tsakiridou et al. (2006); Tung et al. (2012); Etuah et al. (2022)
	Gender	Literature	Tsakiridou et al. (2006); Tung et al. (2012); Etuah et al. (2022)
	Education	Literature	Tsakiridou et al. (2006); Tung et al. (2012); Etuah et al. (2022)
	Occupation of head of household	Literature	Tsakiridou et al. (2006); Tung et al. (2012); Etuah et al. (2022)

	Number of household members	Literature	Tsakiridou et al. (2006); Tung et al. (2012); Sriwaranun et al. (2015); Etuah et al. (2022); Ghazanfari et al. (2024)
	Number of children in the family	Literature	Loureiro et al. (2002); Tsakiridou et al. (2006); Freyer and Haberkorn (2008); Tung et al. (2012); Sriwaranun et al. (2015); Etuah et al. (2022)
	Place of residence/welfare level of consumers	Delphi	Tsakiridou et al. (2006); Tung et al. (2012); Sriwaranun et al. (2015); Etuah et al. (2022)
<b>Importance of food characteristics</b>	Appearance of food	Literature	Asioli et al. (2017)
	Place of production and company	Literature	Vehapi and Dolićanin (2016)
	Price	Literature	Sriwaranun et al. (2015); Vehapi and Dolićanin (2016)
	Ease of access	Literature/Delphi	Vehapi and Dolićanin (2016)
	Ingredients	Literature	Asioli et al. (2017)
	Artificial additives	Literature	Asioli et al. (2017)
<b>Use of organic food products in the past</b>		Literature/Delphi	Sriwaranun et al. (2015)
<b>Opinions on organic food production methods</b>	Use of chemical fertilizers	Literature	Bazoche et al. (2014); Asioli et al. (2017); Shahabi Ahangarkolaee and Gorton (2021)
	Organic foods are natural	Literature	Bazoche et al. (2014); Asioli et al. (2017)
	Use of genetic modification	Literature/Delphi	Shahabi Ahangarkolaee and Gorton (2021)
	Nutritional value of organic food	Literature	Shahabi Ahangarkolaee and Gorton (2021); Çakmakçı and Çakmakçı (2023)

	Use of preservatives in organic food	Literature	Bazoche et al. (2014); Asioli et al. (2017); Shahabi Ahangarkolaee and Gorton (2021)
	Use of manure in organic farming	Literature	Priya and Parameswari (2016); He (2020)
	Appearance of organic products	Literature	Bazoche et al. (2014)
	Labeling of organic products	Literature/Delphi	Bazoche et al. (2014); Vehapi and Dolićanin (2016); Asioli et al. (2017)
<b>Attitudes toward pesticides and fertilizers</b>	Environmental damage	Literature	Bazoche et al. (2014); Sana et al. (2018)
	Health effects of pesticides	Literature	Bazoche et al. (2014); Fathia et al. (2018); Shahabi Ahangarkolaee and Gorton (2021); Alam (2024)
	Government regulation/policies	Delphi/Literature	Baiyegunhi et al. (2018); Edalati et al. (2020); Shahabi Ahangarkolaee and Gorton (2021)
	Chemical residue concerns	Literature/Delphi	Bazoche et al. (2014)
	Farmers' standards	Delphi	—
	Environmental harm from conventional methods	Literature	Bazoche et al. (2014); Babajani et al. (2015); Sana et al. (2018)
<b>Awareness and attitudes toward organic products</b>	Taste and quality of organic food	Literature/Delphi	Haghjou et al. (2013); Bazoche et al. (2014); Sana et al. (2018); Shahabi Ahangarkolaee and Gorton (2021); Etuah et al. (2022)
	Organic farming and the environment	Literature	Haghjou et al. (2013); Baiyegunhi et al. (2018); Etuah et al. (2022);
	Trust in organic producers	Literature/Delphi	Baiyegunhi et al. (2018); Canova et al. (2020); Bernabéu et al. (2022);

