

Cold-weather **hybrid** broccoli. Bred for superior **seed vigor**. Seedlings survive in temperatures down to 37° F.

Germination: Soak seeds in water overnight to remove **hard coats** and end **dormancy**. Place in 70° F soil to **germinate**.

Location: **Sow** in a place that gets full sun.

**Sowing method:** Use a pen or similar shaped object to prepare holes 0.5 cm deep, 2 cm apart. Drop one **seed** per hole. Cover with soil. Water.

Days to sprout: 7-14

Days to maturity: 58

Harvest: Cut buds before they flower.

Price : \$ 0.5 / 100 g. packet\*

\*Bulk orders of 100 or more receive a discount of 10%



### Get ready!

① Before you read the passage, talk about these questions.

- 1 How do farmers plant seeds?
- 2 What do seeds need to grow?

### Reading

② Read the page from The New Gardener's Seed catalog. Then, mark the following statements as true (T) or false (F).

- 1 — The seedlings can survive below 37° F.
- 2 — The broccoli seeds have hard coats.
- 3 — The seeds will sprout within two weeks.

### Vocabulary

③ Match the words (1-6) with the definitions (A-F).

- |               |                |
|---------------|----------------|
| 1 — hard coat | 4 — seed vigor |
| 2 — germinate | 5 — hybrid     |
| 3 — seedling  | 6 — sow        |

- A the firm outer layer of a seed  
 B to sprout from a seed  
 C to plant seeds  
 D made by parents of different breeds  
 E a young plant  
 F the strength and survivability of a seed

④ Write a word that is similar in meaning to the underlined part.

- 1 Farmers plant small objects from which plants grow in the spring.  
s \_ \_ d \_
- 2 Each plant has a different number of days until it can be harvested.  
d \_ \_ \_ t \_ m a \_ \_ \_ \_ y
- 3 Some plants require special ways in which seeds are planted.  
\_ o w \_ \_ \_ m e \_ \_ \_ \_
- 4 To plant a large crop, you need a large quantity order of seeds.  
b \_ \_ \_
- 5 Some plants produce seeds that pass the winter in an inactive state.  
\_ o r \_ \_ \_ \_ y



- 3 Listen and read the page from The New Gardener's Seed catalog again. How many weeks will it take for the broccoli to be edible?

## Listening

- 4 Listen to a conversation between a customer and a farmer. Mark the following statements as true (T) or false (F).

- 1 — The customer wants watermelon seeds.
- 2 — The farmer does not have the seed varieties that the customer wants.
- 3 — The customer will receive 10% off.

- 5 Listen again and complete the conversation.

Farmer: Hi there. Welcome to Braxton Farms. How can I help you?

Customer: Hi, I'd like to buy some seeds.

Farmer: Great. What varieties are you interested in?

Customer: I want some 1 \_\_\_\_\_, the Super King. And some cantaloupe, the Royal Gold.

Farmer: I'm sorry. I 2 \_\_\_\_\_ that.

Customer: Super King watermelon and Royal Gold cantaloupe.

Farmer: 3 \_\_\_\_\_. Also, we have a special today on 4 \_\_\_\_\_ orders. You get 10% off.

Customer: 5 \_\_\_\_\_. I only need two packets of each.

Farmer: Well, they 6 \_\_\_\_\_ packs of 3 for \$3.78.

## Speaking

- 8 With a partner, act out the roles below based on Task 7. Then, switch roles.

USE LANGUAGE SUCH AS:

I'd like to buy some seeds.

What varieties are you interested in?

I only need ...

Student A: You are a farmer selling seeds. Talk to Student B about:

- seed varieties
- discounts
- total price

Student B: You are buying seeds. Answer Student A's questions.

## Writing

- 9 Use the conversation from Task 8 to fill out the receipt.

