A Systems Approach in Addressing AMR: What animal ag model for the future?

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IATP Europe
10-11 November, 2016
Global antimicrobial use in food animals (mg per 10km pixel)
Global Average Annual Consumption of Antimicrobials per Kg of animal produced

2010 Baseline:

45 mg·kg$^{-1}$ (cattle)

148 mg·kg$^{-1}$ (chicken)

172 mg·kg$^{-1}$ (pigs)
Projections for 2010-2030

• global consumption of antimicrobials will increase by 67%:

• from 63,151 tons (± 1,560 tons)

• to 105,596 tons (± 3,605 tons)
Middle-income countries (2010-2030)

Increase consumption of abx by 1/3:

• shifting production practices in middle-income countries
• largescale intensive farming operations replace extensive farming systems
• routine sub-therapeutic use of antimicrobials in these systems
BRICS

• 99% increase in abx consumption

• seven times the projected population growth in this group of countries
2/3 increase in abx consumption (2010-2030)

Due to the sheer numbers of animals produced for food
Is this a question of Food Security, Equity or lack of Vision?

<table>
<thead>
<tr>
<th>India’s Poultry Meat Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
</tr>
<tr>
<td>Per capita (kg)</td>
</tr>
<tr>
<td>Total in kilotons</td>
</tr>
</tbody>
</table>

http://www.oecd.org/site/oecd-faoagriculturaloutlook/

<table>
<thead>
<tr>
<th>Estimates of Poultry Meat Production from Select States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Number of Animals Slaughtered (in 000)</td>
</tr>
<tr>
<td>2007-08</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
</tr>
<tr>
<td>Maharashtra</td>
</tr>
<tr>
<td>Haryana</td>
</tr>
<tr>
<td>West Bengal</td>
</tr>
<tr>
<td>Tamil Nadu</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Source: State/UT Animal Husbandry Departments
Food Security: Evidence of Double Burden (obesity and malnutrition)

- India: 15.2% of Indian population undernourished yet rising incidence of obesity

- Chinese health guidelines: reduce meat consumption by 50%

- International goal of meat consumption: 90g/per person
Consumption Trends

- Dietary Guidelines (U.S.): significant reduction in red meat and processed meat
- A dramatic shift in the market towards abx free poultry and a push towards abx free meats
- Increasing awareness amongst consumers about routine use of abx in meat
- Dramatically increased awareness that this is a serious public health risk in last few years
Markets shifting in spite reg. lag
CHAIN REACTION

HOW TOP RESTAURANTS RATE ON REDUCING USE OF ANTIBIOTICS IN THEIR MEAT SUPPLY

A REPORT BY:

Friends of the Earth
NRDC
Keep Antibiotics Working
Consumers Union
Center for Food Safety
FACT
### Top Chain Restaurant Antibiotics Policies & Sourcing Practices*

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chipotle</td>
<td>Panera Bread</td>
<td>Chick-fil-A</td>
<td>Dunkin' Donuts</td>
<td>McDonald's</td>
<td>Wendy's</td>
</tr>
<tr>
<td>Burger King</td>
<td>Denny's</td>
<td>Pizza Hut</td>
<td>Papa John's</td>
<td>Starbucks Coffee</td>
<td>Olive Garden</td>
</tr>
<tr>
<td>Subway</td>
<td>Taco Bell</td>
<td>KFC</td>
<td>Applebee's</td>
<td>Sonic</td>
<td>Chili's</td>
</tr>
<tr>
<td>Jack in the Box</td>
<td>Dairy Queen</td>
<td>IHOP</td>
<td>Outback Steakhouse</td>
<td>Little Caesars</td>
<td></td>
</tr>
</tbody>
</table>

*Information in this graphic regarding companies’ antibiotics policies and/or meat purchasing practices reflects “Reported Information” which comes from companies’ responses to the survey, follow up emails, public statements made by the companies, and/or efforts by the report’s authors to locate such policies online.*

**Institute for Agriculture and Trade Policy**
Implications of these trends

• Education and Awareness on nutrition (overconsumption of meat---red and processed meat)
• Education and Awareness of use of abx in meat and dairy production and public health risk
• Addressing the model
Political Economy of this rise in consumption
Figure 6. U.S. Dairy Exports 2008 to 2014

*Volume includes SMP, WMP, food preps, MPC, whey, cheese, butterfat and lactose

Lilliston, B. *Big Meat Swallows the Trans Pacific Partnership* (IATP 2014)
Extreme Power: The top ten process much more than the next ten combined
Figure 3. U.S. Pork Exports


Lilliston, B. *Big Meat Swallows the Trans Pacific Partnership* (IATP 2014)
Free Trade Agreements

With the continuous proliferation of free trade agreements (FTAs) in the Asia and Pacific region, the ARIC FTA database tracks and provides a comprehensive listing of bilateral and plurilateral FTAs with at least one of ADB's 48 regional members as signatory. It covers all agreements at all stages of development, from those under study or consultation to those in force.

