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Challenges in Agriculture's Producer-Public Interface: Perspectives of an Economist

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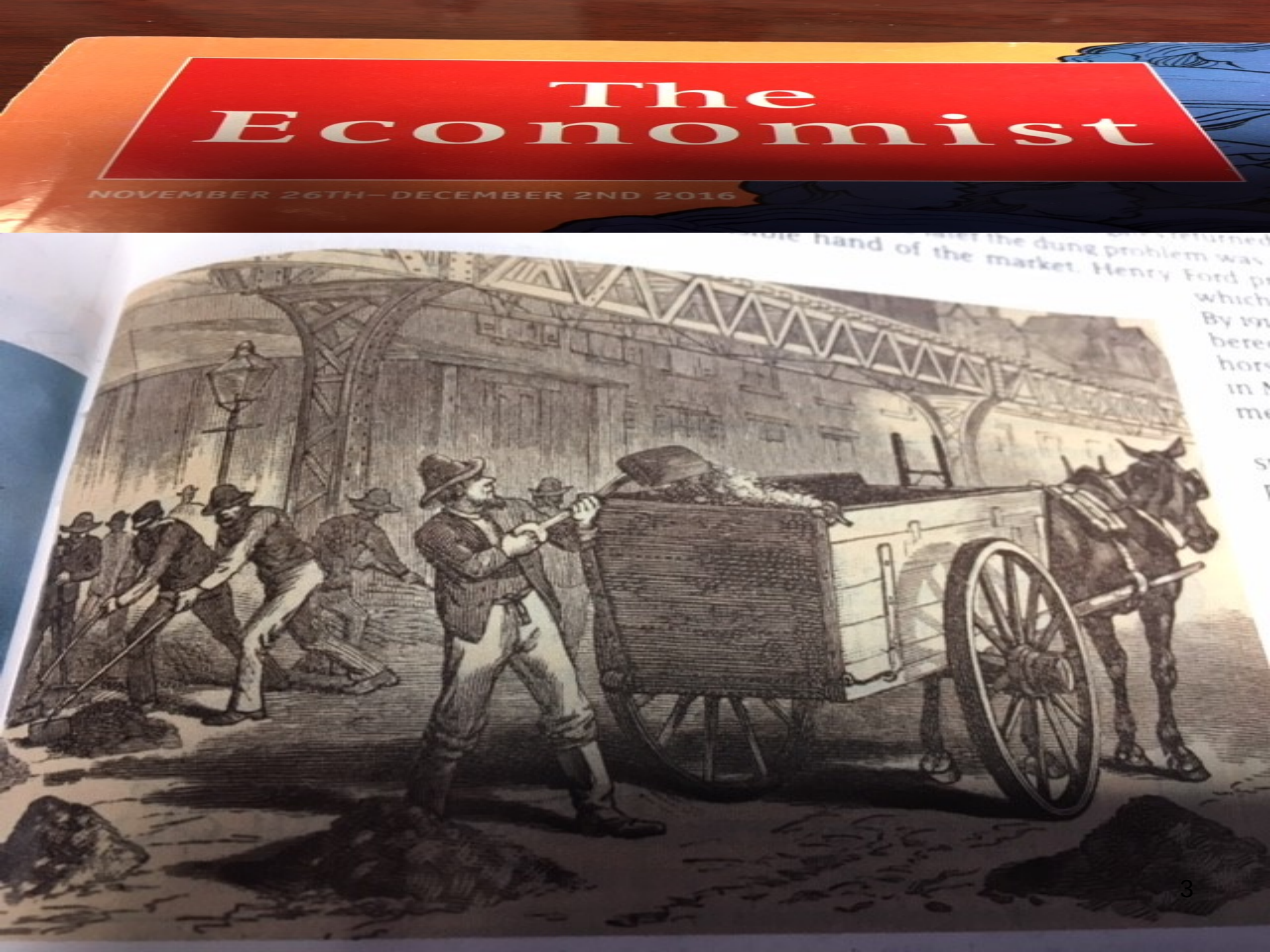
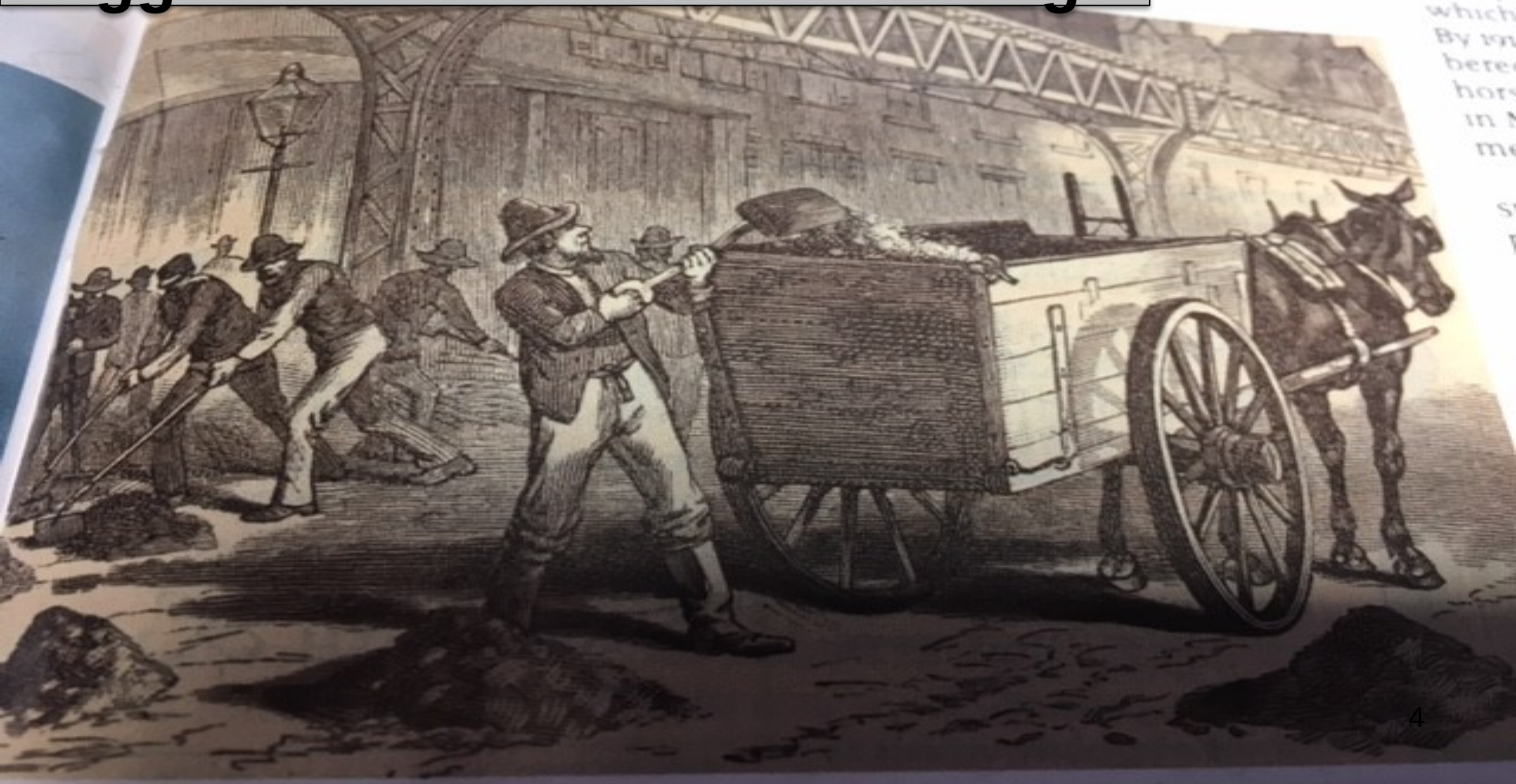
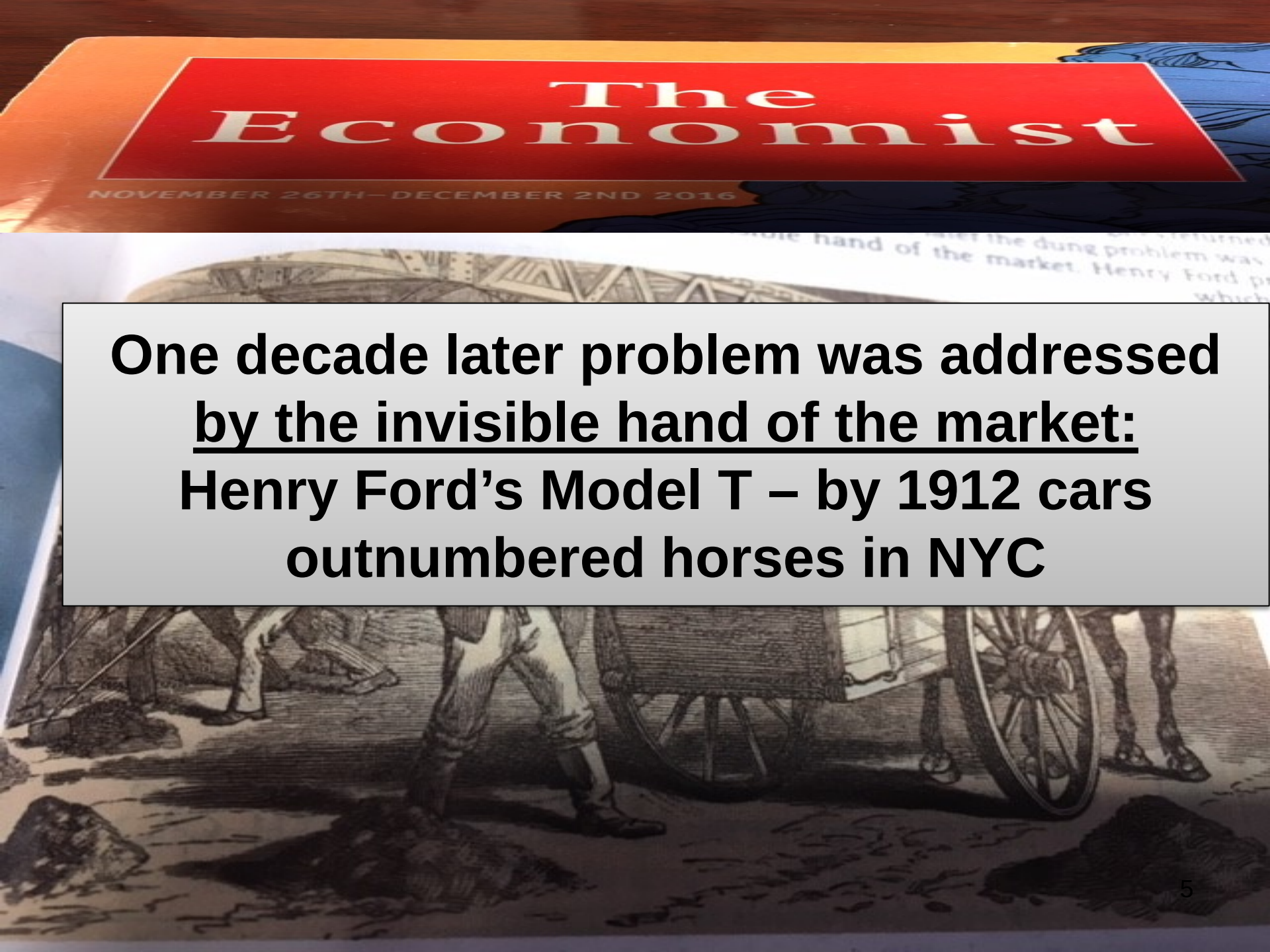