Seed Variety: \_\_\_\_\_

Number of packets: \_\_\_\_\_

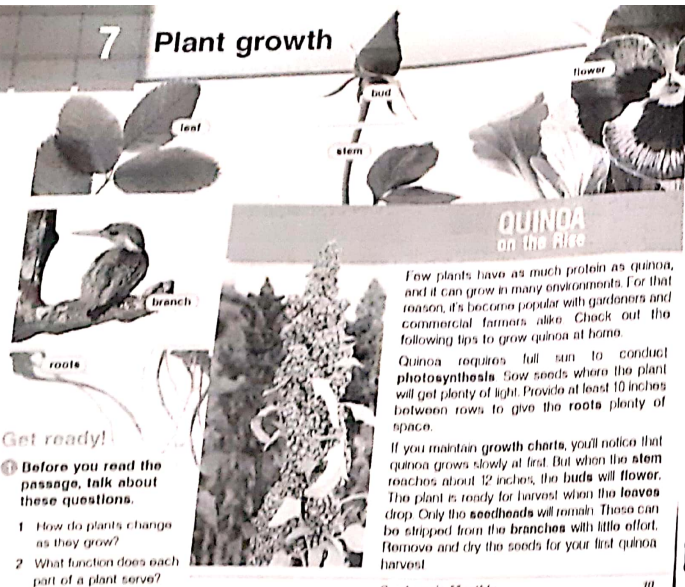
Seed Variety: \_\_\_\_\_

Number of packets: \_\_\_\_\_

Discount? Y / N

Total Price: \_\_\_\_\_

## 7 Plant growth



### Get ready!

1 Before you read the passage, talk about these questions.

- 1 How do plants change as they grow?
- 2 What function does each part of a plant serve?

### Reading

2 Read the magazine article. Then, mark the following statements as true (T) or false (F).

- 1 No plant has more protein than quinoa.
- 2 Quinoa sprouts quickly and then slows.
- 3 Farmers who grow quinoa harvest its seeds.

### Vocabulary

3 Match the words (1-4) with the definitions (A-D).

- 1 photosynthesis
- 2 branch
- 3 stalk
- 4 quinoa

- A a narrow part that supports leaves  
B a chemical process that produces energy  
C a limb of a plant  
D a strong plant that is grown for its seeds

Few plants have as much protein as quinoa, and it can grow in many environments. For that reason, it's become popular with gardeners and commercial farmers alike. Check out the following tips to grow quinoa at home.

Quinoa requires full sun to conduct photosynthesis. Sow seeds where the plant will get plenty of light. Provide at least 10 inches between rows to give the roots plenty of space.

If you maintain growth charts, you'll notice that quinoa grows slowly at first. But when the stem reaches about 12 inches, the buds will flower. The plant is ready for harvest when the leaves drop. Only the seedheads will remain. These can be stripped from the branches with little effort. Remove and dry the seeds for your first quinoa harvest.

Gardener's Monthly

19

4 Fill in the blanks with the correct words and phrases from the word bank.

### Word bank

roots growth chart seedhead  
leaves buds flowering

- 1 Those \_\_\_\_\_ will grow into flowers.
- 2 Plants absorb nutrients from the soil with their \_\_\_\_\_.
- 3 Photosynthesis occurs in the \_\_\_\_\_ of a plant.
- 4 Tom keeps a detailed \_\_\_\_\_ of his crops to test how effective his fertilizers are.
- 5 \_\_\_\_\_ plants usually produce colorful blooms in the spring.
- 6 The \_\_\_\_\_ of a quinoa plant contains the protein-rich harvest.

5 Listen and read the magazine article again. Why do gardeners like quinoa?

### Listening

6 Listen to a conversation between two farmers discussing plant growth. Mark the following statements as true (T) or false (F).

- 1 The man planted quinoa for the first time.
- 2 The woman's crops did not grow.
- 3 The woman planted quinoa on thousands of acres.

7 Listen again and complete the conversation.

- Farmer 1: Susan, you planted quinoa for the first time this year. 1 \_\_\_\_\_?
- Farmer 2: I did. I was worried 2 \_\_\_\_\_, but it seems okay now.
- Farmer 1: Worried? Why?
- Farmer 2: It was growing so slowly. But it just 3 \_\_\_\_\_ for the buds to flower.
- Farmer 1: Oh, so they're 4 \_\_\_\_\_?
- Farmer 2: Yeah, they are. We expect to harvest them next week.
- Farmer 1: That's great. How much do you expect to harvest?
- Farmer 2: Well, we only planted a 5 \_\_\_\_\_, so probably two thousand pounds 6 \_\_\_\_\_.

### Speaking

8 With a partner, act out the roles below based on task 7. Then, switch roles.

USE LANGUAGE SUCH AS:

You planted quinoa?

Worried? Why?

How much do you expect to harvest?

