

Quarterly Trends Update: Food Fraud Compliance and the Implications to Your Business: 3Q-2018

Webinar: Wednesday, September 19, 2018
1:00 to 2:00 PM ET

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College of Veterinary Medicine/ Food Safety



WWW.FoodFraud.MSU.edu Twitter @FoodFraud and #FoodFraud



Food Fraud Curriculum

Massive Open Online Course (MOOC – free, open, online)

- Free, open, online, open to everyone, includes a 'certificate of completion'
- **Food Fraud Overview MOOC** – Open; self-paced
- **Food Fraud Audit Guide MOOC** – Usually monthly
- **Food Defense Audit Guide MOOC** – Usually monthly
- **Training: FFVA & FFPS – June 18, 25 & July 2**

Executive Education (Short-Course)

- Food Fraud Strategy, Quantifying Food Risk with Vulnerability Assessments

Graduate Courses (Online, Three Credits)

- Food Fraud Prevention
- Anti-Counterfeit & Product Protection (Food Fraud)
- Quantifying Food Risk (including Food Fraud)
- Global Food Safety (including Food Fraud)
- Food Protection and Defense (Packaging Module)
- Packaging for Food Safety

Graduate Certificate (Online, Four Courses Each)

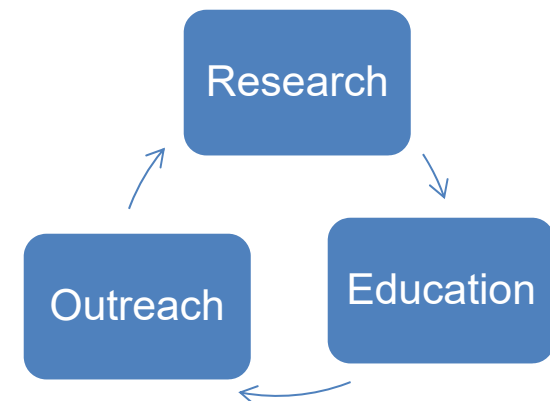
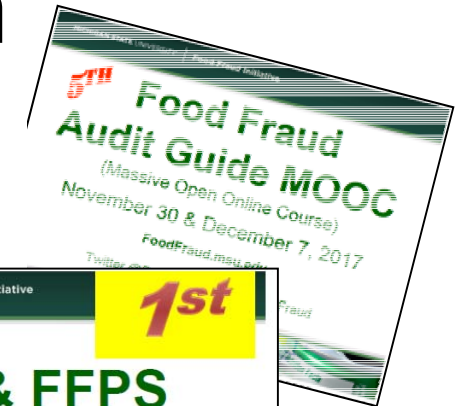
- Certificate in Food Fraud Prevention (Food Safety)

Master of Science in Food Safety (Online)

- www.online.FoodSafety.msu.edu

Certificate in International Food Law

- <https://www.canr.msu.edu/iflr/>



Defining Food Fraud

- **Action: *Illegal* deception for economic gain using food**
 - Consistent with GFSI, EC/EU, UK, ISO, and others...
 - Includes the sub-category of “Economically Motivated Adulteration” or EMA
 - Note: FDA currently defines EMA as a “substance” for “economic gain”
- **Motivation: Economic Gain**
 - “Food Defense” motivation is traditionally harm or terror
 - “Food Defense (FDA/FSMA-IA)” is narrowed to “wide-scale human health harm”
- **Effect:**
 - Economic *Threat*
 - Public Health *Vulnerability or Threat*

Examples

- Horsemeat in ground beef
- Peanut Corporation selling known contaminated product
- Diluted or extra virgin olive oil
- Melamine in pet food and infant formula
- Over-icing with unsanitary water

- Unauthorized unsanitary repackaging (up-labeling or origin-laundering)
- Cargo Theft reintroduced into commerce/ Stolen products
- Expired product date code tampering or “refreshing”

Reference: Spink & Moyer (2011). Defining the Public Health Threat of Food Fraud, Journal of Food Science

Link to MSU-FFI Glossary:

