



TACTICAL SCIENCES NETWORK

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Enhancing food security and biosecurity in U.S. agricultural and food systems through increasing coordination and cooperation among [USDA NIFA's agricultural biosecurity programs](#).

Our Continuum...

- ▶ IPM includes
 - ▶ NIPMCC
 - ▶ CPPM
 - ▶ EIP
 - ▶ RIPMC
 - ▶ ARDP

Tactical Sciences Coordination Network

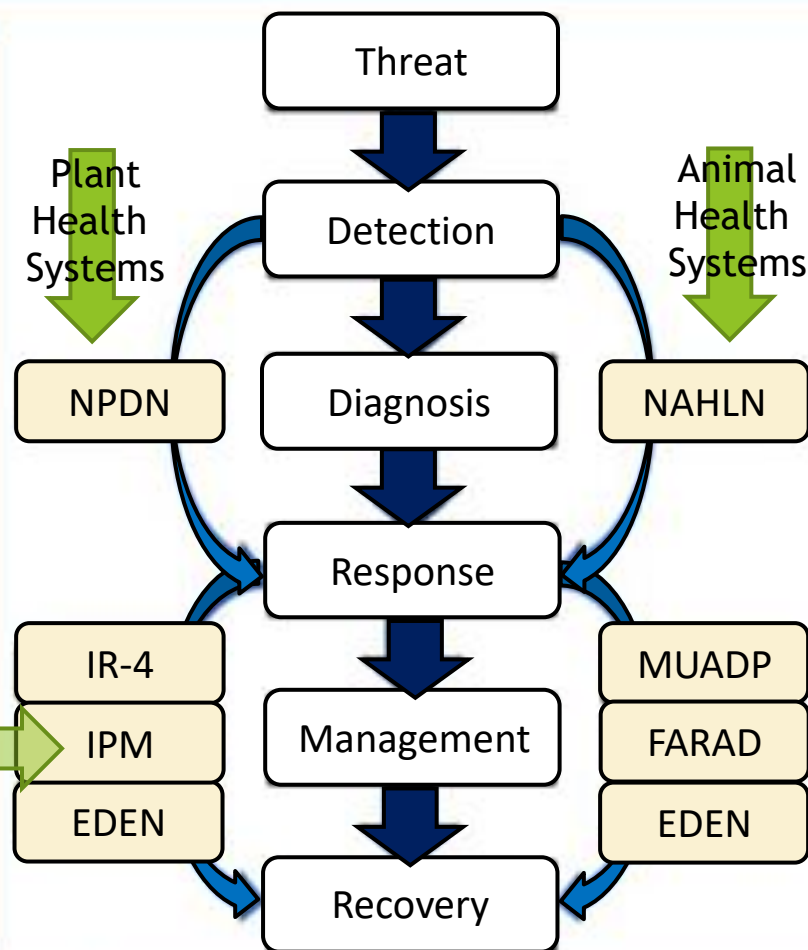


Figure 1: Program alignment with the threat response continuum.

What are the TSN program goals?

► Goals:

- Convene tactical sciences programs to build on **common issues**;
- Develop a **coordinated** strategy of outreach, communications, and program activities
 - Cross-network collaboration
 - Identify common issues
 - Seek external funding,
- Develop public-private **partnerships** to sustainably protect the US food supply.



► Vital components (as identified by NIFA Call to Conversations)