The Economist
NOVEMBER 26TH–DECEMBER 2ND 2016

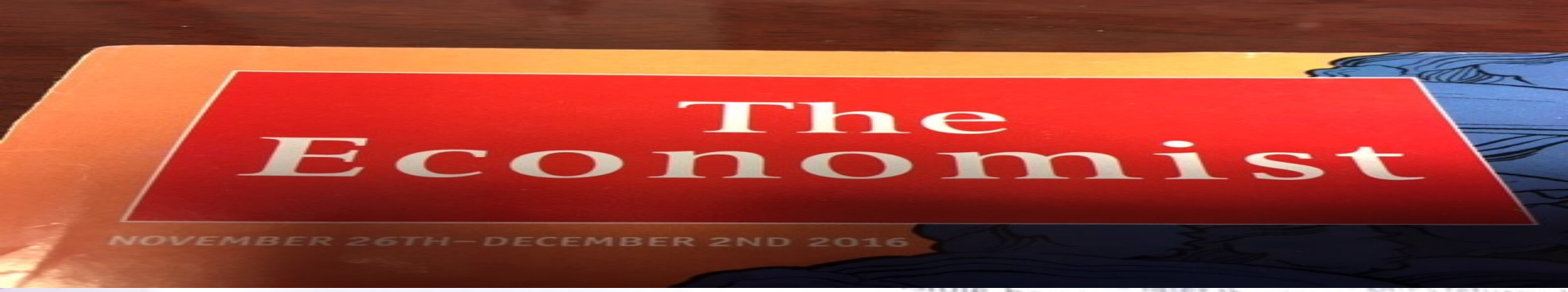
<u>300k horses in London in 1900</u>

“most malodorous environmental challenge facing the world’s biggest cities … was horse dung”