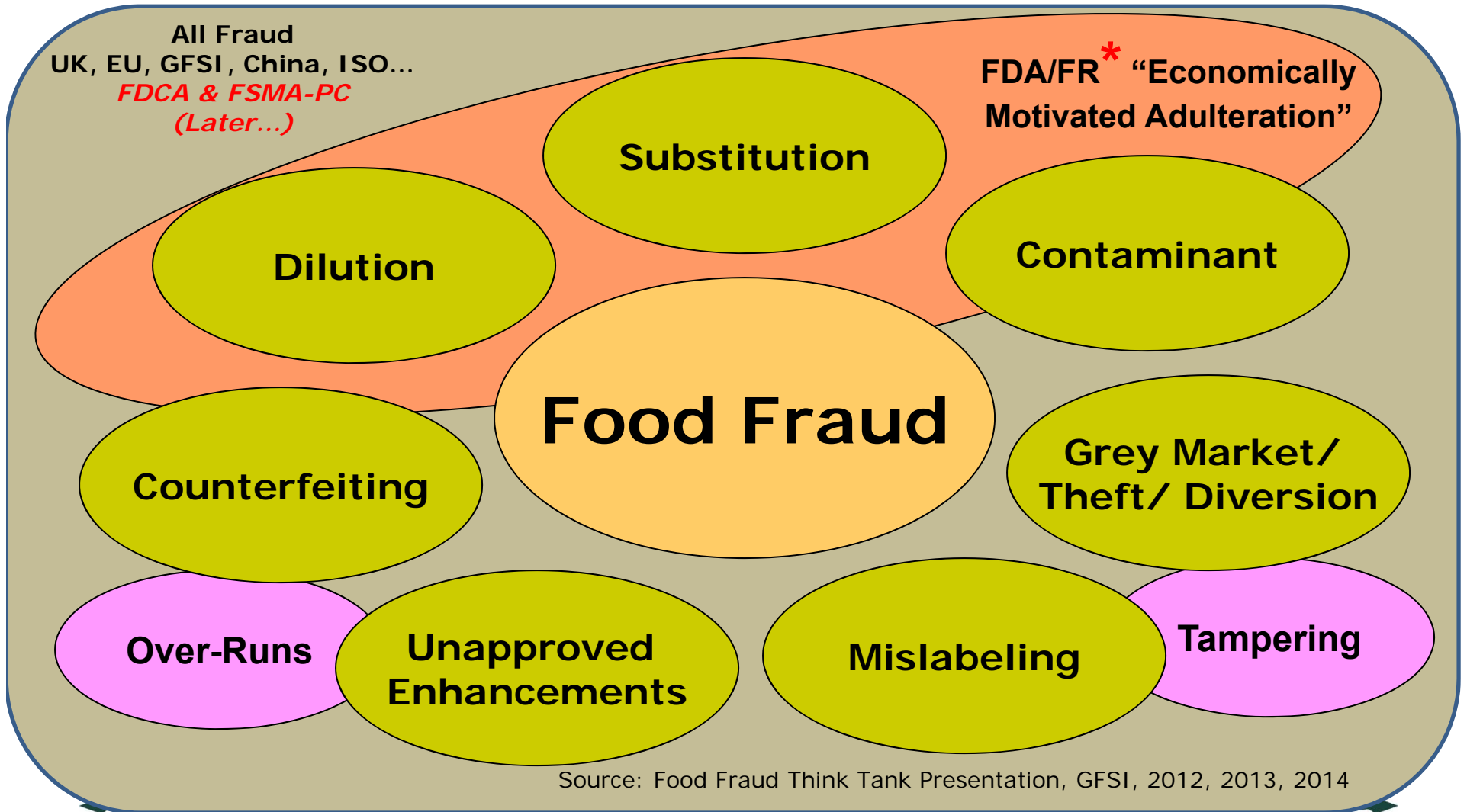
<http://foodfraud.msu.edu/2018/03/20/for-comment-glossary-of-food-fraud-related-terms-03-2018-please-participate/>

GFSI Issue 7 Published

Food Fraud Defined and Scope

- “A collective term encompassing the deliberate and **intentional substitution, addition**,...
- **Tampering...**
- or **misrepresentation (mislabeling)** of food,
- food **ingredients...**
- Or food **packaging**, labelling, **product information** or false or misleading statements made about a product...
- for **economic gain...**
- that could impact **consumer health.**”

What is Food Fraud?



Source: Food Fraud Think Tank Presentation, GFSI, 2012, 2013, 2014

Referenced
and Cited by
FDA/Ostroff
4/ & 10/2017

The Food Risk Matrix

Prevent by Understanding the Motivation

Food Quality	Food Fraud EMA	Motivation Gain: Economic
Food Safety	Food Defense Wide-scale Terrorism	Harm: Public Health, Economic, or Terror
Unintentional	Intentional	
Action		

Source: Adapted from: Spink (2006), The Counterfeit Food and Beverage Threat, Association of Food and Drug Officials (AFDO), Annual Meeting 2006; Spink, J. & Moyer, DC (2011) Defining the Public Health Threat of Food Fraud, Journal of Food Science, November 2011

GFSI Issue 7 Published Food Fraud Terms



FSM AI 21 Food fraud vulnerability assessment

- The standard shall require that **the organisation** has a **documented food fraud vulnerability assessment procedure** in place to identify potential vulnerability and prioritise food fraud mitigation measures.