- Effectiveness
- Accountability
- Efficiency
- Relationship/Trust

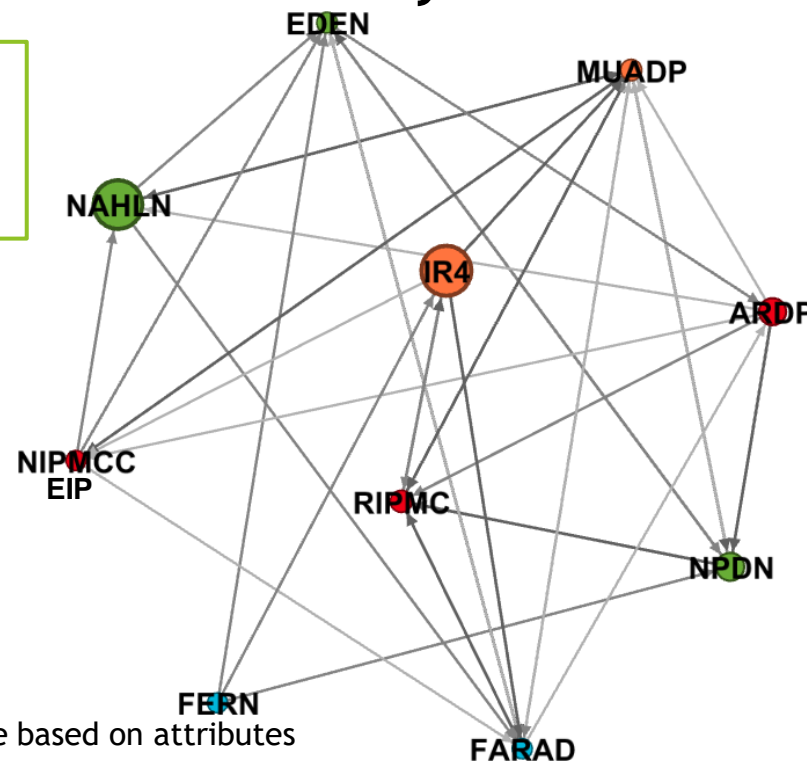
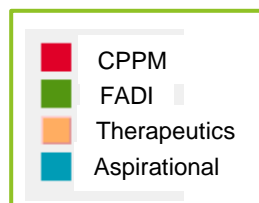
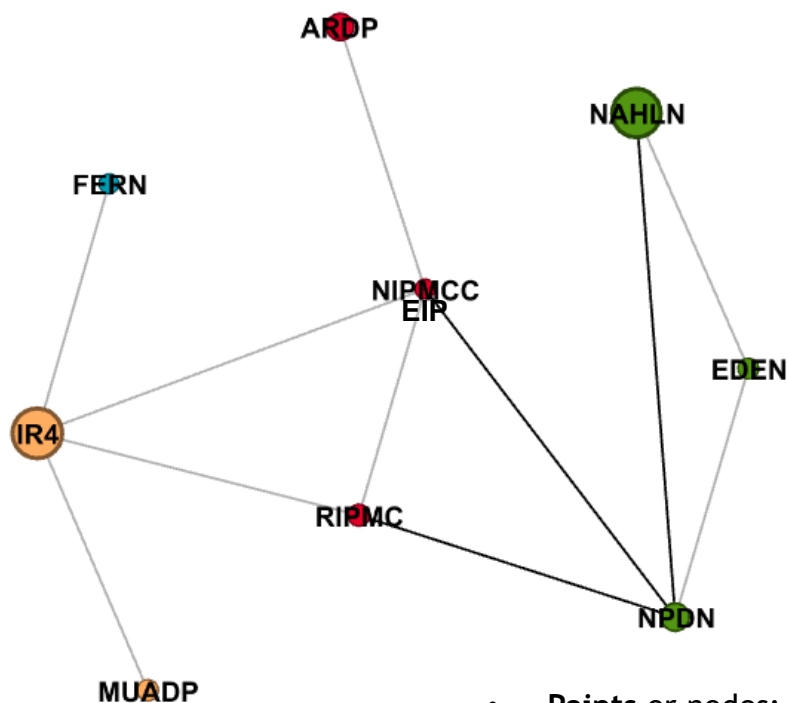
Common Themes/Needs Identified

- ▶ **Communications** (audience recognition and messaging)
- ▶ **Next Generation Scientists/Workforce Development/Succession planning**
- ▶ **Lab standards** (certification, accreditation, QC, SOP development, etc.)
- ▶ **Equipment obsolescence**
- ▶ **Surveillance** (observation networks, citizen science education, etc. – maybe also information sharing/communication?)
- ▶ **Information Technology**
- ▶ **Sustainability**
- ▶ **Stakeholder relations/input to NIFA**

