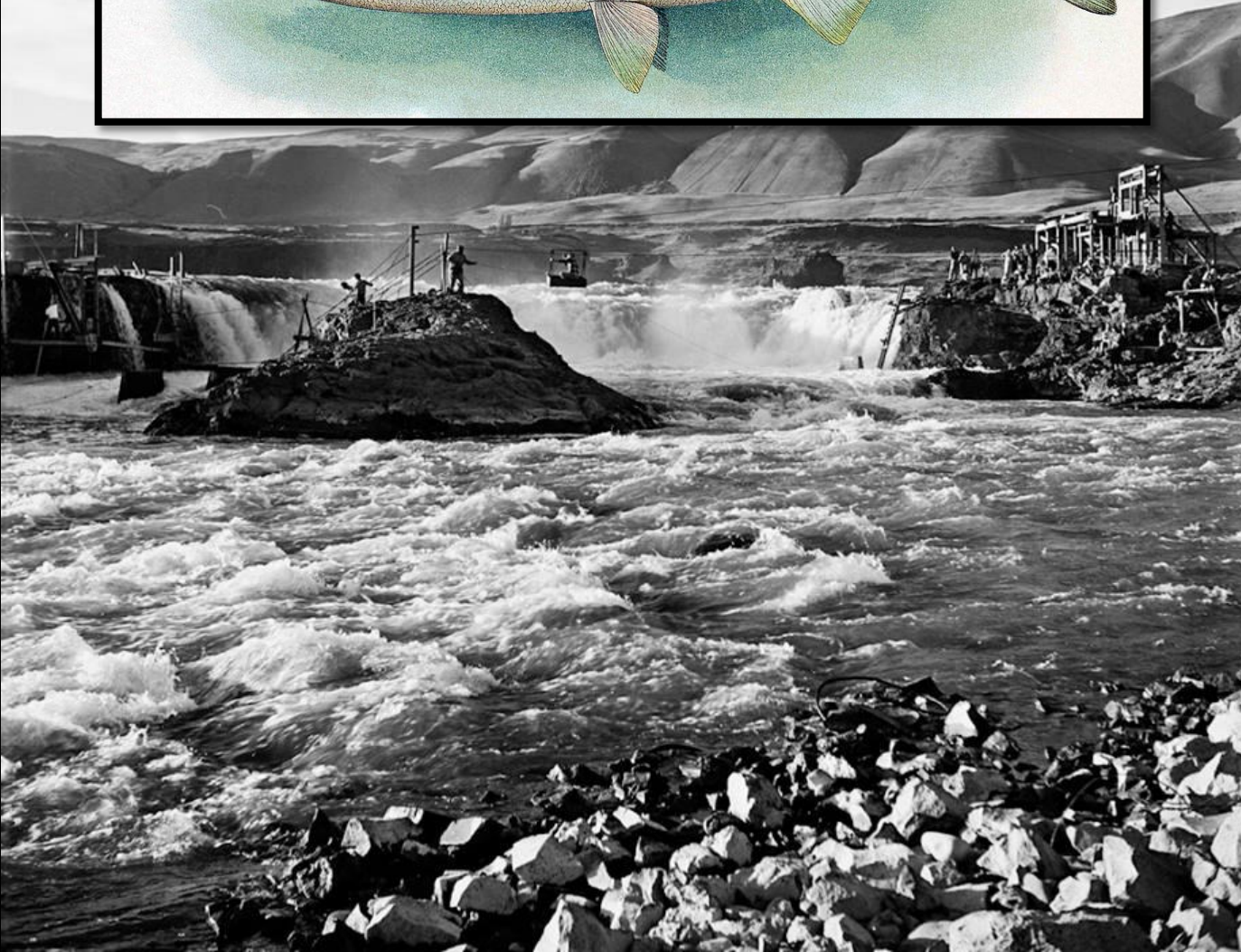
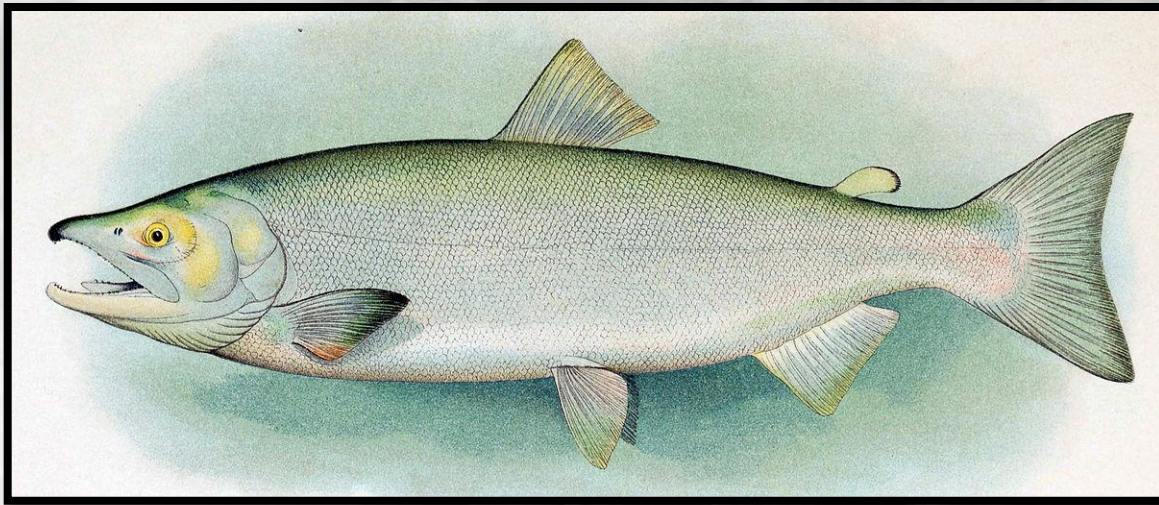


# Food (especially chicken and eggs) and the Environment



Lecture at the International Centre of Goa  
April 28, 2018



# Beijing – one week



# Kuwait City – one week



# Sicily – one week



# Chad – one week



# Cairo – one week



# Poland – one week





# Ecuador – one week



# Japan – one week



# Mexico – one week



# Great Britain – one week



# Mongolia – one week



# California – one week



# India – the Patkars of Ujjain



"A beautiful and important book about one of the world's most important subjects." —Eric Schlosser, author of *Fast Food Nation*

# HUNGRY PLANET



## WHAT THE WORLD EATS

PETER MENZEL and FAITH D'ALUISIO • Foreword by Marion Nestle

2005



# Mary Douglas

- “Deciphering a Meal,” *Daedalus*, Vol. 101, No. 1, Myth, Symbol, and Culture (Winter, 1972), pp. 61-81
- “Food is both itself and simultaneously more than itself.” (From *Food and the Social Order: Studies of Food and Festivities in Three American Communities* (1982).

