



EAT

UP!

AN INFOGRAPHIC EXPLORATION OF FOOD



BY ANTONIA BANYARD AND PAULA AYER

ART BY BELLE WUTHRICH



annick press
toronto + berkeley + vancouver



© 2017 Antonia Banyard and Paula Ayer (text)
© 2017 Belle Wuthrich (illustrations)

Edited and proofread by Linda Pruessen
Designed by Belle Wuthrich

Annick Press Ltd.

All rights reserved. No part of this work covered by the copyrights hereon may be reproduced or used in any form or by any means—graphic, electronic, or mechanical—without the prior written permission of the publisher.

We acknowledge the support of the Canada Council for the Arts, the Ontario Arts Council, and the participation of the Government of Canada/la participation du gouvernement du Canada for our publishing activities.



ONTARIO ARTS COUNCIL
CONSEIL DES ARTS DE L'ONTARIO
an Ontario government agency
un organisme du gouvernement de l'Ontario

Funded by the
Government
of Canada

Financé par le
gouvernement
du Canada

| **Canada**

Cataloging in Publication

Banyard, Antonia, author

Eat up! : an infographic exploration of food / by Antonia Banyard and Paula Ayer ; art by Belle Wuthrich.

Includes bibliographical references and index.

Issued in print and electronic formats.

ISBN 978-1-55451-884-5 (hardback)--ISBN 978-1-55451-883-8 (paperback).--

ISBN 978-1-55451-886-9 (pdf)--ISBN 978-1-55451-885-2 (html)

1. Food--Juvenile literature. 2. Food industry and trade--Juvenile literature. 3. Agriculture--History--Juvenile literature. 4. Agriculture--Environmental aspects--Juvenile literature. 5. Nutrition--Juvenile literature.

I. Ayer, Paula, author II. Wuthrich, Belle, 1989-, illustrator III. Title.

TX355.B36 2017

j641.3

C2016-906528-6

C2016-906529-4

Distributed in Canada by University of Toronto Press.

Published in the U.S.A. by Annick Press (U.S.) Ltd.

Distributed in the U.S.A. by Publishers Group West.

Printed in China

Visit us at: www.annickpress.com

Visit Antonia Banyard at: antoniabanyard.ca

Visit Belle Wuthrich at: bellewuthrich.com

Also available in e-book format.

Please visit www.annickpress.com/ebooks.html for more details. Or scan



INTRODUCTION

Introducing Your Amazing . . . Food! 2

1 The TWO- MILLION- YEAR MEAL

On the Hunt for Food 4

Now We're Growing! 6

Boom Time 8

Food Goes Global 10

2 FARM to TABLE

Farm Out! 12

Meet Your Meat 14

I Sea Food! 16

FrankenFood or SuperSolution? 18

Transforming Our Food 20

3 The BUSINESS OF FOOD

Let's Go Shopping 22

Market Matters 24

Sales Games 26

Speeding Up 28

4 FOOD IN OUR BODIES

Body Builders 30

Power Foods 32

Most Wanted: Nutrition Culprits 34

Tasty Tidbits 36

5 **FOOD
AND THE
ENVIRONMENT**

Power Hungry	38
Food and Water	40
The Dirt on Land	42

6 **FOOD
AROUND
THE WORLD**

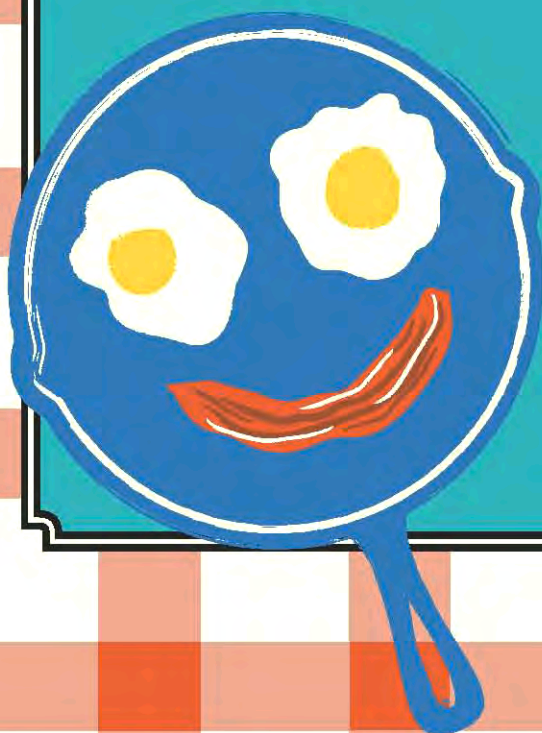
Let's Trade	44
Global Gastronomy	46
Extreme Food	48
Feeding the World	50