FSM AI 22.1 Food fraud mitigation plan

- The standard shall require that **the organisation** has a **documented plan** in place that specifies the measures the organisation has **implemented to mitigate** the public health risks from the **identified food fraud vulnerabilities**.

Every 'vulnerability' does **NOT** need a control plan.

FSM AI 22.2 Food fraud mitigation plan

- The standard shall require that **the organization's** Food fraud mitigation plan **shall cover the relevant GFSI scope** and shall be supported by the organisation's Food Safety Management System.

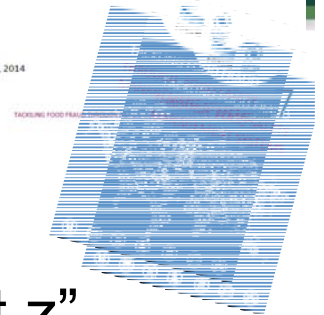
Audit Depth

- ...from “point A” to “point B” not yet all the way to “point z”
- “GFSI is aware that the harmonization and best practices are just now being developed and refined. *A new system that is less than a year old in implementation cannot be expected to be as robust, thorough, or detailed as a system such as HACCP that has been implemented for more than 25 years.*”
 - “The most important step for the food industry is to start addressing food fraud, *and for auditors to start asking the basic questions* on how vulnerabilities were assessed and identified, and a strong mitigation plan thought through.”

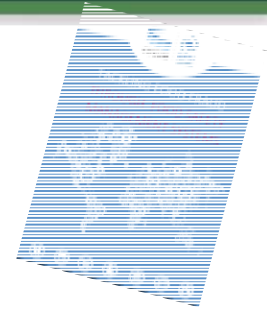
GFSI is aware that the harmonization and best practices are just now being developed and refined. A new system that is less than a year old in implementation cannot be expected to be as robust, thorough, or detailed as a system such as HACCP that has been implemented for more than 25 years. The most important step for the food industry is to start addressing food fraud, and for auditors to start asking the basic questions on how vulnerabilities were assessed and identified, and a strong mitigation plan thought through.

The focus of the auditor should be in assessing the approach taken by the company (is it company-wide? Is it built by a multi-disciplinary team? Is it clearly documented and reviewed regularly? What's the source of information used to support the assessment?).