# Food and the Environment

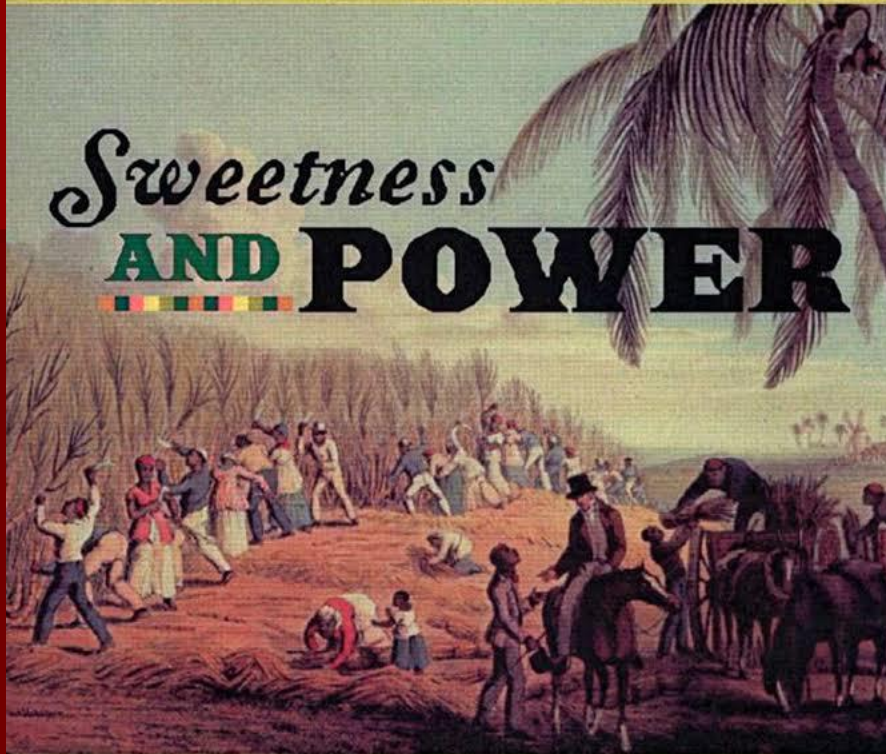
- Quite simply, this formula:

“Environmental history begins in the belly.” (Donald Worster)

"This measured, intelligent, ambitious book has something  
for everybody. . . Mintz opens a whole series of doors  
onto rich and unsuspected worlds."

—J. H. Elliott, *The New York Review of Books*

# Sweetness **AND POWER**



**The Place of Sugar in Modern History**



**Sidney W. Mintz**

1985



Mintz – how sugar became a world commodity – from nothing to something – and a more refined understanding of political economy, one that takes “taste” seriously.  
“internal” and “external”  
Sweetness and power.

Internal – custom, tradition, cultural values and cuisines, “taste” (as source of comfort, as “good,” as tradition, as relationships, as motherhood, as authenticity, as religious and ethical practice), as nourishment (nutrition) as the child of necessity, as Choice

External – personal ambitions, political agendas, trade policy, labor regimes (slavery), industrial agriculture, agricultural research and innovation, market forces, reform movements, environmental constraints and possibilities

# How we get what we eat

Subsistence agriculture – growing just enough for your family or for the village, with very little to trade. Emphasis on mixed husbandry – growing several crops, some of which help each other.

Industrial food production – using machines, industrial fertilizers, and special seeds to grow large quantities of the same crop – corn, wheat, rice, cattle, chickens – to see on the market.