One decade later problem was addressed <u>by the invisible hand of the market:</u> Henry Ford's Model T – by 1912 cars outnumbered horses in NYC



100 Years after being viewed as an <u>environmental savior:</u>

oil is viewed increasingly as horse dung used to be – a menace to public health and the environment

Everything is in the Eye (and point in time) of the Beholder

- Over time:
  - Relative view on problems change (food *availability* vs. food *type* – Maslow's hierarchy of needs*)*
  - Scientific ability & Public acceptance change
    - Consumers & Producers change views
- Challenges arise & are addressed all the time

Innovation is hard to predict:

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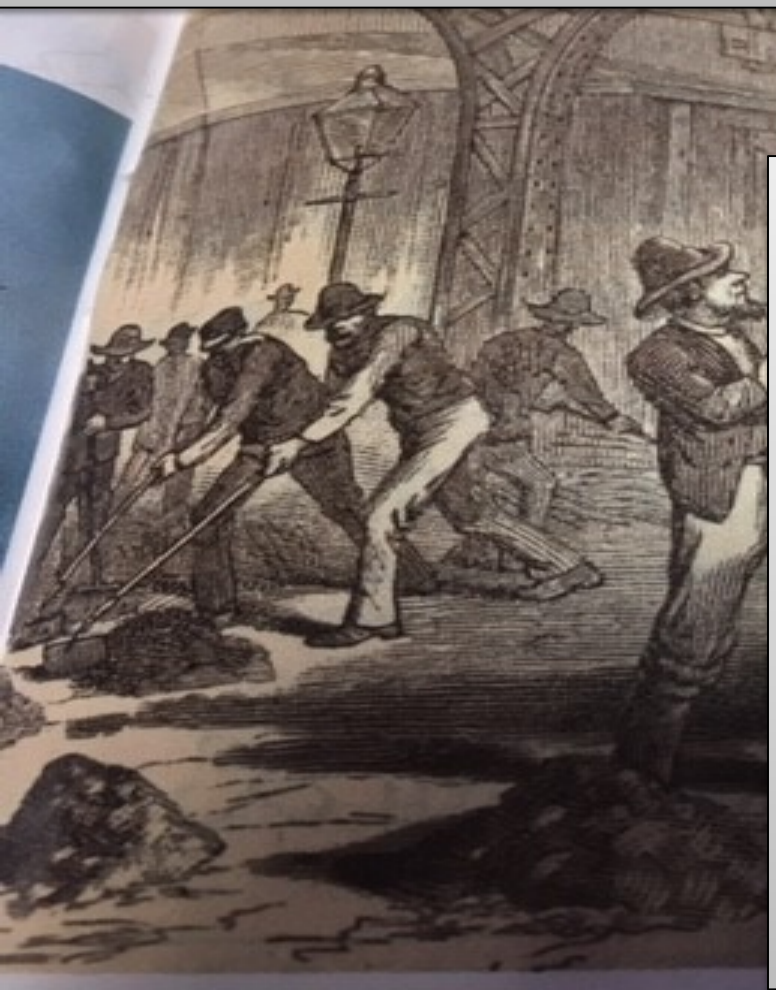

GT:

Listen to consumers & customers for signals of need but do not focus on "tweaks" to status quo

GT Situation Summary

- Current challenges can be addressed ***IF*** we:

  1) Accurately recognize the challenge

  2) Actively pursue solutions

  3) “Let markets work”

GT Situation Summary

- Current challenges can be addressed ***IF*** we:

1) Accurately recognize the challenge
   - ❑ GT: Denial & “educating the public” likely not fruitful

2) Actively pursue solutions
   - ❑ GT: Avoid “tweaks” / Innovation needed at times

3) “Let markets work”
   - ❑ GT: Minimize regulatory & policy interference

Changes in Consumer "Signals"

- We must appreciate essential role of consumer demand & customer product acceptance

–Avoid "talking at" consumers & instead listen (2 ears & 1 mouth):

Remember who holds the $$$

Changes in Consumer "Signals"

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  - Complex and changing all the time

Changes in Consumer "Signals"

- We must appreciate essential role of consumer demand & customer product acceptance
  - Complex and changing all the time
  - **In agriculture:**
    - **increasingly involves "social issues"**
    - **calls to document, verify, and adjust "conventional" production practices**

Ongoing calls for change, verification, &/or improvement:

Credence Attributes

- Food safety
- Environmental impact
- Animal Welfare
- Origin labeling
- Antibiotic &/or Hormone use

Other Attributes

- Price
- Freshness
- Taste
- Nutrition
- Health
- Convenience

Lister et al. (2017)

- "Social Issues" less important in purchasing decisions than:
  - Safety
  - Freshness
  - Taste
  - Nutrition
  - Health
  - Price

Lister et al. (2017)

Importance Shares	
	Ground Beef
Safety	21%
Freshness	20%
Taste	12%
Health	12%
Nutrition	8%
Price	7%
Hormone Free/Antibiotic Free	7%
Animal Welfare	5%
Origin/Traceability	3%
Environmental Impact	3%
Convenience	2%

41%

18%

Lister et al. (2017)

- **"Social Issues"** < safety, freshness, taste, price…

Importance Shares by Product				
	Ground Beef	*Beef Steak*	*Chicken Breast*	*Milk*
Safety & Freshness	41%	37%	39%	38%
Taste, Health, Nutrition, Price, Conv	41%	47%	44%	45%
HF/AF, AW, Origin/Tr, Env	**18%**	**16%**	**17%**	**17%**

Lister et al. (2017)

- **Heterogeneity must also be appreciated**

Importance Shares by Product and Population Group				
	Ground Beef		*Beef Steak*	
	Group 1	Group 2	Group 1	Group 2
Safety & Freshness	42%	40%	35%	37%
Taste, Health, Nutrition, Price, Conv	46%	39%	55%	44%
HF/AF, AW, Origin/Tr, Env	**12%**	**21%**	**11%**	**19%**
Class Size:	31%	69%	32%	68%

Current Situation

- Importance of attributes is clear
- **HOW** public wants outcomes achieved is less clear
  - *May also be changing over time…*

Economic Realities Going Forward

- Center for Food Integrity's Sept. 4, 2013 tweet:

  "Science tells us if we can do something.

  Society tells us if we should do it."

➢ Think about beta-agonists, feeding GM corn, gestation stalls, laying hen cages, handling techniques, euthanasia practices, …

Economic Realities Going Forward

- Outcomes will only partially align with “best science” approaches or recommendations

  - Public will give license to utilize only a subset of available production options that ‘technically work’

  - Economic & political optimality critical to see

Economic Realities Going Forward

- Outcomes will only partially align with “best science” approaches or recommendations
  - Vote-buy disconnect will persist

Economic Realities Going Forward

- Outcomes will only partially align with “best science” approaches or recommendations
  - Vote-buy disconnect will persist

Table 2. Willingness to Vote for Restrictions and to Pay Premiums, December 2013

Production Practice	Vote to Ban/Limit	Pay a Premium
Limit antibiotic use for cattle to only disease treatment	70.9%	48.0%
Ban cattle castration without use of pain control	66.1%	35.9%
Ban use of sow gestation stalls in the swine industry	51.3%	34.9%
Ban use of laying hen cages in the egg industry	49.7%	40.5%

- Short-term “unfunded mandates” will continue…

Will Consumers Pay for Changes?

- **Not the only question we must consider…**

Will we survive if we do <u>not</u> recognize, adapt, and evolve to changes?

Who wants to go home with a new phone?

Who wants to go home with **THIS** phone:

Sources: http://imgkid.com/old-rotary-phone.shtml http://www.gizmag.com/mobile-pnone-40-year-anniversary-photos/25677/ http://www.cellphonereviews.com/who-invented-the-cell-phone/ http://science.howstuffworks.com/innovation/inventions/who-invented-the-cell-phone.htm

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Consider how much phones have changed…

Sources: http://imgkid.com/old-rotary-phone.shtml http://www.gizmag.com/mobile-pnone-40-year-anniversary-photos/25677/ http://www.cellphonereviews.com/who-invented-the-cell-phone/ http://science.howstuffworks.com/innovation/inventions/who-invented-the-cell-phone.htm

Consider how much MORE phones WILL change…

?

Sources: http://www.techradar.com/us/news/wearables/apple-iwatch-release-date-news-and-rumours-1131043

How should we think about meat-livestock production methods?

