



Grade 12 Consumer Studies
Graad 12 Verbruikerstudies

Die graad 12's moet die toets oopboek beantwoord en indien moontlik na Mev Schmid epos by heidi@roodie.co.za. Indien dit nie moontlik is om te epos nie kan die toets ingehandig word sodra die Graad 12 leerders terugkeer skool toe.

Grade 12 learners need to complete the test as an open book assessment. If possible, the answers should be emailed to Ms Schmid at: heidi@roodie.co.za. If it is not possible to email, the test can be handed in on the day that Grade 12 learners return to school.

CONSUMER STUDIES



GRADE 12 TEST 2020

TERM 2

MARKS: 60
Examiner: H Schmid

TIME: 1 HOUR

INSTRUCTIONS

This test consists of TWO questions.

QUESTION	CONTENT	MARKS	TIME (MINUTES)
1	Short questions	20	10
2	Food and Nutrition	40	50
TOTAL		60	60

1. All the questions are **COMPULSORY** and must be answered.
2. Number the answers correctly according to the numbering system used in this question paper.
3. You may use a calculator.
4. Write with blue ink only.
5. Pay attention to spelling and sentence construction.
6. Write neatly and legibly.
7. Paper consists of 5 pages.

QUESTION 1: SHORT QUESTIONS

Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A-D) next to the question number in the ANSWER BOOK

- 1.1 A suitable choice of breakfast for a person suffering from celiac disease:
- | | | | |
|---|----------------|---|-------------|
| A | Maize porridge | B | Oats |
| C | Weet-bix | D | Tasty-wheat |
- 1.2 A lack of ... causes a dairy intolerance.
- | | | | |
|---|---------|---|---------|
| A | Lactose | B | Lactase |
| C | Glucose | D | Enzymes |
- 1.3 Which one of the following minerals is an anti-oxidant?
- | | | | |
|---|--------|---|----------|
| A | Iron | B | Selenium |
| C | Iodine | D | Calcium |
- 1.4 An advantage of genetically modified food.
- | | | | |
|---|---------------------------------|---|----------------------------|
| A | The yield is bigger and cheaper | B | Pollution is minimized |
| C | More job opportunities | D | Better for the environment |
- (4)
- 1.5 Give one word/term for the following descriptions. Write only the correct term/word next to the question number on your answer sheet.
- 1.5.1 The hormone that stimulates the enzymes in muscle and fat tissue to remove sugar from the blood or to break down glucose for energy. (1)
- 1.5.2 Abnormal reactions of the immune system to substances that are normally harmless, such as peanuts. (1)
- 1.5.3 A medical condition in which bile pigments in the blood cause yellowing of the whites of the eyes, skin and mucous membranes. (1)
- 1.5.4 A soft waxy substance which is produced in the liver and body cells. (1)
- 1.5.5 Access by all people in all times to enough food for a healthy, active life. (1)
- 1.6 From the list below choose THREE food items that will help prevent and manage osteoporosis.
- | | |
|---|------------------------|
| A | Yogurt |
| B | Appels |
| C | Sardines |
| D | Liver |
| E | Citrus fruits |
| F | Green leafy vegetables |
- (3)

1.7 Match the food related illness in Column A with the Symptom in Column B and choose the method that it is transferred from one person to another in Column C. (8)

(Example: 1.7.6 F VI)

COLUMN A FOOD RELATED DISEASE	COLUMN B SYMPTOM	COLUMN C TRANSFER
1.7.1 Hepatitis A	A fever, three or more loose stools, cramps and nausea	i) Is mainly transferred through eating infected food like unpasteurised milk.
1.7.2 Tuberculosis	B dark urine, fever, vomiting and tiredness	ii) Is transmitted through the contact with faecal matter of an infected person.
1.7.3 Dysentery	C coughing which produces mucus, the vomiting of blood	iii) Is transferred in the air and people breath in the bacteria.
1.7.4 E-coli infection	D watery diarrhoea that sometimes contains blood.	iv) When an unimmunized person eats or drinks something that is contaminated by the virus.