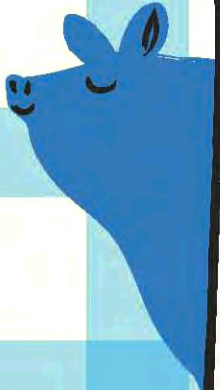
7 **FOOD IN
YOUR LIFE**

Family Food	52
Getting to You	54
Learning Your Food ABCs	56

CONCLUSION

Food Wise	58
Glossary	60
Selected Sources	62
Further Reading	68
Index	70
Image Credits	72
About the Authors and Illustrator	x



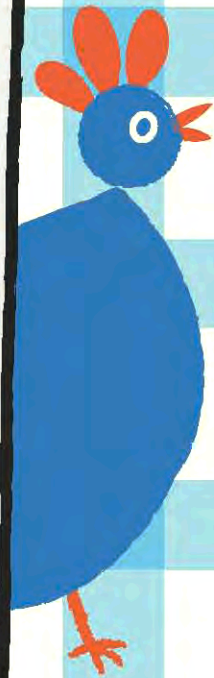


Introducing YOUR AMAZING... FOOD!

We smell it, taste it, cook it, and maybe even throw it (when adults aren't around). But when you look in your lunch bag or on your dinner plate, do you know where your food came from? Who grew it? What it used to be?

If you are *literate*, you know how to read and write. If you're *food literate*, you know your food: where it comes from, how to cook it, which kinds are good for you, and how it affects the environment, your community, and the rest of the world. In the following pages, you'll learn about the history of food, how it grows and gets to us, who has enough food and who doesn't, and how our food and the climate are connected. You'll discover who wants to sell food to you, how the contents of your fridge are truly international, and much more.

**Are you ready to read some food today?
Turn the page to find out ...**





HOW FOOD LITERATE ARE YOU?

Test yourself with the multiple-choice questions below.



Cheese is made from

- (a) plants
- (b) special chemicals
- (c) milk
- (d) pigs



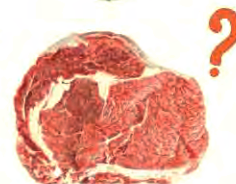
Broccoli comes from

- (a) a plant
- (b) the grocery store
- (c) a tree
- (d) chicken



The main ingredient in pasta is

- (a) meat
- (b) milk
- (c) wheat
- (d) glue



Which of the following foods contains the most protein?



- (a) lettuce
- (b) peanuts
- (c) chocolate

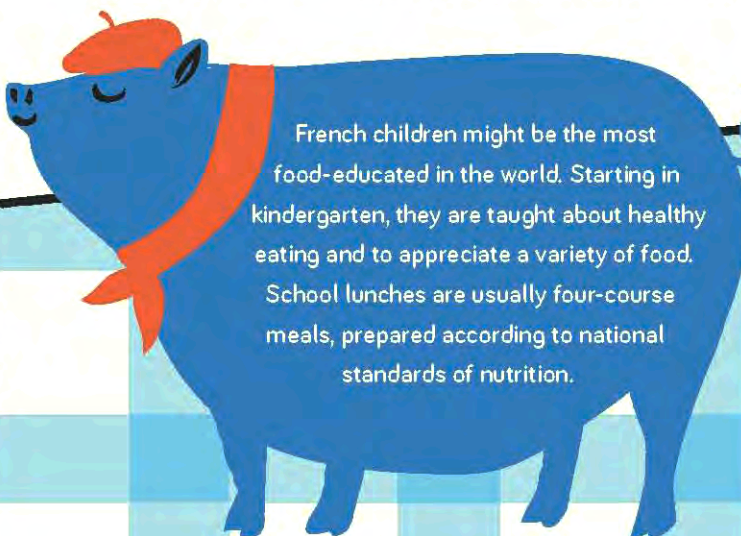


Food insecurity is when

- (a) meat is almost raw
- (b) you can't always afford food
- (c) you hate your mother's cooking

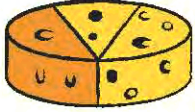
What is a rutabaga?