Student A: You are a farmer. Ask Student B about planting quinoa for the first time. Talk about:

- growth rate
- concerns
- expected harvest

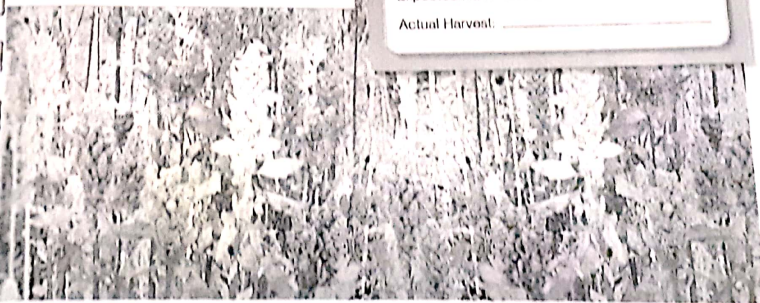
Student B: You are a farmer. Answer Student A's questions.

### Writing

9 Use the conversation from Task 8 to fill out the farmers' notes on the first quinoa harvest.

### Quinoa Harvest Summary

Acres Planted: \_\_\_\_\_  
Summary of Crop Growth: \_\_\_\_\_  
Expected Harvest: \_\_\_\_\_  
Actual Harvest: \_\_\_\_\_





## 10 Feed and nutrients

### Get ready!

- 1 Before you read the passage, talk about these questions.

- 1 What types of food do farm animals eat?
- 2 How does feed affect animals' growth?

### Reading

- 2 Read the job posting. Then, mark the following statements as true (T) or false (F).

- 1 Hillford Farms has fifteen varieties of chicken
- 2 The Hillford Farms daily ration includes fats
- 3 Applicants need a degree in poultry management.

### Vocabulary

- 3 Match the words (1-5) with the definitions (A-E).

- |            |                       |
|------------|-----------------------|
| 1 nutrient | 4 animal nutritionist |
| 2 feed     | 5 vitamin             |
| 3 poultry  |                       |
- A an organic substance found in food that is essential for good health  
 B food given to animals  
 C a person who makes healthy food for animals  
 D any organic or inorganic substance that provides nourishment  
 E domesticated birds such as chickens and turkeys

- 4 Write a word that is similar in meaning to the underlined part.

- 1 Henry increased the daily amount of food.  
r \_ \_ \_ \_ n
- 2 Inorganic substances like potassium are essential for good health.  
\_ \_ \_ \_ \_
- 3 Besides sleep and shelter, the process of nourishing an organism is the most important thing that every organism needs.  
\_ \_ \_ \_ \_
- 4 Animals need a sufficient amount of substances used to make energy in their diet.  
\_ \_ \_ \_ \_ t e \_

- 5 Listen and read the job posting again. What will be the main duties of the animal nutritionist?

### Listening

- 6 Listen to a conversation between an interviewer and a job applicant. Choose the correct answers.

- 1 What does the applicant make at AGM Industries?  
 A low-fat chicken feed  
 B high-protein pig feed  
 C low-carbohydrate pig feed  
 D high-carbohydrate chicken feed
- 2 What requirement does the applicant meet?  
 A He has one year of experience.  
 B He has worked with chickens.  
 C He has created special feeds.  
 D He has worked for Hillford Farms.

- 7 Listen again and complete the conversation.

- Interviewer: Good morning. Mr. Jordan, I'm Terry Riley.  
 Job applicant: 1 \_\_\_\_\_ you, Miss Riley.  
 Interviewer: Nice to meet you too. Please, 2 \_\_\_\_\_ and we'll get started.  
 Job applicant: Thank you. Did you get my resume?  
 Interviewer: Yes, I did. It looks very good. 3 \_\_\_\_\_ your work at AGM Industries.  
 Job applicant: Well, I work at their 4 \_\_\_\_\_ I create special formulas for high-protein feed.  
 Interviewer: Interesting. Now, applicants must have experience with 5 \_\_\_\_\_. Have you ever worked with 6 \_\_\_\_\_?  
 Job applicant: Yes, in my previous job. It was at Reynolds Farms.

### Speaking

- 8 With a partner, act out the roles below based on Task 7. Then, switch roles.

#### USE LANGUAGE SUCH AS:

Nice to meet you.  
 Tell me about ...  
 Have you ever worked with ...

Student A: You are interviewing a job applicant. Talk to Student B about:

- resume
- current job
- experience

Student B: You are interviewing for a job. Answer Student A's questions.

### Writing

- 9 Use the conversation from Task 8 and the job posting to fill out the applicant's resume.