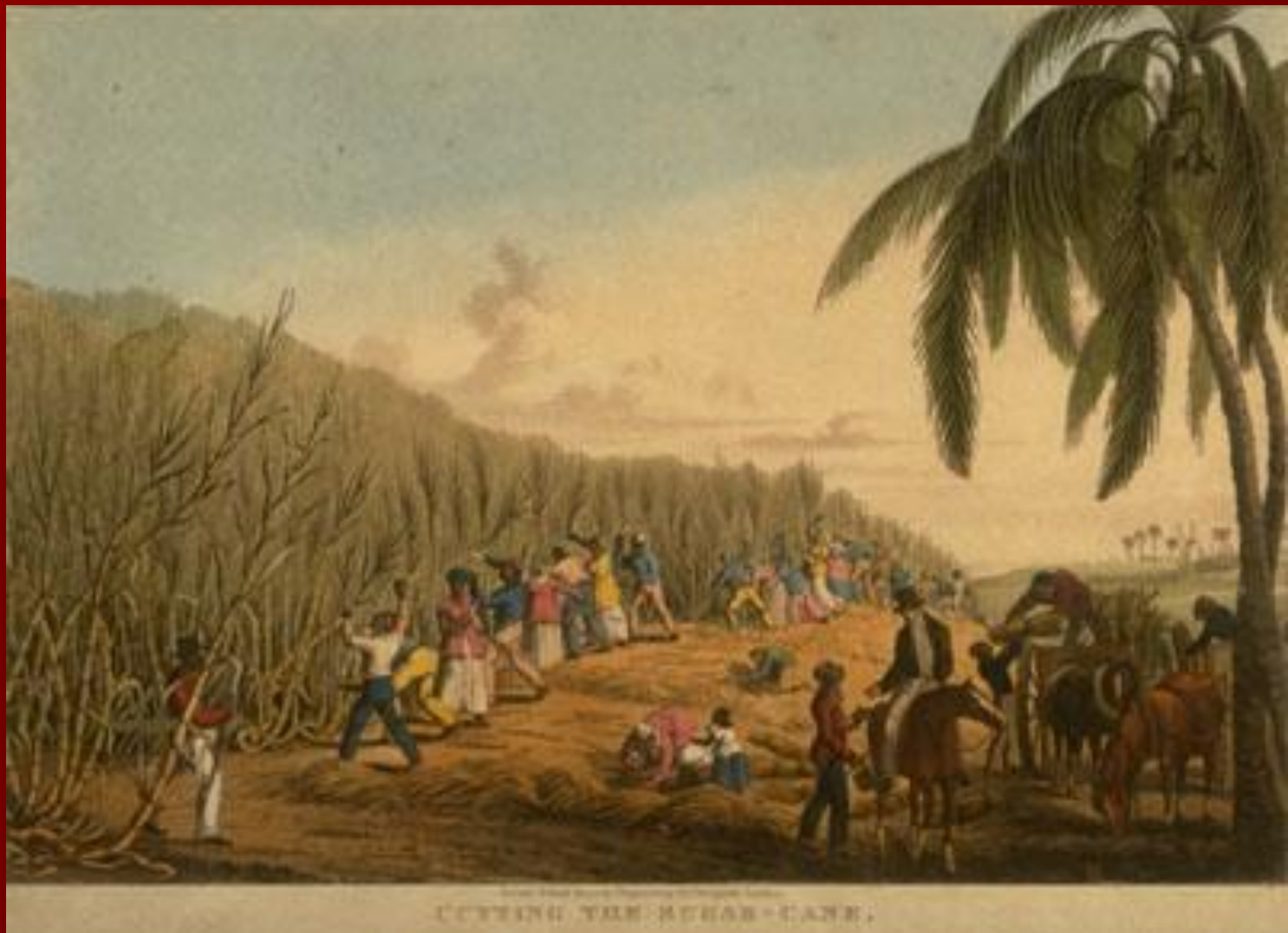




William Clark, Ten Views In the Island of Antigua, in Which are Represented the Process of Sugar Making.... From Drawings Made by William Clark, During a Residence of Three Years in the West Indies (London, 1823). Image shown here is from the John Carter Brown Library at Brown University. Also published in Ladies' Society for Promoting the Early Education of Negro Children (London, ca. 1833). (planting cane)

Harper's New Monthly Magazine(1853), vol. 9, p. 760. (Copy in Special Collections Department, University of Virginia Library)

## Food and Labor Regimes



William Clark, *Ten Views In the Island of Antigua, in Which are Represented the Process of Sugar Making....* From Drawings Made by William Clark, During a Residence of Three Years in the West Indies (London, 1823). Image shown here is from the John Carter Brown Library at Brown University. Also published in *Ladies' Society for Promoting the Early Education of Negro Children* (London, ca. 1833).

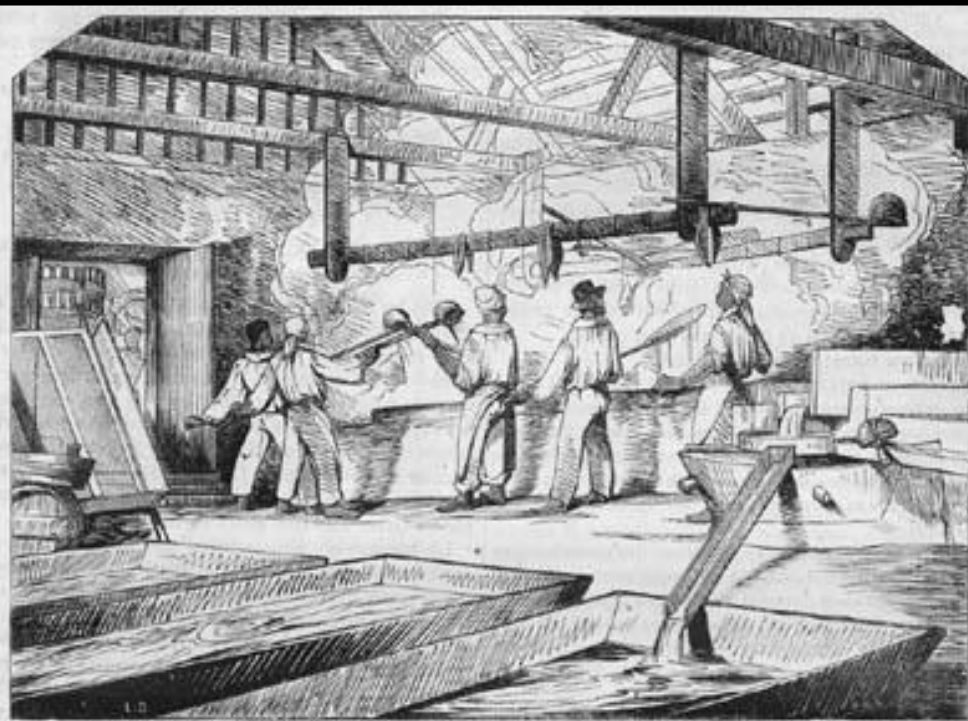


Jean Baptiste DuTertre, *Histoire Générale des Antilles Habitées par les Francois* (Paris, 1667), vol. 2, p. 122. (Copy in the John Carter Brown Library at Brown University)