- (a) a root vegetable
- (b) a red food dye
- (c) a type of elk
- (d) baggy overalls worn by farmers



French children might be the most food-educated in the world. Starting in kindergarten, they are taught about healthy eating and to appreciate a variety of food. School lunches are usually four-course meals, prepared according to national standards of nutrition.

IF YOU SAID THAT cheese is a plant, broccoli grows on trees, pasta is made from meat, and lettuce contains protein, you're not alone. Surveys have found that lots of kids agree with you.



1 in 3 say cheese is made from plants



8 of 10 do not know that broccoli is a plant



1 in 3 say pasta is made from meat



1 in 2 say lettuce contains more protein than peanuts or chocolate

* from surveys of school-aged children in the U.K. and U.S.

The right answers are: cheese is made from milk; broccoli comes from a plant; wheat is the main ingredient in pasta; peanuts contain more protein than lettuce or chocolate; food insecurity means you can't always afford food; and rutabaga is a root vegetable!



MONGREL BEEF-WITTED LORDS!*

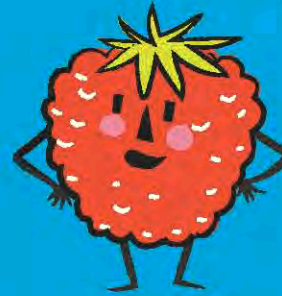
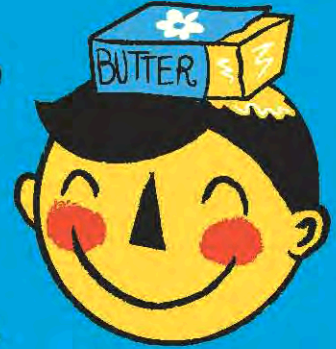
IDEAS ABOUT FOOD are constantly changing. In the 1500s in England, for example, it was believed that God ordered people to eat meat. Beef could make you courageous, but also stupid. The rich ate pumpkin seeds, the poor ate fish, only hardworking laborers could digest bacon, sugar was good for you, and fruit and vegetables were too "watery" and therefore harmful.

* from *Troilus and Cressida*, by William Shakespeare

THE LANGUAGE OF FOOD

WE DON'T JUST EAT FOOD—we talk about it, a lot! Food has found its way into many common phrases in English. Here are just a few:

To butter someone up means to flatter them

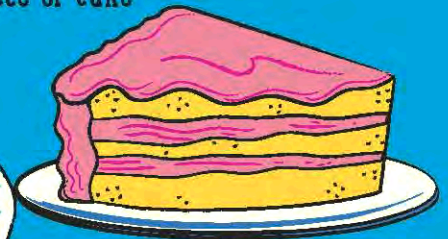


If you're fruitful, that means you're productive

A person who earns money is a breadwinner



Something very easy is a piece of cake



Can you think of any other "edible" expressions?

On the HUNT FOR FOOD

LET'S PRETEND you lived 1 million years ago. What do you do all day? In a word—food. You look for food, then prepare and eat it. Meat is on the menu—from bugs to birds to fish—but mostly you scavenge from other predators' kills. You eat whatever you can find, like fruit, roots, and other plants.

2 million years ago
to 12,000 years ago

Prehistoric people might have started fires by using friction, like these students, or they might have harvested wildfires. Matches are much easier!