			Firoozzare et al. (2024); Ghazanfari et al. (2024)
	Identification of organic products by consumers	Delphi	—
	Health of non-organic foods	Literature/Delphi	Fathia et al. (2018); Bernabéu et al. (2022)
	Availability of organic products	Literature/Delphi	Babajani et al. (2015); Vehapi and Dolićanin (2016); Sana et al. (2018)
Affordability	Price of organic products	Literature/Delphi	Loureiro et al. (2002); Sriwaranun et al. (2015); Vehapi and Dolićanin (2016)
	Affordability of organic products	Literature/Delphi	Sriwaranun et al. (2015); Vehapi and Dolićanin (2016)

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7 **Appendix 3.** The categorization of the well-being status of different districts in Tehran and the sample size of each region.

Regions	Zone numbers of each region	Number of households	Sample size	Percentage of the whole sample size
(a) Prosperous	1, 2, 3, 5, and 6	1,010,743	68	32%
(b) Fairly prosperous	4, 21, and 22	476,108	30	14%
(c) Moderately prosperous	7, 8, and 13	373,366	26	12%
(d) Less prosperous	9, 10, 11, 12, and 14	562,006	39	18%
(e) Deprived	15, 16, 17, 18, 19, and 20	767,757	51	24%
Total	22	3,189,982	214	100%

8 Source: Adapted from Kamal et al., 2019, with modifications. The table is created by the authors.

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10 **Appendix 4.** Demographic profile of the sample.

Characteristic	Subsets	Total frequency	Valid percentage
<b>Gender</b>	Female	84	39.4%
	Male	129	60.6%
<b>Age (years)</b>	Less than 25	64	31.2%
	26–35	55	26.8%
	36–55	62	30.3%
	Over 55	24	11.7%
<b>Education level</b>	Illiterate and primary school	23	10.7%
	High school, diploma, and associate degree	87	40.7%
	Bachelor's and master's degrees	92	43%
	Doctorate and PhD	12	5.6%
<b>Occupation</b>	Homemaker	35	16.7%
	Self-employed	64	30.5%
	Government employee/official	60	28.6%
	Educator	18	8.6%
	Student	12	5.7%
	Worker	2	1%
	Doctor	2	0.9%
	Retired	15	7.1%
	Scientist/faculty member	1	0.5%

	Farmer	1	0.4%
	Total	210	100%
Household size (persons)	1–3	66	31.1%
	4–6	139	65.6%
	Over 7 persons	7	3.3%
Household income groups (\$1 = 690,000 IRR, during November 2024)	Less than \$232	48	22.4%
	\$232–\$362	129	60.3%
	More than \$362	37	17.3%
Number of children below 15 years old	0	100	49.2%
	1–2	97	47.8%
	3 and more	6	3%
	Total	214	100%

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## 15 Appendix 5. The questionnaire for the survey

16 Dear Citizen,

17 Greetings! This questionnaire is designed to explore the opinions of citizens and the status of organic food consumption.

18 Please note that the information provided in the questionnaires will be kept confidential by the researcher, and the  
19 responses will be reviewed anonymously and collectively. The respondents' information will not be published. We thank  
20 you in advance for your cooperation.

21 The research team

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### 23 A- Personal Information:

24 1. Age: .... years

25 2. Gender:

- 26 1) Female ☐
- 27 2) Male ☐
- 28 3. Education:
- 29 1) Illiterate ☐
- 30 2) Primary school ☐
- 31 3) High school and Diploma ☐
- 32 4) Associate Degree ☐
- 33 5) Bachelor's Degree ☐
- 34 6) Master's Degree ☐
- 35 7) Doctorate ☐

- 36 4. Occupation of the Head of Household:
- 37 1) Homemaker ☐
- 38 2) Self-employed ☐
- 39 3) Government Employee ☐
- 40 4) Educator ☐
- 41 5) Student ☐
- 42 6) Worker ☐
- 43 7) Doctor ☐
- 44 8) Other: Occupation .....

- 45 5. Number of household members: .... persons
- 46 6. Number of children under 15 in the household: .... persons
- 47 7. Place of residence: Area ....., Tehran

48 B- Attitudes

- 49 8. How important are the following characteristics to you when purchasing food products?