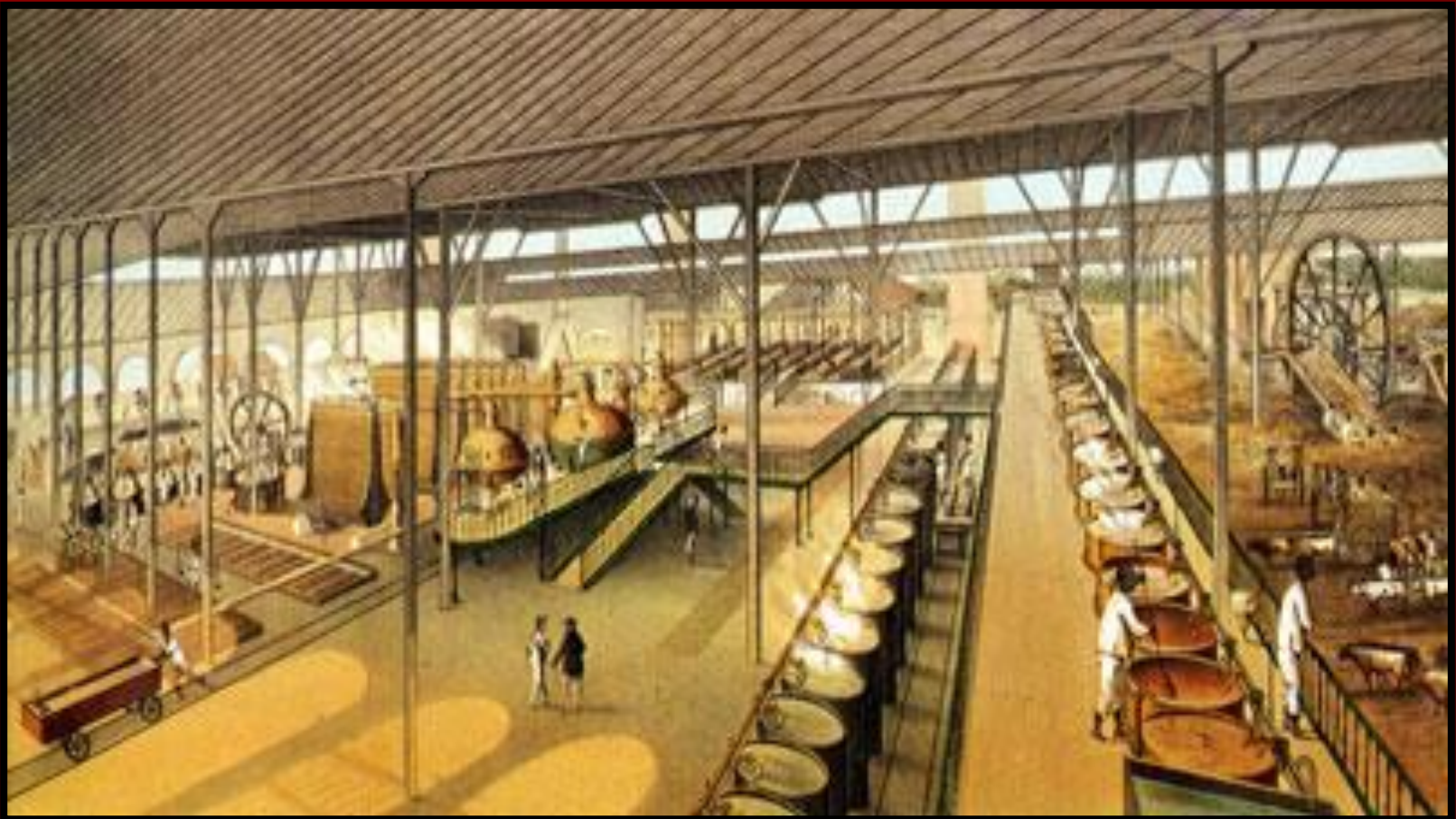
(Moulin pour exprimer le jus des cannes, à la Martinique.)

In French West Indies  
Le Magasin Pittoresque (1835), p. 68



(Vue des chaudières et des rafraichisseurs, à la Martinique.)

Le Magasin Pittoresque (1835), p. 69



Justo German Cantero, *Los ingenios: coleccion de vistas de los principales ingenios de azucar de la Isla de Cuba* (Havana, 1857); reprinted Barcelona, 1984, edited by Levi Marrero. (worked by 409 slaves and 179 paid Chinese laborers.

LE  
CANNAMELISTE  
FRANÇAIS,

O U

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POUR CEUX QUI DESIRENT D'APPRENDRE  
L'OFFICE,  
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ENRICHIE DE PLANCHES EN TAILLE-DOUCE.

Par le Sieur GILLIER S, Chef d'Office, & Distillateur  
de Sa Majesté le Roi de Pologne, Duc de Lorraine  
& de Bar.



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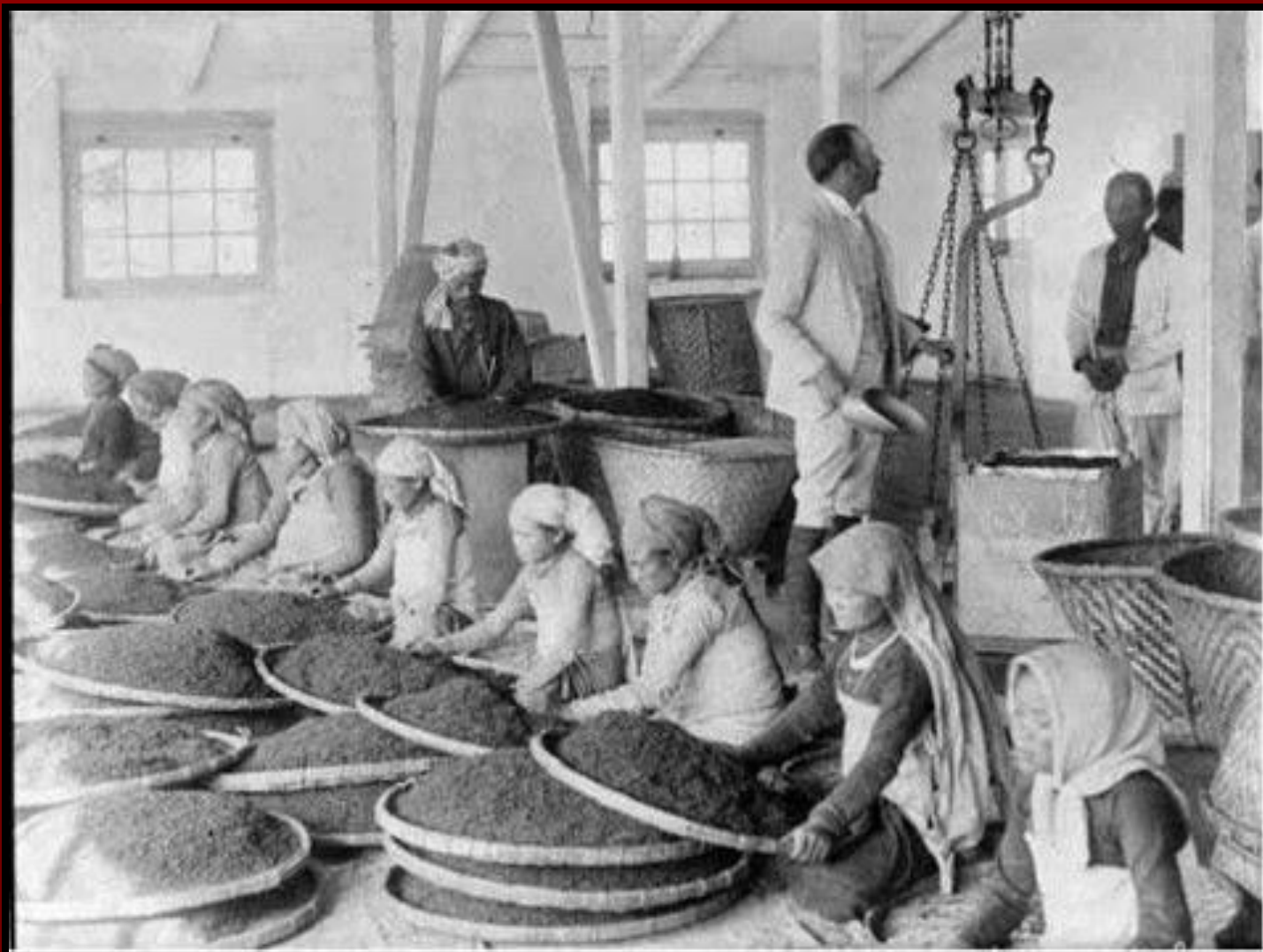
Mid-18<sup>th</sup> century –  
first pastry cookbooks

(Juan de la Mata in particular, the dessert chef to Philip V and Ferdinand VI of Spain, was known for his over-the-top dessert spreads, which featured flowers, subtleties, and even fountains of milk or wine. His *Arte de repostería (Art of Pastry)* of 1747 includes all sorts of sweets, pastries, jams, cakes, meringues, doughnuts, and chocolates.)