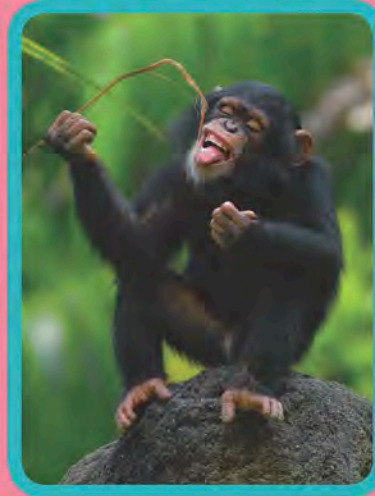
WHY SO FIRED UP ABOUT FIRE?

ASHES AND BONE FRAGMENTS found in a cave in South Africa are from the oldest known human-made fire, which burned about 1 million years ago. This humble cooking fire might explain how the small-brained, ape-like *Homo habilis* evolved into the big-brained *Homo erectus* at lightning speed (in evolutionary terms, that is). Cooked food is easier to chew and digest, which meant these prehistoric humans had more energy to feed their brains. As their brains got bigger, their teeth and guts got smaller, since they didn't need to break down so much raw food.



CHEWING, CHEWING, CHEWING

CHIMPANZEES SPEND almost half their day chewing and eating. Our early chimp-like ancestors spent a lot of time chewing, too. But *Homo erectus*, who lived 1.9 million years ago, needed just an hour and a half a day. They used all their extra time for things like developing language (since their mouths weren't always full) and socializing around the campfire. That's time well spent!



4.5-1.977

**MILLION YEARS AGO
AUSTRALOPITHECUS**

*Eastern Africa,
then farther afield*

Ate fruits, vegetables, tubers, nuts and seeds, and scavenged meat

CAFÉ CAVEMAN

Today's Special!

STARCHY TUBERS (*pounded until chewy*)

TOUGH GRASS AND LEAF SALAD

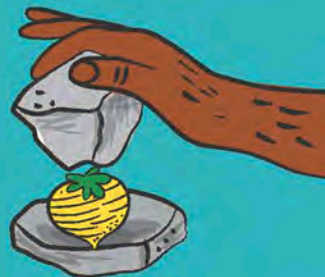
RAW DEAD MOUSE (*mostly skinned*)

JUICY GRASSHOPPERS

FRESH BARK, with *Sticky Sap Syrup*

WILD HONEY WITH CRUNCHY BEESWAX
(*and a bee or two*)

They might not look like much, but these rocks helped our ancestors make dinner. These tools could have been used to crack nuts, scrape bones, or pound roots.



2.6-1.9

**MILLION YEARS AGO
HOMO ERECTUS**

Africa, Asia, Europe

Started processing food (pounding, mashing, etc.), making it easier to chew and digest



**1 MILLION YEARS AGO
HOMINIDS**

Africa

Started using fire to cook food



Now We're GROWING

STARTING ABOUT 12,000 years ago, many groups of people around the world got the same idea. Instead of just chasing animals and gathering plants, they came up with more reliable ways to find food. This might have meant weeding or watering wild plants, or herding wild animals. Then people got more ambitious, planting seeds and raising animals from birth (a process called *domestication*).

12,000 years ago
to the late 1700s

Larger harvests needed to be stored for lean seasons, so people invented ways to keep food for long periods. Stored grain attracted mice, so farmers started domesticating cats.

Farmers in Rome and the Middle East used a three-field system, planting one field with grain, one with legumes, and leaving one to "rest." They'd rotate the crops every year.

FOR BETTER OR WORSE?

THE RISE OF FARMING CHANGED MORE THAN JUST THE MENU

Farmers need to stay put, so farming led to the first towns and cities.

To appease the weather and harvest gods, farmers made sacrifices and prayed. This led to more formalized religions.