[20]

QUESTION 2: FOOD AND NUTRITION

2.1 Describe the term organic food. (2)

2.2 Explain the difference between a person suffering from anorexia nervosa and a person suffering from bulimia. (2)

2.3 Your friend suffers from high cholesterol, give him advice on how to adapt his lifestyle and diet to manage this disease. (6)

2.4 Study the following food information on a label of breakfast cereal and answer the questions that follow:

	Breakfast A per 100g	Breakfast B per 100g
Energy (kj)	1600	1450
Protein (g)	8.0	12.0
Total fat (g)	1.6	1.2
Saturated fat (g)	1.1	0.2
Unsaturated fat (g)	0.5	1.0
Dietary fibre (g)	6	13
Total salt (g)	550	400
Vitamin B12 (mcg)	1.2	0.60
Vitamin C (mg)	52	40
Iron (mg)	12	6

2.4.1 Describe the food related health condition hypertension. (2)

2.4.2 Choose the breakfast that will be most suitable for a person with hypertension and give a reason for your answer. (2)

2.4.3 Choose the breakfast which will be most suitable for a person suffering from Anaemia and give a reason for your answer. (3)

2.5 Some food containing grain has the following symbol on it's packaging.



2.5.1 Define the term Glycaemic index (GI). (2)

2.5.2 Explain the difference between high GI and low GH foods and give an example of each. (4)

2.5.3 Diabetics are advised to follow a low GI diet, explain why and name TWO advantages of a low GI diet. (4)

2.6 Read the following extract of an article published on the News 24 website:

Implicated food additives;

According to a statement by the Food Standard Agency in Britain parents are warned not to give the following colourants to their children.

- Sunset yellow (E110)
- Quinoline yellow(E104)
- Carmoisine (E122)
- Allura red (E129)
- Tartrazine (E102)
- Ponceau (E124)

Plus the preservative:

- Sodium benzoate

<https://www.health24.com/Diet-and-nutrition/Nutrition-basics/Should-food-additives-be->

2.6.1 Explain the purpose of food additives. (2)

2.6.2 What is Sodium benzoate used for? (1)

2.6.3 When food contains Tartrazine the letters should be displayed in 4mm high letters on the packaging. What is tartrazine and why would it be necessary for you to know if a product contains it. (3)

2.6.4 Why is the letter E added to each food additive number? (2)

2.7 What is radiated food and which advantages does it hold for the natural and economic environment? (5)

[40]

TEST TOTAL: 60 MARKS

VERBRUIKERSTUDIES



GRAAD 12 TOETS KWARTAAL 2 2020

PUNTE: 60

TYD: 1 UUR

EKSAMINATOR: H Schmid

INSTRUKSIES

Hierdie toets bestaan uit 2 vrae.

VRAAG	INHOUD	PUNTE	TYD (MINUTE)
1	Kort vrae	20	10
2	Voedsel en voeding	40	50
TOTAAL		60	60

1. Al die vrae is VERPLIGTEND en moet beantwoord word.
2. Nommer die antwoorde korrek volgens die nommeringstelsel wat in hierdie vraestel gebruik word.
3. Jy mag 'n sakrekenaar gebruik.
4. Skryf slegs in swart of blou-ink.
5. Gee aandag aan spelling en sinskontruksie.
6. Skryf netjies en leesbaar.
7. Hierdie vraestel bestaan uit 5 bladsye

VRAAG 1: KORT VRAE

Verskeie moontlike antwoorde word gegee op die volgende vrae. Kies slegs die korrekte antwoord en skryf dit langs die vraagnommer in jou ANTWOORDBOEK neer.

1.1 ń Geskikte keuse vir ontbyt vir ń persoon wat aan seliaksiekte ly:

- | | | | |
|---|-----------|---|-------------|
| A | Mieliepap | B | Hawermout |
| C | Weet-bix | D | Tasty-wheat |

1.2 ń Tekort aan ... veroorsaak suiwelintoleransie.

- | | | | |
|---|---------|---|---------|
| A | Laktose | B | Laktase |
| C | Glukose | D | Ensieme |

1.3 Watter een van die volgende minerale is ń antioksidant?

- | | | | |
|---|--------|---|----------|
| A | Yster | B | Selenium |
| C | Jodium | D | Kalsium |

1.4 ń Voordeel van geneties-gemodifiseerde voedsel.