Must directly consider:

1) **Effectiveness**

2) **Feasibility**

3) **Acceptability**

Effectiveness, Feasibility, & Acceptance

- Just because something “works” doesn’t mean it will be implemented
  - Feasibility, effectiveness, & net econ. value (reflects acceptance) are key
    - *E.coli vaccines for fed cattle are prime example*

Effectiveness, Feasibility, & Acceptance

- Just because something “works” doesn’t mean it will be implemented

➢ ***Key rub between “hard- and soft-sciences”***

Effectiveness, Feasibility, & Acceptance

- Why create something with limited odds of industry adoption and public acceptance?
  - *How would investors react?*

“The consumer is always right”

"The consumer is always right"

Should it really be:

"Consumers and customers are not always right, they are just never wrong" ?

#AcceptanceMatters

Take-Home Message

- Public's role in meat-livestock production is here to stay
  - Documenting, verifying, &/or changing practices is increasingly a cost of doing business

- The industry can effectively respond if it:
  1. Accurately recognizes the challenge
  2. Actively pursues solutions
  3. Lets markets work

Take-Home Message

- Our approach to production will change with:
  - Technology availability
  - Customer & consumer perceptions & preferences
  - Market signals & Regulations

Take-Home Message

- Our approach to production will change with:
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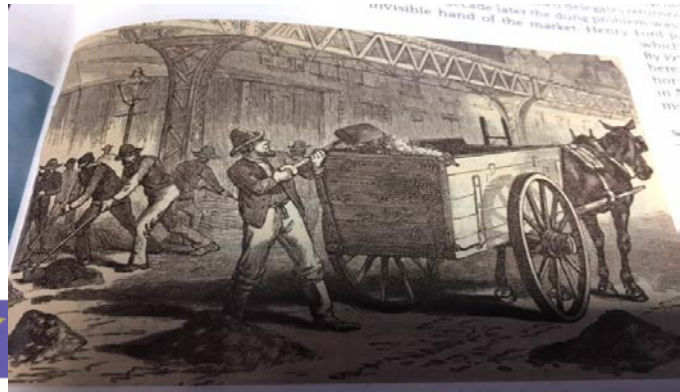
  - Customer & consumer perceptions & preferences
  - Market signals & Regulations

AND THAT'S OKAY!!!



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AMERICAN SOCIETY OF ANIMAL SCIENCE

Article Navigation

Consumer acceptance of livestock farming around the globe

Gesa Busch ✉, Achim Spiller

Animal Frontiers, Volume 8, Issue 1, 11 April 2018, Pages 1–3, https://doi.org/10.1093/af/vfx005

Published: 11 April 2018

"All authors in this issue describe an "ongoing tension between production systems hesitant (in aggregate at least) to change and growing end-user desires for transparency and/or adjustment" (Tonsor, this issue)." pg1

More information available at:

This presentation will be available in PDF format at:
http://www.agmanager.info/about/contributors/individual/tonsor.asp

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AgManager.info website is a comprehensive source of information, analysis, and decision-making tools for agricultural producers, agribusinesses, and others. The site serves as a clearinghouse for applied outreach information emanating from the Department of Agricultural Economics at Kansas State University. It was created by combining departmental and faculty sites as well as creating new features exclusive to the AgManager.info site. The goal of this coordination is to improve the organization of web-based material and allow greater access for agricultural producers and other clientele.

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- Garrett Lister, Glynn T. Tonsor, Marcus Brix, Ted C. Schroeder & Chen Yang (2017) Food Values Applied to Livestock Products, *Journal of Food Products Marketing*, 23:3, 326-341, DOI: 10.1080/10454446.2014.1000436

Lister, G. et al. 2017 "Food Values Applied to Livestock Products." *Journal of Food Products Marketing*.

- Food Values Descriptions

Freshness	The expected freshness of the product as indicated by expiration date and visual perception of the food product
Taste	The extent to which consuming the product is appealing to the senses including flavor, smell, and texture
Price	The price per unit paid for the food product
Safety	With proper handling, consuming the product will not cause illness
Convenience	The ease with which the product can be prepared and/or consumed including preparation and cooking time
Nutrition	The extent to which consuming the product provides essential nutrients such as protein, carbohydrates, vitamins, and minerals. Also, how consuming the product provides necessary calories and energy, as part of a daily diet
Health	The extent to which consuming the product positively contributes to long term health including the amount and type of fat and cholesterol in the product
Origin / Traceability	The extent to which the locations and identities of producers and processors are known
Hormone Free / Antibiotic Free	Whether the animal source of the food product was produced using added hormones or antibiotics
Animal Welfare	The extent to which the animal source of the food product was raised using animal friendly physical and psychological means
Environmental Impact	The extent to which production and marketing of the food product impacts the environment locally, regionally, and globally