² GFSI position paper on food fraud, 2014



Incoming Goods & Outgoing Goods - Key Points

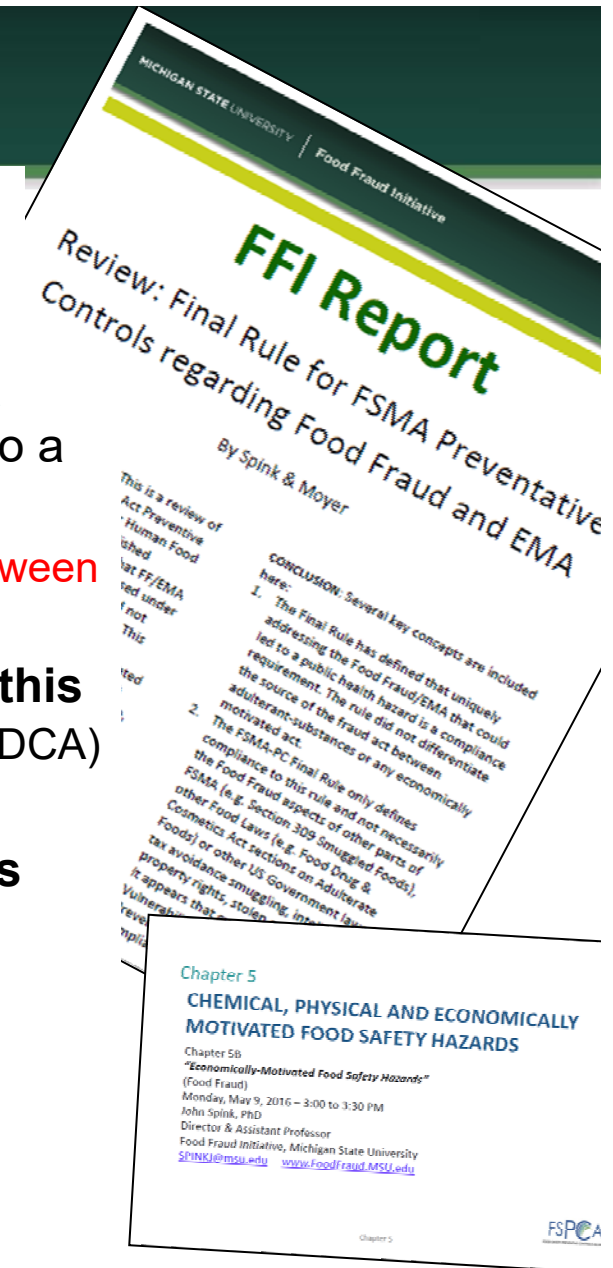


- “All” not necessary “every” or “each”
 - *can cluster into groups... even very big groups*
- Include “Other” to address “all”
 - *admittedly a very broad category... it can be further refined later...*
- *Just get started... and complete an assessment*
 - *Identify future needs...*
 - *Getting to “point B” not all the way to “point Z”*

FSMA Food Fraud/ EMA Preventive Controls Rule

1. Uniquely addressing Food Fraud/EMA that could lead to a public health hazard is a compliance requirement.
 - The rule did **not** differentiate the source of the fraud act between adulterant-substances or any economically motivated act.
2. The FSMA-PC Final Rule only defines compliance to this rule (Refer to the Adulterated Foods & Misbranded Foods in FDCA)
3. It appears that current broad Food Fraud Vulnerability Assessment and Food Fraud Prevention Plan activities will lead to compliance with FSMA-PC for EMA/FF.
 - 1. Unique **Hazard** Assessment
 - 2. Address **Hazard** (Prevention Plan)

<http://foodfraud.msu.edu/wp-content/uploads/2015/09/FDA-FSMA-ERM-FRN-draft-rulemaking-2015-v12-formatted.pdf>



FSMA LAW (above the Final Rule)

Hazard analysis (FSMA 21 CFR 117.130 & 507.33)

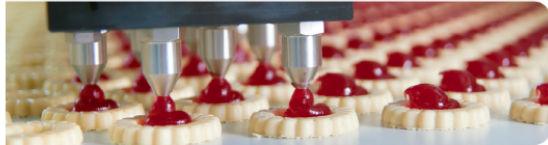
- “(a) (1) you must conduct a hazard analysis to identify and evaluate... known or reasonably foreseeable hazards...”
- “(2) The hazard analysis must be written **regardless of its outcome**”
 - “(ii) The hazard may be unintentionally introduced; or”
 - “(iii) The hazard may be intentionally introduced for purposes of **economic gain**.”
 - Note: a separate Food Fraud assessment is NOT required.
 - Note: an assessment of all vulnerabilities IS required.

Audit Non-Conformance – results and warnings...

QUARTERLY UPDATE

Food Fraud Compliance Requirements: Dates

- GSFI (FSSC, SQF, IFS, BRC) – January 2018
- GFSI (BRC) – July 2015 (1.5 yrs. before GFSI)
- FSMA-Preventive Controls – September 2016
 - “(2) The hazard analysis must be written regardless of its outcome”
- Food Drug & Cosmetics Act Adulterated Foods–
1938
- Sarbanes-Oxley – 2002 and 2007
 - **ALL** risks to earnings are controlled **or disclosed**



FSSC 22000 and Food Fraud Prevention

Jacqueline Southee, FSSC 22000 US Liaison

Food Safety Summit, May 9th 2018

**FSSC
5/9/2018**

Food Fraud Requirements

2.1.4.4.1 Vulnerability assessment

The organization shall have a documented and implemented vulnerability assessment procedure in place that:

- 1) identifies potential vulnerabilities
- 2) develops control measures and
- 3) prioritizes them against the identified vulnerabilities

FSSC 22000 FF & FD Guidance documents

Voluntary support document including:

- Background
- Definitions
- Requirements
- Implementation
- Team and training
- Auditing
- References

Guidance on Food Fraud & Food Defense - 10 April 2018



Non Conformity Grading – FF & FD

- Critical NC
 - FF and FD requirements are completely ignored: no risk assessment done, no plan and not embedded in FSMS; A direct food safety impact observed and/or certification integrity at stake.
- Major NC
 - FF and FD requirements are completely ignored: no risk assessment done, no plan and not embedded in FSMS.
- Minor NC
 - FF and FD requirements considered but the design is incomplete and/or execution not effective and/or not fully embedded in FSMS.