*Table with One Hundred Place Settings*, Anonymous, etching, Juan de la Mata, *Arte de repostería* (Madrid: Antonio Marin, 1747), pl. iew



([http://www.huffingtonpost.com/maite-gomezrejon/cooking-art-history-feast\\_b\\_8561012.html](http://www.huffingtonpost.com/maite-gomezrejon/cooking-art-history-feast_b_8561012.html) accessed 4/11/17)



NY.  
XED

IN  
**6<sup>th</sup>**  
BAGS

DON

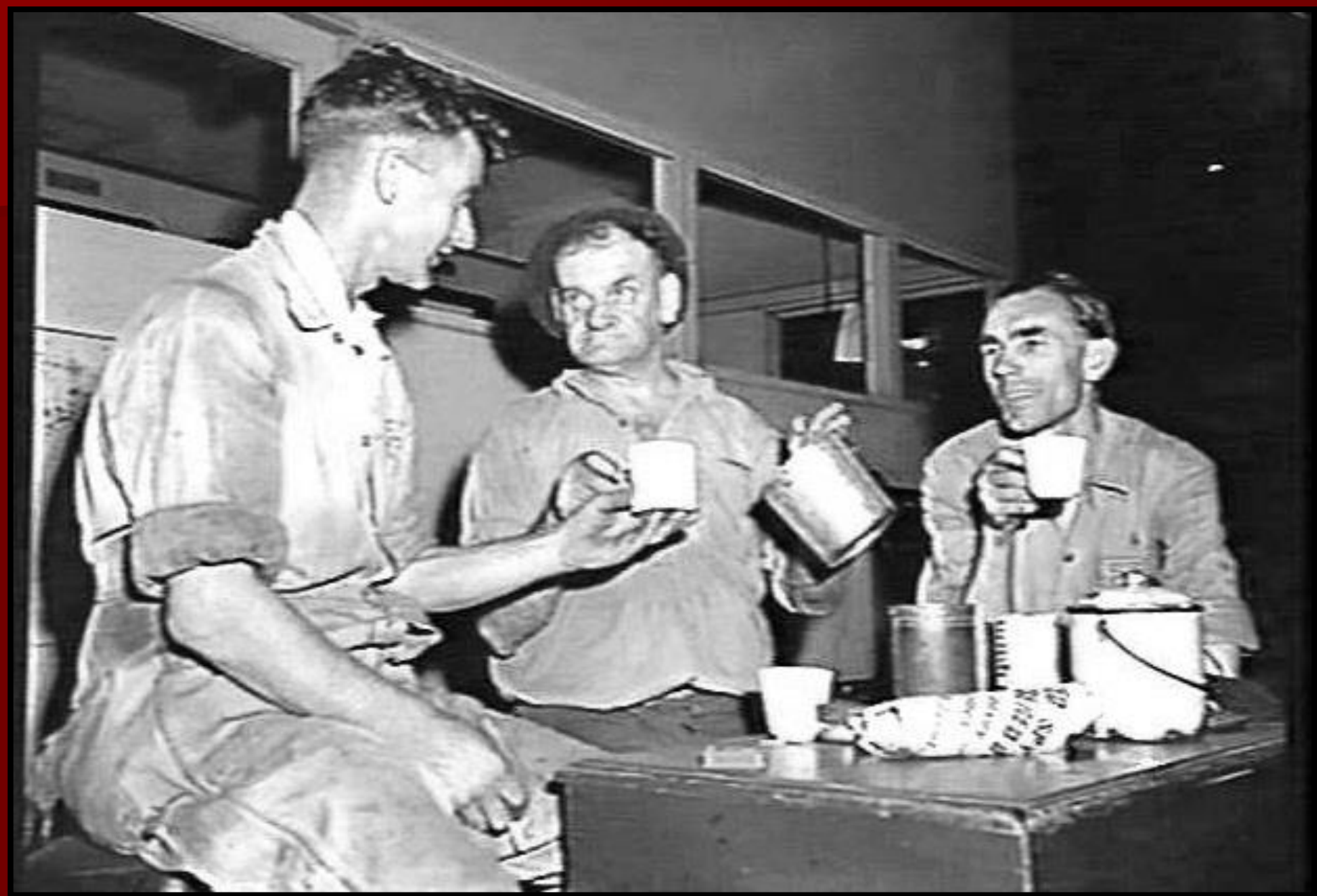
AGENTS FOR THE COMP. TEAS APPOINTED IN EVERY TOWN & VILLAGE





8978



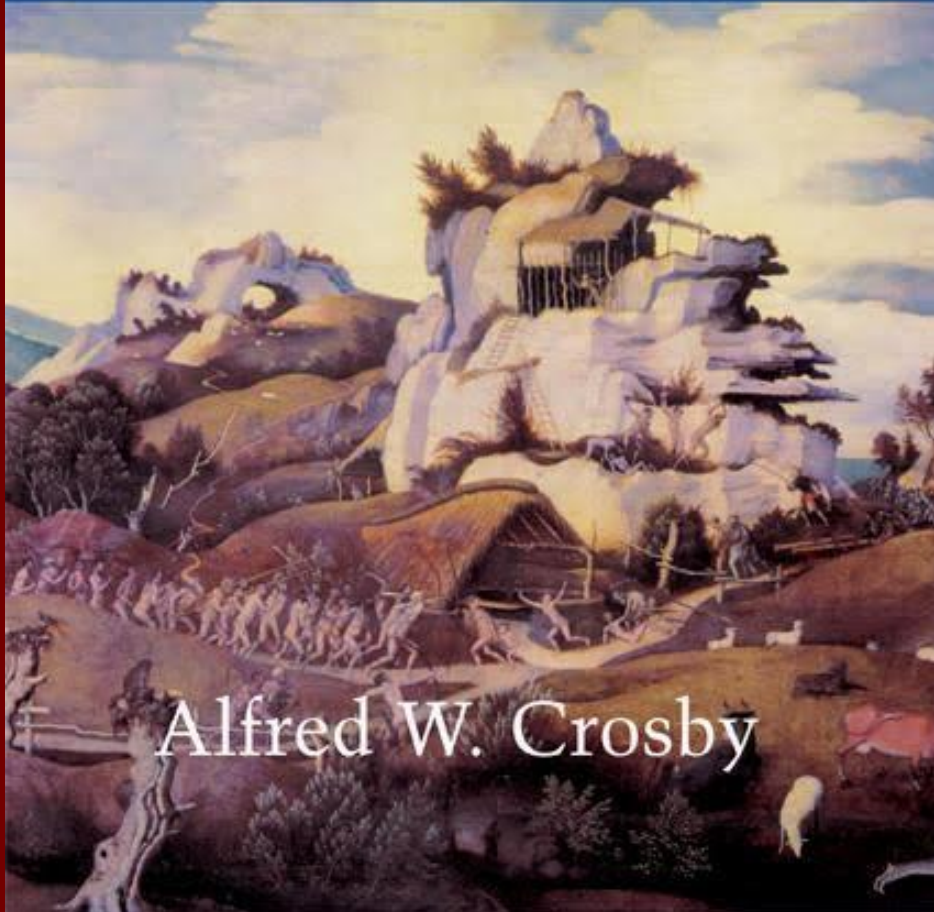




# ECOLOGICAL IMPERIALISM

The Biological Expansion  
of Europe, 900–1900

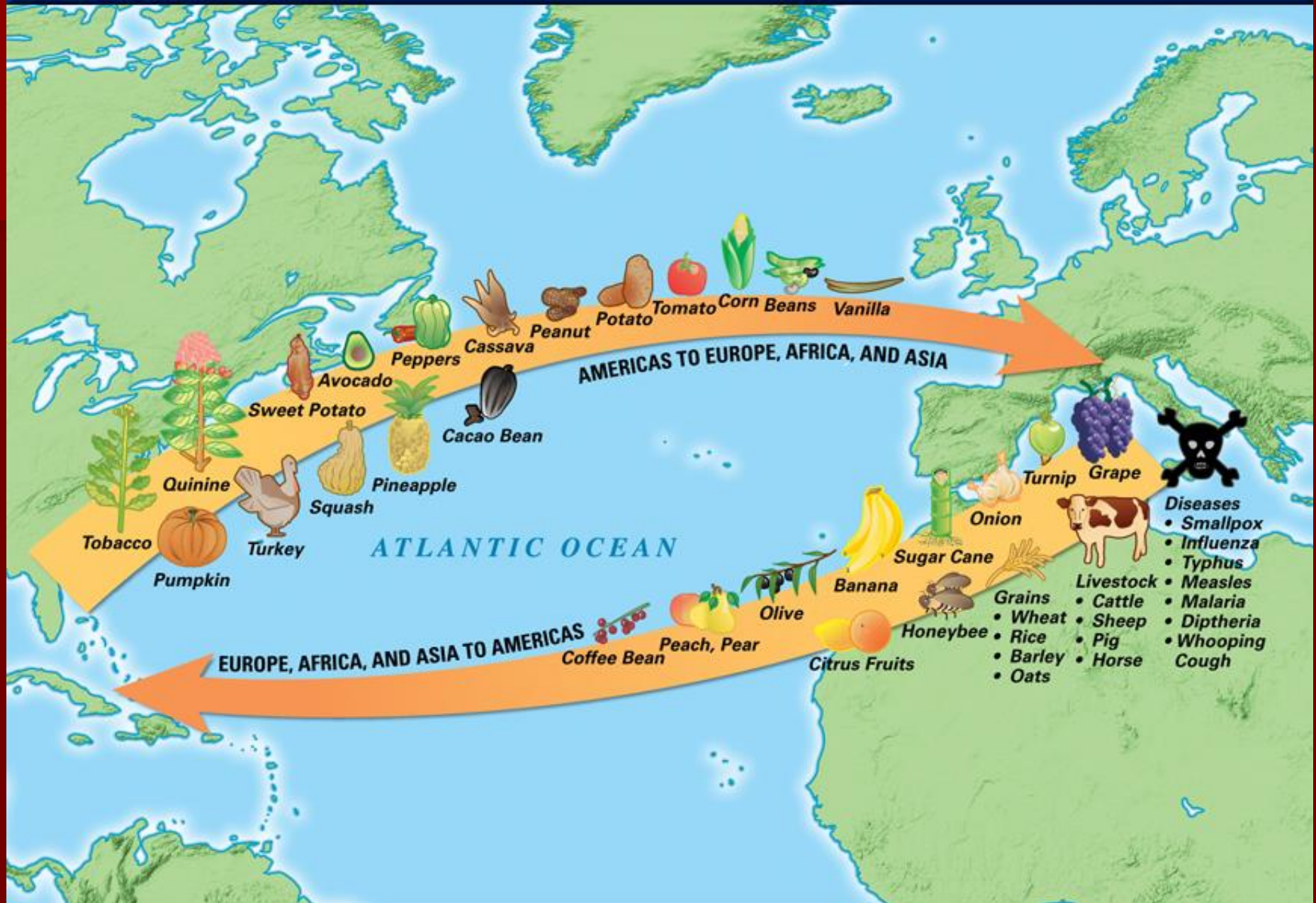
NEW EDITION



Alfred W. Crosby

1989 –  
the history  
of organisms  
moving around

# Columbian Exchange





First depiction of maize, in Leonhart Fuchs' herbal *De Historia stirpium comentarii insignes...*, published in Basle, Switerland in 1542.

# Industrial Food Production – how modernization changes everything





# Factories in the Fields

- New financial arrangements – investment farming; national and international marketing
- Growth of scientific expertise – with government support and expanded knowledge-transfers
- New kinds of seeds, monocultures, increased inputs
- Production by machine

**Corn – Now everywhere – but especially in Americans**



# Corn and Industrial Farming

- The development of hybrid corns – one of the most important technological developments in American history – enormous increases in productivity

As well as new industrial methods for processing corn -- wet processing which breaks corn into its chemical constituents

# Corn in Everything

Of the 45,000 items in a modern American supermarket, more than a quarter contain some

Form of corn – even when there is no corn in the produce section, you’ll find in other forms – in the wax on cucumbers to make them shine, in the pesticide responsible for the perfect form of the vegetables, even in the coating on the container used to ship vegetables.