Name: \_\_\_\_\_  
 Position applying for: \_\_\_\_\_  
 Current Position: \_\_\_\_\_  
 Responsibilities: \_\_\_\_\_  
 Former Position: \_\_\_\_\_  
 Responsibilities: \_\_\_\_\_



### POSTING #09500 Animal Nutritionist

Date posted: Jan. 25  
 Employer: Hillford Poultry Farm  
 Location: Lancaster, PA  
 Job Description: Prepare feed formula for fifteen varieties of chicken. Research and select low-cost ingredients with high nutrient content. Balance carbohydrate, fat, protein, vitamin, and mineral content in daily rations. Adjust feed formula as needed.  
 Job Qualifications: Masters Degree or higher in animal nutrition. Minimum of two years' experience, preferably on a poultry farm.  
 Salary: Based on experience. generous benefit package available.  
 Contact Information: Brian Walker (610) 555-5905  
 bwalker@hillford.com

animal nutritionist

feed



# 11 Housing animals



## PROPER ANIMAL HOUSING METHODS

May 1, 2011 by Ben Keller

Here are some tips for how to properly house animals. I will use my hog barn as an example. The ideas apply to coops and pens as well. Animals with proper housing are in their comfort zones. They are healthier and more productive than animals with poor housing. First, make sure the enclosure matches the space requirements of the animal. You also need to know the animals' critical temperatures to prevent heat stress and cold stress. Don't forget to have a good waste management system. Slotted floors provide a simple way to keep your animal's living space clean.

## Vocabulary

Read the sentence pair. Choose where the words best fit the blanks.

1 coop / cold stress

A The chickens live in a separate

B Install a heater to prevent

2 heat stress / pen

A During the summer \_\_\_\_\_ is a problem

B Pigs do best if they are kept in their own

3 slotted floor / waste management

A \_\_\_\_\_ is essential for odor control

B A \_\_\_\_\_ helps air to circulate

## Get ready!

Before you read the passage, talk about these questions.

1 How are animals housed in your country?

2 How do workers maintain animal housing structures?

## Reading

Read the page from a farming blog. Then, mark the following statements as true (T) or false (F).

1 — The author raises poultry

2 — Housing affects animals' productivity

3 — Slotted floors prevent heat stress

Match the words (1-4) with the definitions (A-D).

- 1 — barn
- 2 — comfort zone
- 3 — critical temperature
- 4 — space requirement

- A conditions under which an animal is comfortable
- B a structure used to house animals
- C the amount of space that an animal needs
- D a temperature that must be maintained

Listen and read the page from a farming blog again. Apart from proper housing, what else do animals require to be productive?

## Listening

Listen to a conversation between two farmers discussing animal housing. Place a check (✓) next to reasons they need a new barn.

- 1 ☐ They will have more animals
- 2 ☐ The barn gets too cold in winter
- 3 ☐ The barn has poor ventilation
- 4 ☐ They want to add slotted floors
- 5 ☐ The barn doesn't meet space requirements

Listen again and complete the conversation.

- Farmer 1: I think we need a new barn.  
Farmer 2: What's wrong with this one?  
Farmer 1: First, the 1 \_\_\_\_\_ isn't very good.  
Farmer 2: I agree with you there. It's 2 \_\_\_\_\_ in here during the 3 \_\_\_\_\_.  
Farmer 1: And don't forget, we're getting 4 \_\_\_\_\_ May.  
Farmer 2: That's a 5 \_\_\_\_\_. We'll need more space then.  
Farmer 1: I'll talk with a builder tomorrow.  
Farmer 2: Let's estimate the 6 \_\_\_\_\_ first.

## Speaking

With a partner, act out the roles below based on Task 7. Then, switch roles.

### USE LANGUAGE SUCH AS:

- I think we need a new barn.  
I agree with you there.  
We'll need more space.

Student A: You are a farmer. You want a new barn. Talk to Student B about

- a new barn
- temperature
- animals and space

Student B: You work with Student A on a farm. Answer Student A's questions.

## Writing

Use the conversation from Task 8 to fill out the farmers' letter to a builder.

Dear Mr Haynes,

We need \_\_\_\_\_

Our current barn \_\_\_\_\_

And we are getting \_\_\_\_\_

The barn won't meet \_\_\_\_\_

We need the new barn \_\_\_\_\_

It should be able to house \_\_\_\_\_

How much \_\_\_\_\_?

Thanks,