REVIEW: Non-Conformance/ Conformance (FSSC 22000)

- “Incomplete”
 - All type of fraud – stated and demonstrated
 - All products – stated and demonstrated
 - Some method to gather information
- “execution not effective”
 - Does not convince the auditor that you did actually address this.
 - Weak or no methodology
 - Weak or no evidence of action (written? Plan and execution?)
- “or not fully embedded in FSMS”
 - Explain how the assessment and strategy is connected to the overall food safety management system
 - Integrated, calibrated, or correlated assessment

Auditor Perspective

Top FF Non-Conformance:

- **Vulnerability Assessment (62%):** *Nonexistent or inadequate*
- **Product Inspection (21%):** No evidence of incoming verification methods
- **Assurance/Testing (6%):** Lack of tests or assurance actions when materials are being identified at particular risks
- Reference: AIB (2018), GFSI Annual Conference, Tokyo



Organizations mindset:

- *“Suppliers are responsible”*
- but.... **don't know what to do!**

REVIEW: Food Fraud Compliance Requirements: Scope

“Food Fraud Compliance Requirements — The general compliance requirements for Food Fraud prevention are:

1. Conduct a Food Fraud Vulnerability Assessment (Y/N)
2. Written (Y/N)
3. Implement a Food Fraud Prevention Strategy (Y/N)
4. Written (Y/N)
5. Minimally conduct an annual Food Fraud Incident Review (Y/N)
6. Note: Address all types of Food Fraud (Y/N)
7. Note: Address all products from both incoming goods (e.g., ingredients) and outgoing goods (e.g., finished goods) through to the consumer.” (Y/N)

- Reference:
- Food Safety Magazine, Feb 2017, “*Food Fraud Vulnerability Assessment and Prefilter for FSMA, GFSI and SOX Requirements*”, <http://www.foodsafetymagazine.com/magazine-archive1/februarymarch-2017/food-fraud-vulnerability-assessment-and-prefilter-for-fsma-gfsi-and-sox-requirements/>
- New Food Magazine, Feb 2017: *Food Fraud Prevention – how to start and how much is enough?*, <http://www.newfoodmagazine.com/33890/new-food-magazine/past-issues/issue-1-2017/issue-1-2017-digital-version/>



Call to Action

1. Review the GFSI requirements
2. Review your current certification status AND report to see if the auditor asked the full set of questions.
3. Consider the “7 Questions” – if any “no” then get education on next steps.

MSU Engagement 2018

	Outcome	Benefit	Commitment
Graduate Course	Share your knowledge and set direction of research	Plus Graduate Certificate in Food Fraud Prevention	14 Weeks, online, May to August, ~\$2200
Executive Education	Share your knowledge and set direction of research	Develop the internal talent to support initiatives in the AC space, meet other thought leaders (“invitation only” sessions for brand owners)	2 Days on-campus (\$1950) 2019 dates TBD
Multi-Client Studies	Research the why’s of AC/D, understand underlying drivers	Uncovering the drivers may lead to new strategies to combat Counterfeiting	Teleconference Meetings with option for on-campus e.g. Veterinary and Animal Product Fraud
MOOC	Engage global network of Food Fraud thinkers..	Two, 2-hour on-line webinar format with assessment. Students earn an MSU “credential”.	Overview: Open; self-paced FF Audit Guide: Monthly FFVA & PS: Monthly Food Defense Audit Guide: Monthly

Acknowledgements

- **MSU Veterinary Medicine:** Dean Christopher Brown, Chair Dan Grooms, Chair Ray Geor, Dr. Wilson Rumbelha, Cindy Wilson, Dean John Baker
- **MSU Global:** Associate Provost/ Executive Director Christine Geith, Jerry Rhead, Gwyn Shelle, Lauren Zavala, Associate Provost/ EVP Dr. Karen Klomprens, Rashad Muhammad
- **Queens's University Belfast (UK):** Professor & Director Christopher Elliott, Dr. Moira Dean, Dr. Michael Hollis
- **MSU Online Master's of Science in Food Safety:** Director Melinda Wilkins, Ex-Director Julie Funk, Kristi Denbrock, Heather Ricks, Peggy Trommater, Heidi Chen, Dr. Gary Ades, Chair Ray Goer
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- **MSU Food Safety Policy Center:** Dr. Ewen Todd
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- **State of Michigan's Ag & Food Protection Strategy Steering Committee:** Dr. John Tilden, Brad Deacon, Gerald Wojtala, Byron Beerbower
- **The Citadel:** Dr. Roy Fenoff



Discussion

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<https://youtu.be/xZgEqNaoQLI>

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Discussion

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