- | | | | |
|---|--------------------------------|---|----------------------------|
| A | Groter opbrengste en goedkoper | B | Besoedeling word verminder |
| C | Meer werkseleenthede | D | Beter vir die omgewing |

1.5 Gee een woord/term vir die volgende beskrywings. Skryf slegs die korrekte woord/term langs die vraag nommer neer.

- 1.5.1 Die hormoon wat die ensieme in spiere en vetweefsel stimuleer om suiker uit bloed te verwyder of glukose af te breek vir energie. (1)
- 1.5.2 Abnormale reaksies van die immuunstelsel op ń tipe stof wat normaalweg skadeloos is soos neutre. (1)
- 1.5.3 ń Mediese toestand waarin galpigmente in die bloed veroorsaak dat die wit van die oë, vel en slymvliese geel raak. (1)
- 1.5.4 ń Sagte wasagtige stof wat in die lewer en liggaamselle geproduseer word. (1)
- 1.5.5 Toegang deur alle mense te alle tye tot genoeg voedsel vir ń aktiewe, gesonde lewe (1)

1.6 Van die lys hieronder kies DRIE voedselitems wat osteoporose sal help voorkom en bestuur. (3)

- | | |
|---|----------------------|
| A | Jogurt |
| B | Appels |
| C | Sardiens |
| D | Lewer |
| E | Sitrus vrugte |
| F | Groen blaar groentes |

- 1.7 Pas die voedselverwante siektes in Kolom A by die Simptoom in Kolom B en kies die manier van hoe dit oorgedra word in Kolom C. (8)
(Voorbeeld: 1.7.6 F VI)

KOLOM A VOEDSELVERWANTE SIEKTE	KOLOM B SIMPTOOM	KOLOM C OORDRAG
1.7.1 Hepatitis	A koors, drie of meer los stoelgange, krampe, naarheid	i) Word hoofsaaklik oorgedra deur die eet van besmette voedsel, soos ongepasteuriseerde melk.
1.7.2 Tuberkulose	B donker urine, koors, vomering, moegheid	ii) Word oorgedra deur kontak met die ontlasting van 'n besmette persoon.
1.7.3 Disenterie	C hoes wat mukus voortbring, die opbring van bloed	iii) Word deur die lug versprei en mense asem die bakterie in.
1.7.4 E-coli infeksie	D sere in die ingewande wat stoelgang bloederig maak	iv) Wanneer 'n ongeïmmuniseerde persoon iets eet of drink wat deur die uitskeiding van 'n persoon wat die ontsteking het, besmet is.

[20]

VRAAG 2: VOEDSEL EN VOEDING

- 2.1 Beskryf die term organiese voedsel. (2)
- 2.2 Verduidelik die verskil tussen iemand wat aan anorexia nervosa ly en iemand wat aan bulimia ly. (2)
- 2.3 Jou vriend ly aan hoë cholesterol, gee hom advies oor hoe hy sy leefwyse en dieet moet aanpas om dit te kan bestuur. (6)
- 2.4 Bestudeer die volgende tipiese voedselinligting op die etikette van die volgende ontbytgrane, beantwoord dan die vrae wat volg:

	Ontbytgraan A per 100g	Ontbytgraan B per 100g
Energie (kj)	1600	1450
Proteïen (g)	8.0	12.0
Totale vet (g)	1.6	1.2
Versadigde vet (g)	1.1	0.2
Mono-onversadigde vet (g)	0.5	1.0
Dieetvesel (g)	6	13
Totale sout (g)	550	400
Vitamiën B12 (mcg)	1.2	0.60
Vitamiën C (mg)	52	40
Yster (mg)	12	6

- 2.4.1 Beskryf die voedselverwante gesondheidstoestand hipertensie. (2)
- 2.4.2 Kies die ontbytgraan wat die beste sal wees vir 'n persoon wat aan hipertensie ly en gee 'n rede vir jou antwoord. (2)

2.4.3 Kies die ontbytgraan wat die beste sal wees vir 'n persoon wat ly aan bloedarmoede en gee 'n rede vir jou antwoord. (3)

2.5 Sommige graan voedsel bevat deesdae 'n GI simbool soos hieronder.



2.5.1 Definieer die term Glukemiese indeks (GI) (2)

2.5.2 Verduidelik die verskil tussen hoë GI en lae GI voedsel en gee een voorbeeld van elk. (4)

2.5.3 Diabete word geadviseer om 'n lae GI dieet te volg, verduidelik waarom en noem TWEE voordele van 'n lae GI eetplan. (4)

2.6 Lees die volgende uittreksel van 'n artikel gepubliseer op Nuus 24 se webtuiste:

Geimpliseerde voedselbymiddels:

Volgens 'n verklaring uitgereik deur die Voedsel Standaard Agentskap in Britanje, word ouers gewaarsku om nie voedsel wat die volgende kleurmiddels bevat vir hulle kinders te gee nie.