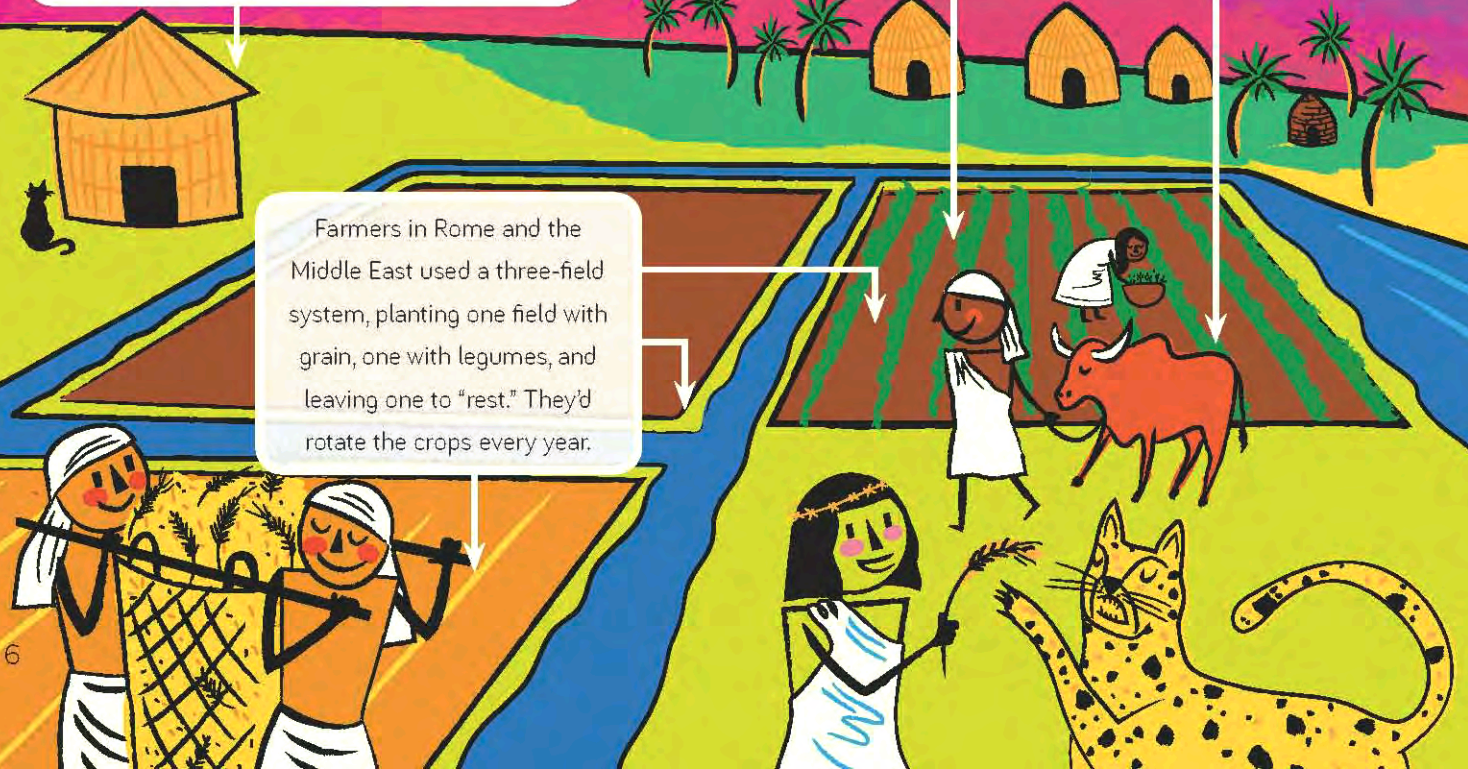
Writing was developed to record the harvest.

Whoever controlled food had power, so societies became less equal.