Current network analysis state



Intended future Network Analysis state



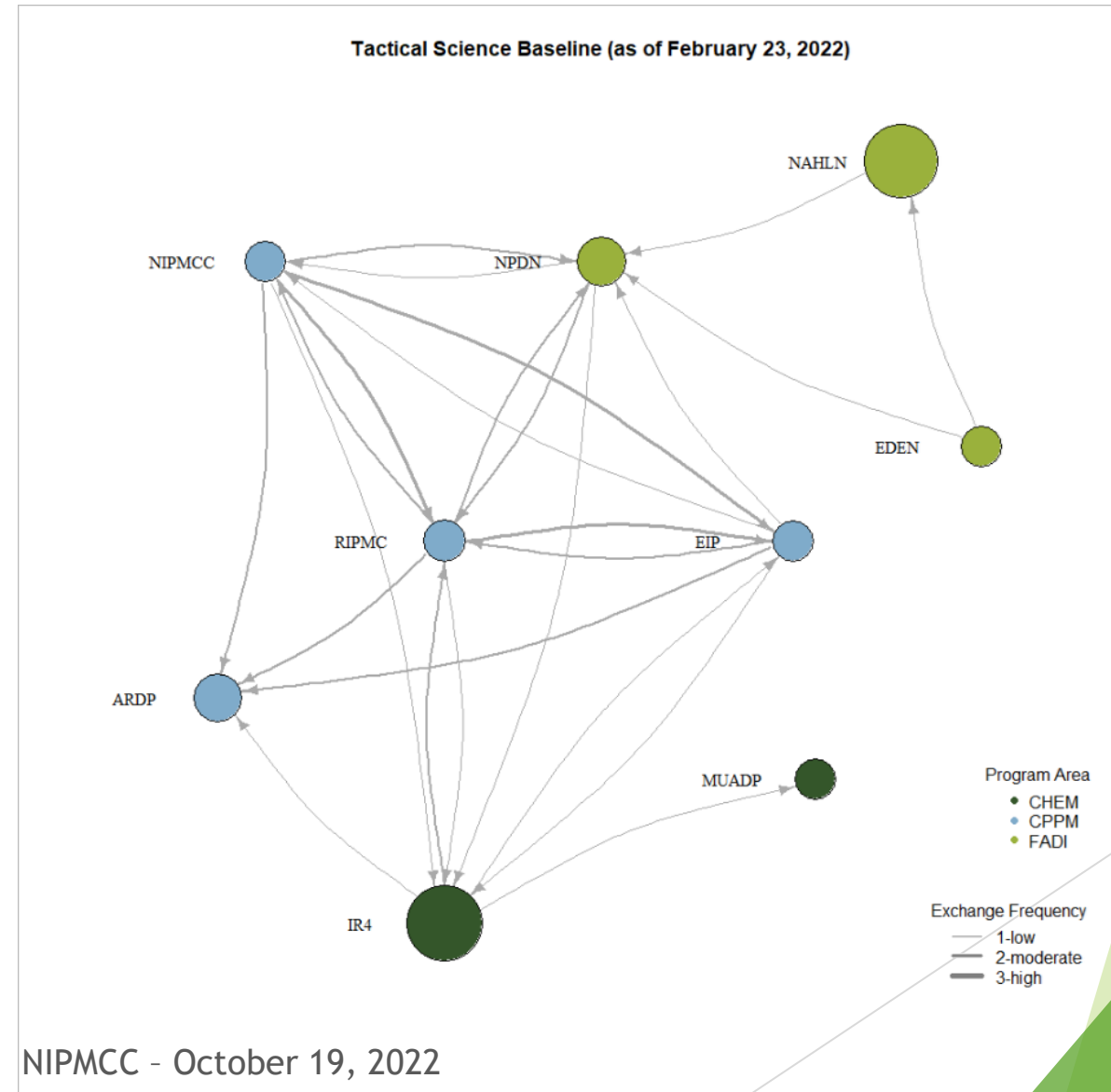
- Points or nodes: size, color, shape based on attributes
- Lines or edges
 - Direction (based on how information flows between points)
 - Value (based on things like trust or frequency of interactions)
- Spacing and layout generally not important
- Descriptive metrics
 - Density - Number of lines out of all possible lines
 - Average Degree - Average number of connections across all points
 - Average path length - Average number of lines from each point to all other points

Network analysis [baseline]

Programs = 9
Connections = 21
Network Density = .29



- Program 'circle size' based loosely on relative budget
- Color = program area
- Line thickness = frequency of interactions
- Arrow direction = flow of information and resources



Tactical Sciences Coordination Network (TSN)

➤ SWOT exercise

■ Internal

- Strengths
- Weaknesses

■ External

- Opportunities
- Threats

➤ TIME context*

- Tolerate
- Invest
- Migrate
- Eliminate

■ (*Gartner)

➤ PPT Framework

- People
- Process
- Information
- Technology

Summary of SWOT Analysis

➤ Strengths

- National representation, across regions and sectors
- Communication with Federal partners and agencies
 - Recommended - In-person meeting (in Washington, DC)
- Industry and commodity association board members
- Ability to take materials/white papers back to regional organizations

Summary of SWOT Analysis

➤ Weaknesses

- Infrequency of in-person meetings and networking opportunities
- Not fully engaging lobbyist-type resources
 - Need to structure whitepapers containing an ‘ask’ from an economic valuation analysis perspective
- Sparse infrastructure and support staff for continuation of efforts; hurts persistency of goals/priorities
- No clear evaluation of communications and metrics from national level to regional/state components
- Lack of bi-directionality of idea flow
- Year-to-year changes in leadership and representation