- Sonsak geel (E110)
- Quinoline geel(E104)
- Carmoisine (E122)
- Allura rooi (E129)
- Tartrasien (E102)
- Ponceau (E124)

Plus die preserveermiddel:

- Bensoëuur

<https://www.health24.com/Diet-and-nutrition/Nutrition-basics/Should-food-additives-be->

2.6.1 Verduidelik die doel van voedselbymiddels. (2)

2.6.2 Waarvoor word bensoëuur en natriumbensoaat gebruik? (1)

2.6.3 Wanneer produkte tartrasien bevat moet die bestanddeel in 4mm hoë letters aangedui word. Wat is tartrasien en waarom sal dit nodig vir jou wees om te weet of 'n produk dit bevat. (3)

2.6.4 Waarom voeg hulle die letter E vooran elke voedselbymiddel nommer? (2)

2.7 Wat is bestraalde voedsel en watter voordele hou dit vir die natuurlike en ekonomiese omgewing in? (5)

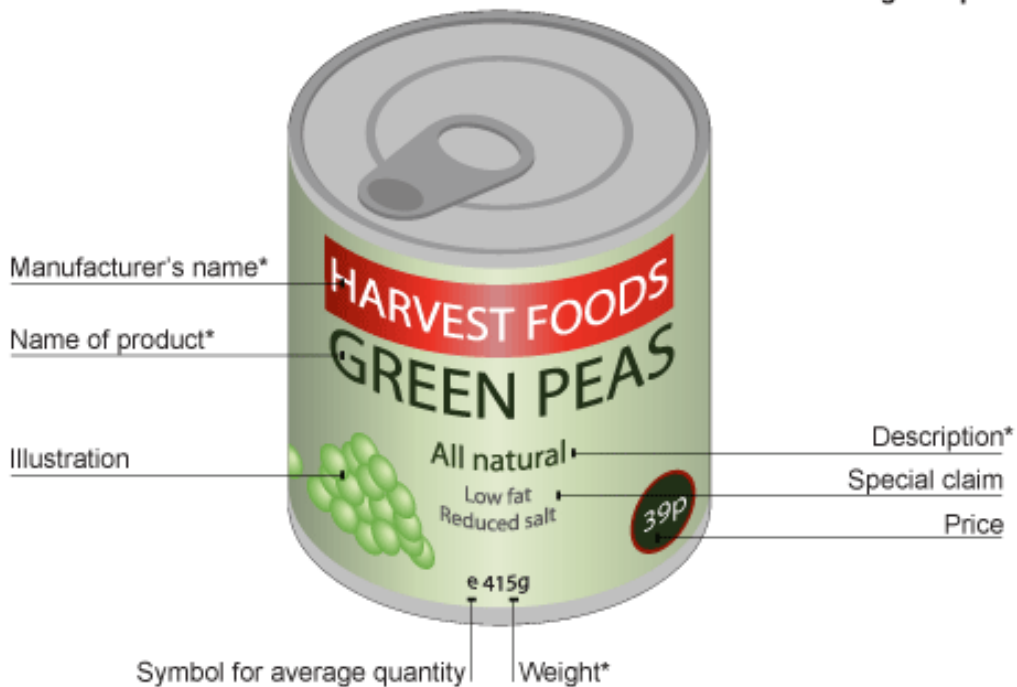
[40]

TOETS TOTAAL: 60 PUNTE

Food labelling

BASIC INFORMATION REQUIRED ON A FOOD LABEL

* These are a legal requirement



- Name of product
- Description of product
- Manufacturer's name and contact details
- Picture of product on label
- Net content/ weight of product (bread is exempt)
- Ingredients (listed in descending order of weight)
- Cooking/heating instructions
- Storage instructions
- Place of origin
- Allergy information
- Manufacturing date
- Use-by/ best-by dates

INTERPRETATION OF FOOD LABELS

NAME OF PRODUCT:

- ❖ Not misleading
- ❖ Accurate
- ❖ Describe category e.g. baby food
- ❖ Easy to read
- ❖ More than 4mm in height