FTAs Trends | FTA by country/economy | FTA by group | All FTAs | Comparative FTA toolkit

Lists the 48 ADB-member countries/economies in Asia and the Pacific and the FTAs they are engaged into within or outside the region.

Afghanistan (2 FTAs)
Armenia (10 FTAs)
Australia (19 FTAs)
Azerbaijan (10 FTAs)
Bangladesh (6 FTAs)
Bhutan (3 FTAs)
Brunei Darussalam (11 FTAs)
Cambodia (8 FTAs)
China, People's Republic of (23 FTAs)
Cook Islands (4 FTAs)
Fiji (5 FTAs)
Georgia (13 FTAs)
Hong Kong, China (6 FTAs)
India (28 FTAs)
Indonesia (17 FTAs)
Japan (24 FTAs)
Kazakhstan (14 FTAs)
Kiribati (4 FTAs)
Korea, Republic of (25 FTAs)
Kyrgyz Republic (10 FTAs)
Lao PDR (10 FTAs)
Malaysia (22 FTAs)
Maldives (2 FTAs)
Marshall Islands (5 FTAs)
Micronesia, Federated States of (5 FTAs)
Mongolia (1 FTA)
Myanmar (10 FTAs)
Nauru (4 FTAs)
Nepal (3 FTAs)
New Zealand (18 FTAs)
Pakistan (18 FTAs)
Palau (4 FTAs)
Papua New Guinea (6 FTAs)
Philippines (11 FTAs)
Samoa (4 FTAs)
Singapore (33 FTAs)
Solomon Islands (5 FTAs)
Sri Lanka (8 FTAs)
Taipei,China (9 FTAs)
Tajikistan (8 FTAs)
Thailand (22 FTAs)
Timor-Leste (0 FTAs)
Tonga (4 FTAs)
Turkmenistan (6 FTAs)
Tuvalu (4 FTAs)
Uzbekistan (10 FTAs)
Vanuatu (5 FTAs)
Viet Nam (16 FTAs)
### Table 13. Four-Firm Concentration in Livestock Slaughter by Type of Livestock, Selected Years, 1980-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Steers &amp; Heifers (%)</th>
<th>Sheep &amp; Lambs (%)</th>
<th>Hogs (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>36</td>
<td>56</td>
<td>34</td>
</tr>
<tr>
<td>1995</td>
<td>81</td>
<td>72</td>
<td>46</td>
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<td>2000</td>
<td>81</td>
<td>67</td>
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<td>2002</td>
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<td>2009</td>
<td>81</td>
<td>70</td>
<td>63</td>
</tr>
<tr>
<td>2010</td>
<td>85</td>
<td>65</td>
<td>65</td>
</tr>
</tbody>
</table>
Number of U.S. Farms With Hogs 1983-1999. (IATP)

Rural Decline needs policies for revitalization and anti-trust
A Systems and Multisectoral Approach
Coherent Multi-Sectoral Policies

- Trade Policy
- Anti-trust and regulation of buyer power
- Agriculture Policy
- Rural Development Policy
- Health and Nutrition Policy
Trade and Investment Treaties Must Not

- Undermine countries’ abilities to effectively regulate antibiotic use and antibiotic resistance

Multi-sectoral assessment needed
Assessment of Free Trade Agreements (by WHO and member states) on:

• inadequate regulations on the use, promotion and marketing of antibiotics
• curtailing antibiotic resistance and
• creation of further incentives to use antibiotics in food production
Assessment on the impacts of FTAs on:

- dispute settlement regimes such as investor-state
  (ability for corporations to sue governments through arbitration panels)

- Their implications for enacting future regulations to curb antibiotic use and antibiotic resistance (if they curb expected profits of corporations)

- India’s Model Treaty should be scrutinized
New “breed” of FTAs:

• Would be able to set global standards on abx use in food production (primacy of trade over other concerns)

• Harmonization of food standards that favor trade rather than safety

• Instead agreements must appropriately reflect and prioritize public health and environmental concerns--subservient to facilitating greater trade.
Transatlantic Trade and Investment Partnership

TTIP or “TAFTA”
Key Impact

• Chilling Effect of New and Proposed Legislations and Rules,

• Undermine efforts to create desperately needed stronger rules on antibiotic use in the animal industry

• Use of scientific uncertainty to delay rule-making
Asks for WHO

1) Undertake a study that addresses the gaps

2) Assess existing global standard setting on abx use: CODEX, Joint FAO/WHO standards and FAO/OIE guidelines and provide recommendations on:

- Ways to significantly improve CSO participation from South and North
- Significantly strengthen standards in conjunction with financial assistance for developing countries to meet those standards.
Food and Agriculture Policy

- Investment in small producers, animal welfare, extension, risk management for small producers
- Healthy and happy animals do not require routine applications of antibiotics
- Agroecology
- Decentralized markets
- Fair Prices
- Good procurement Policies
Thank You!

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