Food Characteristics	Importance Level
1. Appearance of food (taste, smell, color, freshness)	0) Unimportant <input type="checkbox"/> 1) Slightly Important <input type="checkbox"/> 2) Moderately Important <input type="checkbox"/> 3) Important <input type="checkbox"/> 4) Very Important <input type="checkbox"/>
2. Place of production and company	0) Unimportant <input type="checkbox"/> 1) Slightly Important <input type="checkbox"/> 2) Moderately Important <input type="checkbox"/> 3) Important <input type="checkbox"/> 4) Very Important <input type="checkbox"/>
3. Price	0) Unimportant <input type="checkbox"/> 1) Slightly Important <input type="checkbox"/> 2) Moderately Important <input type="checkbox"/> 3) Important <input type="checkbox"/> 4) Very Important <input type="checkbox"/>
4. Ease of access	0) Unimportant <input type="checkbox"/> 1) Slightly Important <input type="checkbox"/> 2) Moderately Important <input type="checkbox"/> 3) Important <input type="checkbox"/> 4) Very Important <input type="checkbox"/>

Food Characteristics	Importance Level
5. Ingredients (fat, sugar, salt, etc.)	0) Unimportant <input type="checkbox"/> 1) Slightly Important <input type="checkbox"/> 2) Moderately Important <input type="checkbox"/> 3) Important <input type="checkbox"/> 4) Very Important <input type="checkbox"/>
6. Artificial colors, preservatives, and chemical residues	0) Unimportant <input type="checkbox"/> 1) Slightly Important <input type="checkbox"/> 2) Moderately Important <input type="checkbox"/> 3) Important <input type="checkbox"/> 4) Very Important <input type="checkbox"/>

50 9. Have you ever used organic food products?

51 1) I don't know what organic products are ☐

52 2) No ☐

53 3) Yes ☐ How many times? ...

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55 10. In your opinion, how are organic agricultural products produced? (Please write only your own opinions without  
56 help from others.)

Statements	Yes <input type="checkbox"/>	No <input type="checkbox"/>	I don't know <input type="checkbox"/>
1) Chemical fertilizers and pesticides are used to produce organic food.			
2) Organic foods are not natural products.			
3) Genetic modification is used in the production of organic food.			
4) Organic foods have higher nutritional value than regular foods.			
5) Organic foods do not contain preservatives.			
6) Human or animal manure is used in organic farming.			
7) Organic products do not differ in appearance from regular products.			
8) Organic products in Iran have a specific label or mark.			

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58 11. What is your opinion about pesticides and chemical fertilizers?

Statements	Agree <input type="checkbox"/>	Somewhat Agree <input type="checkbox"/>	Disagree <input type="checkbox"/>	No Opinion <input type="checkbox"/>
1) Fertilizers and pesticides damage the environment.				
2) Fertilizers and pesticides used in agriculture are harmless to human health.				
3) Authorities and government organizations ensure that pesticides and chemical fertilizers are used appropriately.				
4) Residues of pesticides and chemical fertilizers are not strong enough to cause disease in humans.				
5) Ordinary farmers follow necessary standards when using chemical fertilizers and pesticides.				
6) The production of food products using current conventional methods does not harm the environment.				

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60 12. What is your opinion about organic products?

Statements	Agree <input type="checkbox"/>	Somewhat Agree <input type="checkbox"/>	Disagree <input type="checkbox"/>	No Opinion <input type="checkbox"/>
1) Organic foods have better taste and quality compared to non-organic foods.				
2) Organic farming methods are better for the environment than conventional methods.				



3) I trust organic food producers.				
4) I can identify organic agricultural and food products.				
5) Non-organic foods are as healthy as organic foods.				
6) Organic foods are sufficiently available in my neighborhood and the stores where I shop.				
7) Organic foods are more expensive than regular products.				
8) I cannot afford to buy organic products.				

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13. I am willing to pay .... percent more for organic products compared to regular products.

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14. What problems and solutions do you think exist for citizens' access to organic food products? And what is your suggestions for policymakers?

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