Summary of SWOT Analysis

➤ Opportunities

- Chance for increased funding through highlighting the value of the work product
- Need to develop a strong marketing plan to assist in enhancing funding opportunities
- Pursuing administrative resources from partner universities
- Finding a pathway for facilities & administration/Indirect costs/overhead to be allowed for host institutions
 - Farm bill language has the prohibition on overhead

Summary of SWOT Analysis

➤ Opportunities

- Revisit length of leadership and membership tenure to promote continuity and efficacy
- Become more action item oriented; to-do lists at end of meetings.
- State IPM awardees provided with travel budget to attend NIPMCC meetings
- Virtual meetings to optimize time

Summary of SWOT Analysis

➤ Threats

- Lack of funding
 - Time is a constraint as leadership and participants have many responsibilities outside of their role in NIPMCC
 - Lack of resources leads to difficulty in implementing committee recommendations which lowers participation
- Poor year-over-year continuity year-long leadership cycles make for challenging implementation
 - New chair each year and goals are all multi-year
- Only regional directors of IPM are included so there is a limited representation of topic areas/expertise.

Summary of SWOT Analysis

➤ Threats

- Turnover and administration change at NIFA may lead loss of institutional memory and lower prioritization of IPM disciplines
- Decrease in human capital
 - Administrations are not prioritizing refilling IPM related positions.
 - Decrease in trained applied scientists (extension specialists and educators) in IPM that directly interact at the grower level.
- Unclear direction and purpose for NIPMCC and how this translates to regions and states

Underway - Thematic Working Groups

- ▶ Communications
 - ▶ Surveillance
 - ▶ Workforce Development
 - ▶ Stakeholder Relations
 - ▶ IT Systems
 - ▶ Lab Standards and Equipment Obsolescence
-
- ▶ Analyze the network(s) for possible gaps and opportunities
 - ▶ Addressed Communications, Stakeholder relationships and Workforce Development in June

Working Groups - Communication

- Identity of TSN is vague, unclear, missing, unintelligible
- What does comparing program logic models tell us?
- Mycotoxins are a broadly shared concern – can that be a shared communications platform?
- **Example:** Currently issue of cotton seed bug.
 - Responsible program is unclear
 - APHIS focuses on pre-introduction – Less so once introduced
 - Biosecurity challenges go beyond NIFA to APHIS, FDA, etc. All agencies need to be coordinated. Programmatic institutional/agency loyalty needs to be overcome.

Working Groups - Stakeholder Relations

- Flat funding + Inflation = Diminishing functionality!
- Can/will industry stakeholders advocate for us? What tools do they need?
- Will industry share what they value from our programs?
- Can we/how can we aid in compelling “Explanatory notes” preparation?
- What stakeholders/partners can we engage with so they will engage for us (themselves)?

Working Groups - Workforce Development

Technical Skills

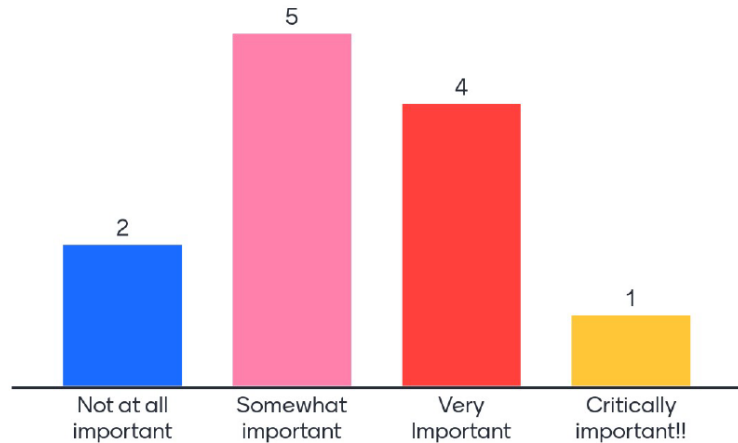


Human Skills



Working Groups - Workforce Development

How important is succession planning to the sustainability of your program?



Other points?

- ▶ Leadership is a more critical need than technical skills.
- ▶ Don't have resources (\$ and time) to develop a workforce succession plan.

So what! Why does TSN matter?



- ▶ Funds are short
- ▶ Opportunities lie in collaboration
- ▶ Industry could be a partner
- ▶ We can be our own best advocate
- ▶ Being proactive in finding the next generation
- ▶ Not all relationships offer equal opportunity in every goal area

Charge From NIFA to find...

- ▶ **Efficiency**
- ▶ **Effectiveness**
- ▶ **Relationship**
- ▶ **Accountability**



**TACTICAL
SCIENCES
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**(per Calls to Conversation report)*