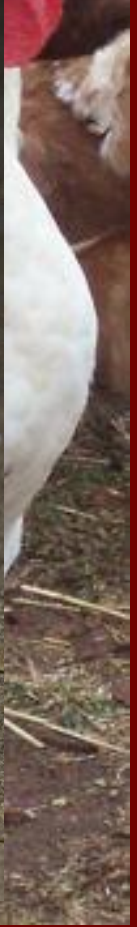
Native Americans who grew corn called themselves “corn walking” – but the modern American, who may think of the most important American foods as beef and potatoes, has more corn in him than anyone ever did

Americans are “corn walking”













Red Junglefowl (*Gallus gallus*) in Pasir Ris Park, edge of mangroves

John Lynn





Black Langshan Cockerel  
Tamara Staples



White Leghorn Bantam Cock  
Tamara Staples



Porcelain Belgian Bearded D'ucle Bantam Pullet

Tamara Staples



Silver Duckwing Modern Game Large Fowl Hen  
Tamara Staples





## LỊCH SỬ VỀ DỊCH CÚM

Có ba đại dịch cúm trong thế kỷ 20

**Năm 1917-18:** Dịch cúm Tây Ban Nha, lây lan ra tất cả các Đại lục, số lượng người bị nhiễm chiếm 25-30% dân số thế giới. Hậu quả là 20-40 triệu người chết – bằng số nạn nhân trong Đại chiến thế giới thứ nhất.

**Năm 1957-58:** Dịch cúm châu Á, 1-2 triệu người chết

**Năm 1968-69:** Dịch cúm Hồng Kông, 1 triệu người chết

DỊCH CÚM  
GIA CẦM HIỆN NAY

Bắt đầu vào cuối năm 2003 ở 8 nước Cam-pu-chia, Thái Lan, Indonesia, Nhật Bản, Lào, Hàn Quốc, Thái Lan và Việt Nam, tính đến nay có 60/108 người bị nhiễm bệnh đã tử vong; hơn 100 triệu gia cầm bị chết và tiêu hủy. Việt Nam đang là nước bị thiệt hại nặng nề nhất. Nếu đại dịch xảy ra thì sẽ có khoảng 8,2 triệu người nhiễm và 820 nghìn người tử vong.

## HÃY...

- Tự giác phòng chống dịch là bảo vệ bạn và gia đình bạn.
- Tự giác không ăn tiết canh gia cầm, gia súc và bất cứ chế phẩm nào từ gia cầm, gia súc.
- Thông báo ngay cho cán bộ thú y và chính quyền địa phương khi thấy hiện tượng cúm gia cầm.
- Đưa người bệnh đến trạm y tế và cách ly tránh lây lan sang cộng đồng và người thân nếu thấy có các triệu chứng nhiễm cúm gia cầm.

2003-04 and 2005-06  
Avian flu epidemics in  
Vietnam – 45 million birds  
Culled in the first season,

H5N1 virus

**DANGER!**  
(beware of  
chickens)



# Zoonosis

- Zoonotic diseases – in which animals are co-hosts, or the source of a disease that can be transmitted to humans
- Ebola, hantavirus, HIV, rabies, brucellosis, e.coli, salmonella
- Pathogens might be viruses, bacteria, or fungi
- Influenza viruses and contagion



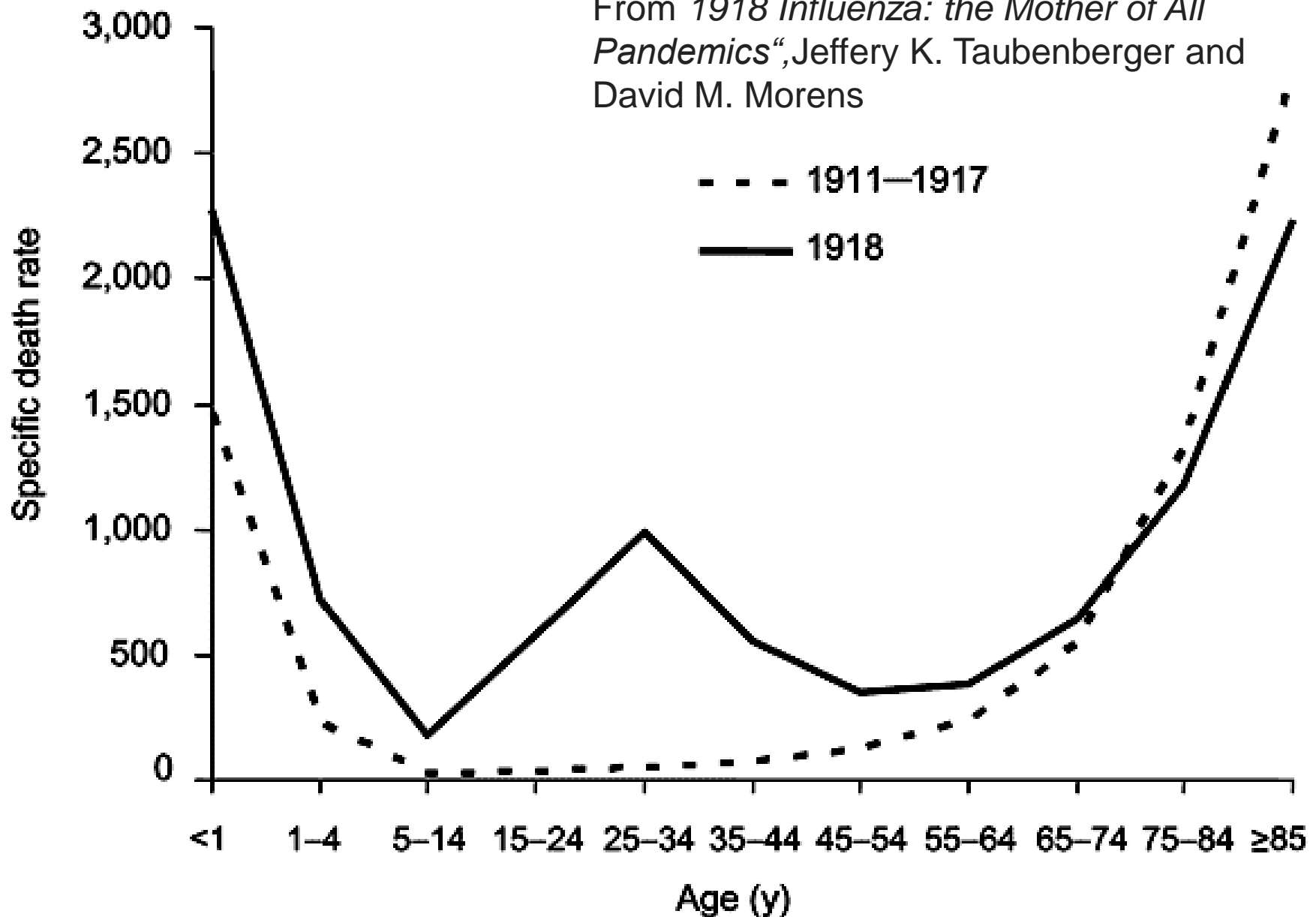
Historical photo of the 1918 Spanish influenza ward at Camp Funston, Kansas