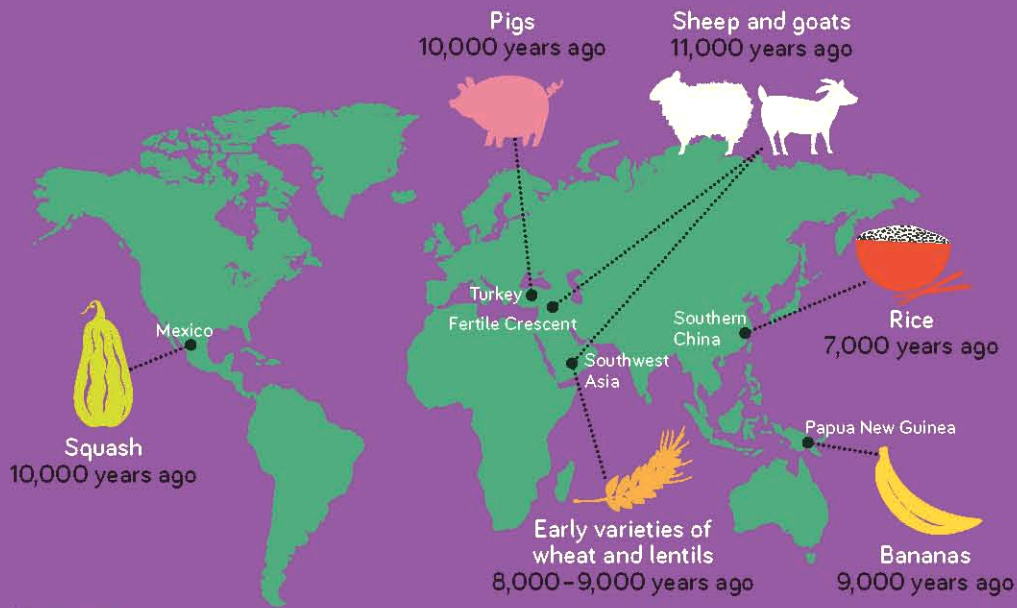
Farming communities actually had a *less* varied diet than the far-roaming hunter-gatherer societies.

Early farmers learned that using the same field to grow different crops from season to season gave them better results than always growing the same crop. Thousands of years later, we know this is because of nitrogen. Grains take nitrogen out of the soil, while legumes like beans and lentils add it back.

Animals were first domesticated for their meat, but people later realized they were useful for other jobs, such as pulling plows or heavy carts, or for their wool.



WHEN FOODS WERE FIRST FARMED



23,000 YEARS AGO

Mesopotamia

Earliest known farming began

10,000–6,800 YEARS AGO

Eastern Europe and the Fertile Crescent

Pigs, sheep, and goats first domesticated

9,000–8,000 YEARS AGO

Fertile Crescent

Crops such as grains and lentils first cultivated

8,000 YEARS AGO

Egypt and Mesopotamia

First forms of irrigation, such as canals, developed

FEAST GIVEN BY KING MERNEPTAH OF EGYPT

around 1200 BCE

FISH (filleted and salted)

OXEN

DUCKS (spit-roasted)

ORYX

GAZELLE (basted in honey)

SWEET OILS (for sauces)

CELERY, PARSLEY, LEEKS

LETTUCE

BEANS

BREAD, HONEY CAKES

POMEGRANATES,

GRAPES, FIGS, AND

JUJUBES

HEADS OF GARLIC

BEER AND WINE

EARLY, EARLY FARMERS

Though farming really took off about 12,000 years ago, archaeologists now believe it began 11,000 years before that. Sickle blades, tools used for grinding grains, and even preserved weeds found in an archaeological site near the shore of the Sea of Galilee (in modern-day Israel) suggest that humans were dabbling in farming much earlier than we thought.

Farmers needed to get water to their fields. They developed irrigation techniques, such as canals, to divert water from nearby rivers or lakes.

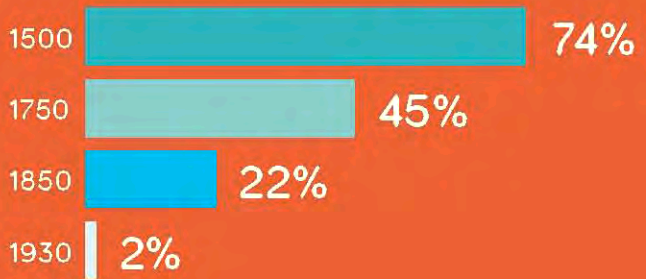
BOOM Time

FARMING WENT ON in much the same way for a thousand years or so. Then, in the late 1700s in Britain, several new ideas added up to *big* changes. In fact, the effects were so great that they revolutionized society. The farming techniques and practices that became popular during the Agricultural Revolution, as this period is now known, soon spread across Europe and to North America.