NUTRITIONAL INFORMATION

Allows consumers to compare products

Typical values	100g contains	Each slice (typically 44g) contains	% RI*	RI* for an average adult
Energy	985kJ 235kcal	435kJ 105kcal	5%	8400kJ 2000kcal
Fat	1.5g	0.7g	1%	70g
of which saturates	0.3g	0.1g	1%	20g
Carbohydrate	45.5g	20.0g		
of which sugars	3.8g	1.7g	2%	90g
Fibre	2.8g	1.2g		
Protein	7.7g	3.4g		
Salt	1.0g	0.4g	7%	6g

This pack contains 16 servings
 *Reference intake of an average adult (8400kJ / 2000kcal)

LIST OF INGREDIENTS

- Listed in descending order of mass
- Added water should be listed
- Flavourings, colouring and preservatives should be listed
- If in a very small packet, or if a fruit or vegetable, an ingredients list is not necessary



ADDITIVES

- Must be listed on label
- Colourants must be listed with E numbers
- Preservatives or curing agents are listed by chemical names, preceded by the word “preservatives”
- Anti-oxidants must be shown
- Additive which could cause food allergens must be identified.

INSTRUCTIONS FOR STORAGE AND USE

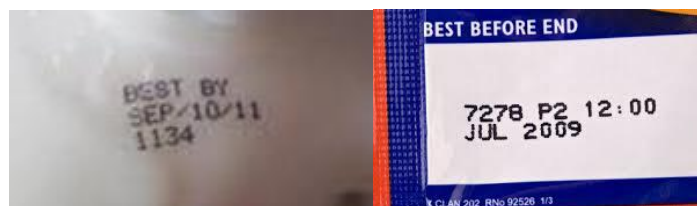
- Preparation, cooking, heating and serving instructions should be given.
- Specific storage instructions e.g. keep in a refrigerator once opened
- These instructions should be near use-by date to ensure quality of product.

DATE MARKING

- **Best-before:** indicates the length of time a product may be kept before used.
- **Sell-by-date:** last date on which a product should be offered for sale.
- **Use-by-date:** the product is not marketable after this date

Found on perishable foods e.g. milk

May not be safe to eat after this date



NUTRITIONAL CONTENT CLAIMS

- Conditions prescribed in Act.
- Food must be analysed in an accredited laboratory
- Example:

Component	Claim	Conditions
Alcohol	Non-alcoholic	0.5% by volume
Sodium	Low Very low Virtually free of	120 mg NA per 100g 40 mg per 100g 5 mg per 100g

MISLEADING NUTRIENT CLAIMS ON FOOD LABELS

LABELLING LEGISLATION

New regulations on 1 March 2012

Food labels fall under the following:

Regulations Relating to the Labelling and Advertising of Foodstuffs, No. R 146 of the Foodstuffs, Cosmetics and Disinfectants Act 1972

AIM:

- ✓ Standard form on labels
- ✓ Descriptions may not be misleading
- ✓ All claims must be supported by nutritional information
- ✓ Additives and allergens must be clearly stated

EXAMPLES OF MISLEADING CLAIMS

- If words like “fresh”, “home-made” are used on label – must comply with stipulated criteria
- If product was frozen and then thawed – must have “previously frozen” on label
- All listed information on label must be true. If labelled as “low energy” product must meet certain requirements e.g. 170 kJ per 100g
- No negative claims on labels e.g. A plant oil which does not contain cholesterol may not state “cholesterol free”
- “no sugar added” – product still contains fructose
- Words such as “reduced”, “lite” may not be used when referring to total fat, cholesterol, sugar or salt



GENETICALLY MODIFIED FOODS



WHAT ARE GENETICALLY MODIFIED FOODS?

It is food which is developed using genetic manipulation of DNA (genes) to produce a product that has been changed in some way from the original organism.

PURPOSE OF GENETIC ENGINEERING

Product has:

- greater-resistance to disease
- better flavour
- better colour
- bigger size
- longer shelf life

ADVANTAGES OF GM FOODS

- Crops are modified to become resistant to pests.
- Fewer pesticides need to be sprayed on crops
- Some modified so that they are resistant to weed-killing chemicals
- Crops may have an increased resistance to disease, drought.
- The crop yields are greater and more people can be fed.
- Production costs may be lower.
- Crops have a longer shelf-life with better processing and manufacturing properties
- GM foods are cheaper and more plentiful
- Crops may have an improved flavour, appearance and texture.