# 1918 Influenza Pandemic

(January 1918 – December 1920)

- (also known as the Spanish flu) -- infected 500 million people world-wide -- even on remote sites in the Arctic and South Pacific islands – with deaths of 50 to 100 million (three to five percent of the world's population) – more than WWI – altogether a deadly “natural disaster”

From *1918 Influenza: the Mother of All  
Pandemics*, Jeffery K. Taubenberger and  
David M. Morens









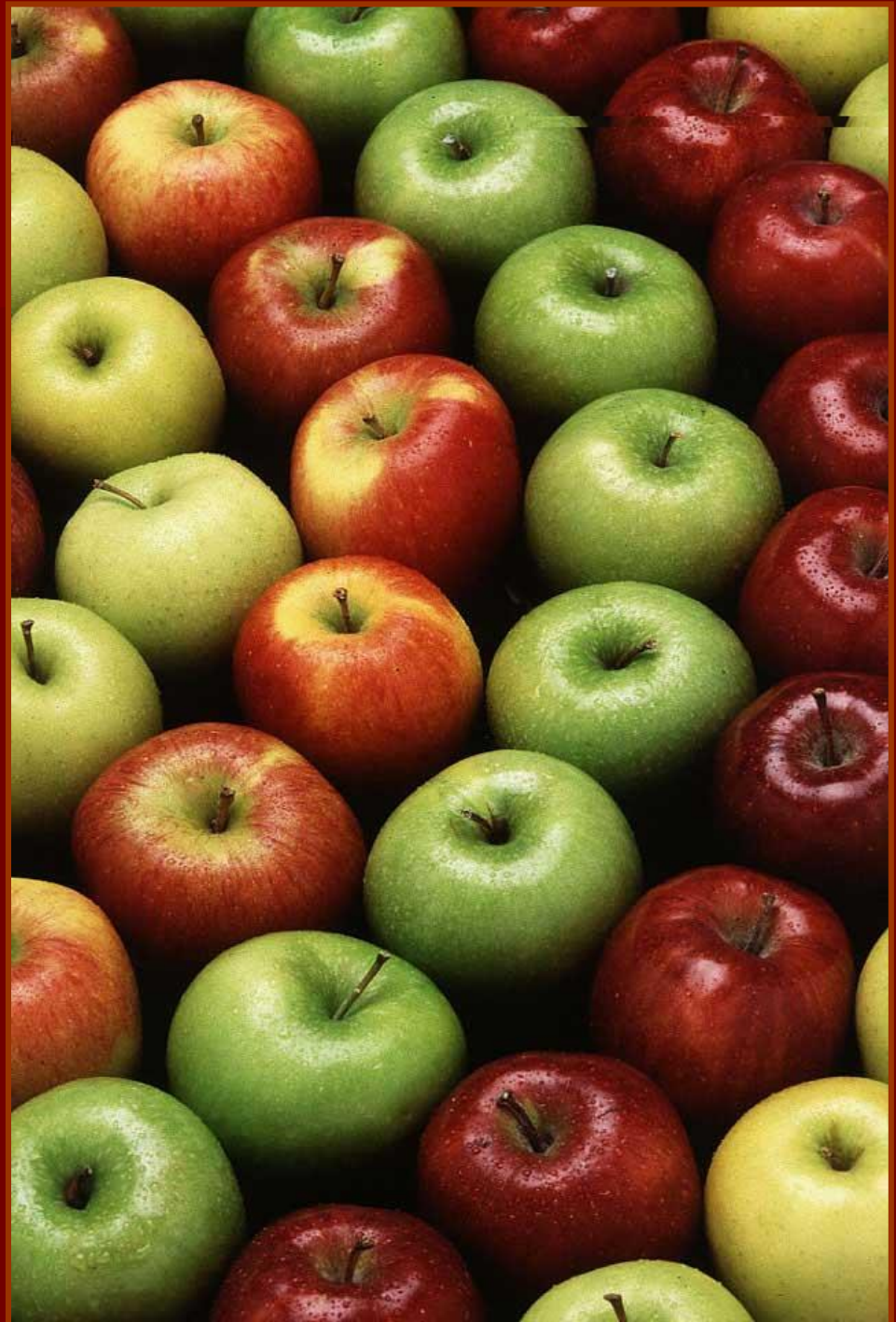
Charoen Pokphand Group  
CP Thailand

# Avian Flu and the response by WHO, FAO, and other organizations

- Transformed the institutions and approaches to emerging diseases in Vietnam – linked them to international epidemiological initiatives, but with some cultural differences.
- Transformed the production of chickens – opened the door for the industrial production of chicken and the growth of the industry, put additional pressures on traditional husbandry, changed consumer habits and spurred the growth of modern



Apple Nation  
American  
sweets



# Apples made native -- Johnny Appleseed



- Pioneers and apples
- *Heterozygous* – apples fall very far from the parents – are not true to the parents
- Starting apple trees from cuttings
- Apples and apple jack on the American frontier

“An apple a day keeps the doctor away” – is a 20<sup>th</sup> century myth – and advertising pith



# Apples in India

## From the *Hindu Business Line* Washington Apples expects to double exports to India

**CHENNAI, APRIL 4, 2017**

Washington Apples produce will flood India from September, with a record import till August 2018, said Rebecca Lyons, International Marketing Director, Washington Apple Commission, a self-governing body of growers and packers.

Imports of Washington Apples is likely to double this year to nearly 5.5 million tonnes, she told newsmen. “We had a bumper harvest last year,” she said. Mexico is the top importer of Washington Apples, followed by Canada, Taiwan and India.

### Fresh Washington Apple



**Product Type:** Fresh

With their fresh red outer cover and sweet, juicy taste, Washington Apple is amongst the most consumed varieties of Apple in America. Fresh Washington Apple proves to be of great help in reducing the **more..**



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