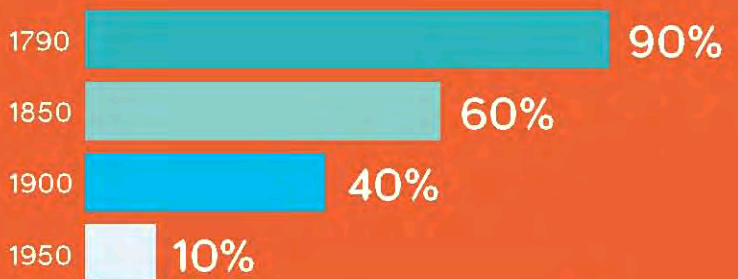
mid-17th to
late 19th centuries

Newly invented machines started to do much of the work humans once did. Steam-powered plows and tractors loosened the soil, seed drills sowed seeds. Machines made farms more productive than they had ever been.

PERCENTAGE OF PEOPLE WHO WORKED IN AGRICULTURE IN ENGLAND



PERCENTAGE OF PEOPLE WHO WORKED ON FARMS IN THE U.S.



Changes to farming techniques and more efficient ways of working meant that each farm worker was now capable of producing more food. With fewer workers needed on farms, more were available to work in new factories in the growing cities.

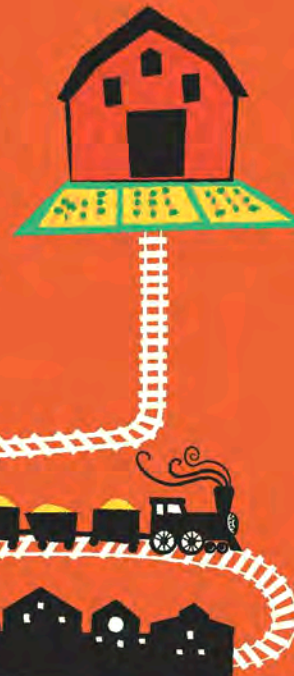
Rye was slowly replaced with wheat and barley, which produce more grain by area.



ALL ABOARD!

THE INVENTION OF STEAM-POWERED TRAINS in the 1800s made it easier to ship food from farms to the cities. Cities grew larger, and farms moved farther and farther away. Refrigerated rail cars, which appeared in the late 1800s, made it possible to ship food that spoiled easily, such as meat and dairy.

In the U.S., different regions started specializing their crops: oranges in Florida, grapes in California, peaches in Georgia. For the first time in history, large numbers of people could live far away from where their food was grown or raised.



HARE (OR RABBIT) SOUP

FROM THE VIRGINIA HOUSEWIFE
by Mary Randolph, 1824

Cut up two hares and put them into a pot with a piece of bacon, two chopped onions, and a bundle of thyme and parsley (which must be taken out before the soup is thickened). Add pepper, salt, pounded cloves, and mace. Put in a sufficient quantity of water and stew gently for three hours. Then, thicken soup with one large spoonful of butter, one large spoonful of brown flour, and a glass of red wine. Boil a few minutes longer, then serve with the nicest parts of the hares.

Tip: Squirrels can be used instead of hare.



Mechanical harvesters and threshers collected and separated grain. They made harvest much easier and quicker than hand harvesting. But in 1830, unemployed farm laborers rioted to protest changes such as the use of threshing machines.

WEST AND EAST

Long before the 1700s, China had discovered a lot of the same farming innovations as Europeans, such as crop rotation and irrigation pumps. So why didn't China have its own agricultural revolution? The answer might be that China's strong, central government discouraged big changes, which can cause unrest. Or, because the Chinese valued classical education so much, they often saw new technologies as nothing more than novelties.

500-100 BCE

China

Farming machines, such as the multi-tube seed drill and winnowing fan, invented

MID TO LATE 1700s

Britain

Agricultural Revolution begins

1830s

United States

First grain-harvesting machine and seed plow patented

1850s TO EARLY 1900s

Europe and North America

Railroad and steamship lines expanded

EARLY 1890s

First gasoline-powered tractors built, replacing steam-powered tractors and animals