DISADVANTAGES OF GM FOODS

- It is unclear what happens to the genes inserted into the organism.
- Not know the influence on the environment e.g. the soil in which it is grown.
- No evidence of what will happen if cross-pollination occurs
- Can cause animal to grow bigger and faster so they can be slaughtered sooner. This is unethical.

CONCERNS RELATING TO GM FOODS

- No specific data proving that GM food are harmless
- A lot of confusion about the labelling of GM foods exists
- Very few labels show GMO's so consumers cannot make fully informed choices.
- People with allergies may be affected especially people allergic to soya and peanuts
- As the process of manipulation is new, safety issues such as toxicity of foods, allergic reactions need to be studied



IMPACT ON THE ENVIRONMENT

- GM foods provide better yields, quality products. More food will be provided for those who need it.
- People are concerned about the effect of the manipulation on the soil, animals involved and how these changes will be transmitted to humans by the food they eat.
- People feel strongly that we should not tamper with nature. They object to the transferring of genes of animal or human origin to other animal and plant species.
- Without any proof most consumers believe it is safe to eat GM foods and buy GM foods



ORGANIC FOODS



WHAT ARE ORGANIC FOODS:

- ▶ Organic refers to **the way** farmers grow or raise and process agricultural products, such as fruit, vegetables, cereals, dairy products and meat.
- ▶ Organic food is produced without artificial fertilisers, pesticides and herbicides
- ▶ Goal is to protect the environment

DIFFERENCES BETWEEN ORGANIC AND INORGANIC FARMING METHODS

Inorganic farming methods

- ▶ Inorganic methods make use of chemicals in fertilisers and insecticides.
- ▶ Produce toxins which destroy trace elements and minerals in the soil.
- ▶ They are also harmful to the human immune system and pollute the water supply.

Organic farming methods

- ▶ Organic farming does not use synthetic fertilisers, pesticides or hormones.
- ▶ It uses crop rotation and the use of recycled organic materials such as compost.
- ▶ Natural pesticides are used to protect the environment and concentrate on the sustainable use of resources

WHAT ENABLES A FARM TO BE ORGANIC?

- ▶ Farm must be certified.
- ▶ Farms are inspected over a 3 year period
- ▶ Crop rotation must be practised
- ▶ Only approved fertilisers and pesticides may be used

CHARACTERISTICS OF ORGANICALLY PRODUCED FOODS:

- ▶ Not genetically modified
- ▶ Free of harmful chemicals and pesticides.
- ▶ Free of unnatural hormones and growth stimulants
- ▶ Has more flavour than other fruit and vegetables



ADVANTAGES OF ORGANIC FOODS

- ▶ Less fuel is used – don't contribute to pollution
- ▶ Waste products such as manure are used and ploughed back into the soil enriching the nitrogen content
- ▶ Healthier
- ▶ Free-range and organically farmed animals are treated more humanely
- ▶ Animals roam freely and fed a natural diet.
- ▶ Organic animals are not treated with hormones or anti-biotics
- ▶ More farm workers are needed so more jobs are created.

DISADVANTAGES OF ORGANICALLY PRODUCED FOODS

- ▶ Products are more expensive as the farming methods are labour intensive.
- ▶ Fruit has more blemishes but a better taste
- ▶ More likely to have mould grow on fruit and vegetables. Mould could produce toxins which are dangerous. Food must be washed thoroughly.
- ▶ Not sufficient organic food produced in S.A so imported.
- ▶ Shelf life shorter as no preservatives are used
- ▶ Organic farming is expensive

IMPACT ON THE NATURAL AND ECONOMIC ENVIRONMENT

- ▶ Improves soil quality and protects the water supply
- ▶ Yields are lower from organic farms and they need more land to grow same amount of food as non-organic farms.
- ▶ Organic pesticides require careful handling
- ▶ Copper sulphate (permitted organic pesticide) is toxic to earthworms
- ▶ Mechanical methods of weed control lead to greater energy use.

REMEMBER THE FOLLOWING:

Organic products are not treated with preservatives and therefore have a shorter shelf life.

Buy from a reputable supplier and buy fruit and vegetables with as few blemishes as possible. Always read the label. Natural is not organic. Wash all organic products carefully before eating.