Quinoa

1 Before reading the text, match these words with their definitions.

1. Side-dish ☐
2. Celiac disease ☐
3. Labelled ☐
4. Reading ☐
5. Cultivars ☐
6. Cross-contamination ☐
7. Facilities ☐
8. Concern ☐
9. Storage ☐
10. To mimic ☐

a. A measurement indicated by a gauge, dial, scientific instrument, etc.
b. A variety of a plant that was produced from a natural species and is maintained by cultivation.
c. A dish served as an accompaniment to the main course.
d. Medical condition in which the absorptive surface of the small intestine is damaged by a substance called gluten.
e. A feeling of worry.
f. Described or classified in a word or phrase.
g. Direct or indirect transfer of bacteria, microorganisms or harmful substances.
h. Building or equipment used for a specific purpose.
i. To imitate.
j. The act of setting aside or accumulating for future use.

2 Put the correct words from the table below in the following text.

Is quinoa really "gluten-free"?

Quinoa is not a grain like wheat, rye or barley, therefore, by definition, it does not contain gluten. Instead, this seed is actually a closer relative of spinach, amaranth and rhubarb, and is a commonly used staple crop in South America, specifically grown in the Andes, where it has been grown **1.** ..... over 5,000 years.

The nutritional composition of this seed **2.** ..... it an attractive alternative to wheat, rye or barley; in fact, the proteins in quinoa actually have a more balanced range of amino acids and include all the essential amino acids required for human nutrition. Quinoa has a favourable protein content, contains a number of minerals and B-vitamin, makes a great, mild-tasting side-dish, and offers fibre, folic acid and minerals often **3.** ..... in other gluten-free foods **4.** ..... are a critical part of the diet of people with celiac.

The gluten protein in grains is a complex mixture of **5.** ..... 100 closely-related proteins, and these proteins differ between wheat varieties. When gluten is consumed and digested in the stomach and small intestine, many small peptide fragments are created. Some of these peptides activate the innate immune system, and some of **6.** ..... activate the adaptive immune system, which results in celiac disease. Diagnostic tests estimate the amount of all these proteins and peptides in the food, therefore a product can be labelled as "gluten-free" only if it has no more than 20 parts **7.** ..... million of gluten.

Technically speaking, quinoa is gluten free: tests show that it typically gives a very low reading for gluten levels. However, tests for gluten may not always accurately predict the safety of a food product for celiacs.

A research study, investigating the immune properties of 15 different cultivars of quinoa, confirmed the lack of gluten, but **8.** ..... that two varieties had unexpectedly high levels of immune reactivity on celiac disease cells, comparable to the levels found in wheat.

9. ....., apart from the risk of cross-contamination with wheat, barley or rye – as the processing of quinoa is often performed in facilities that also process other grains – the major concern is about gluten-like storage proteins present in quinoa, which can mimic proteins found in wheat.

The obvious question is: are these storage proteins sufficiently similar to traditional glutens **10.** ..... they could cause an immune reaction in celiac patients or in patients with other forms of gluten sensitivity? According to new research, unfortunately the answer is yes…

The Green Planet - Copyright © EDISCO Editrice - Vietata la vendita e la diffusione

1.	**a.** from	**b.** for	**c.** since
2.	**a.** allows	**b.** does	**c.** makes
3.	**a.** lacking	**b.** lacked	**c.** lacks
4.	**a.** that	**b.** who	**c.** whom
5.	**a.** above	**b.** below	**c.** over
6.	**a.** this	**b.** them	**c.** their
7.	**a.** per	**b.** for	**c.** by
8.	**a.** finded	**b.** find	**c.** found
9.	**a.** Therefore	**b.** However	**c.** Nevertheless
10.	**a.** what	**b.** which	**c.** that

3 Read the text again and say if these sentences are true or false. Correct the false ones.

	T	F
a. Quinoa is a grain like barley.	☐	☐
b. Quinoa contains gluten.	☐	☐
c. Andine people have used quinoa for centuries.	☐	☐
d. Compared to wheat, quinoa's nutrients are poorer.	☐	☐
e. Proteins, minerals and B-vitamin are present in quinoa.	☐	☐
f. A diet for celiacs is poor in fibre, folic acid and minerals.	☐	☐
g. A "gluten-free" product contains less than 20 parts per million of gluten.	☐	☐
h. Tests for gluten always predict the safety of a food product for celiac disease.	☐	☐
i. There are some gluten-like storage proteins in quinoa.	☐	☐

4 Answer the questions.

a. Why does quinoa contain no gluten?
b. In which area of South America is it specifically grown?
c. Why can quinoa substitute wheat, rye or barley?
d. Compared to other gluten-free foods what nutrients is quinoa rich in?
e. When are small peptide fragments created?
f. When is a product labelled as "gluten-free"?
g. Can tests for gluten guarantee the safety of a food product for celiacs?
h. Are these storage proteins dangerous?



The Green Planet - Copyright © EDISCO Editrice - Vietata la vendita e la diffusione