Documenting & Measuring Collaboration

JEAN HALEY - NORTH CENTRAL IPM CENTER
Overview

Documenting & measuring collaboration
Regional IPM Center Pilot Test
How to map your own networks
Online evaluation resources
Documenting & Measuring Collaboration

Why?

Establish and maintain interactive information networks that cross traditional institutional, disciplinary, programmatic, and geographic boundaries to address regional IPM priorities.

-2014 CPPM RFA
Outcomes & Impacts

Healthy People

Healthy Environment

Healthy Economy
“How can I make what I have work better?”

- Jim VanKirk

http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html
Documenting & Measuring Collaboration

HOW?
How?

Social Network Analysis

How many are already familiar with this?
Social network analysis

Connections

Relationships
Social network analysis

Connections

Relationships
NCIPMC networks

Networks of association
NCIPMC networks

Networks of association

Networks of collaboration
Network structure measures

Density
Network structure measures

Distance
Network structure measures

Clusters / cliques
Documenting & Measuring Collaboration
SNA Centrality Measures

Degree

Betweenness

Closeness

Eigenvector
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WHAT?
What?
NCIPMC Partnership network
Big Picture
NCIPMC Working Groups

Nodes = 617
Unique edges = 4,552
Total edges = 55,531
NCERA-222 partner institution members = 214
Big Picture
NCIPMC Working Groups

Edge Properties (lines = Working Groups)
- Consumer Horticulture
- Extension Entomologists
- Forest IPM
- Great Lakes Fruit IPM
- Great Lakes Vegetable IPM
- Invasive Plants in Trade
- Midwest Weather
- Native American IPM
- Northern Plains
- NRCS & IPM
- Organics & IPM
- Pulse Crops
- School IPM
- Sunflower Pathology
- Tick IPM
- Vector Mosquito

Node Properties (Regions)
- Canada
- NCERA-222
- NCIPMC Staff
- Europe
- Northeast
- North Central
- South
- West
Who are some of the key players?

- MIDWEST WEATHER WORKING GROUP
- ALL NCIPMC WORKING GROUPS
Regional IPM Centers
SNA Pilot Test

SOME RESULTS
Southern IPM Center – Network Reach & Diversity

Blue = Communication between WG members

Red = Communication between WG members and non-WG member
North Central IPM Center – Influencers in the network

EIGENVECTOR CENTRALITY
IMPORTANCE – WHO’S LISTENED TO? WHO’S CONNECTED TO THOSE PEOPLE?

BETWEENNESS CENTRALITY
HOW MANY SHORTEST PATHS ARE YOU ON?
Northeastern IPM Center – Changes over time in network density

<table>
<thead>
<tr>
<th>BASELINE</th>
<th>YEAR 1 FOLLOW-UP</th>
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<tbody>
<tr>
<td>STRENGTH OF CONNECTIONS BEFORE WG FORMATION</td>
<td>STRENGTH OF CONNECTIONS AFTER 1 YEAR OF COLLABORATION</td>
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Frequency of communication about the WG topic with other WG members

Orange = Rarely
Red = Occasionally
Blue = Often
Green = A Great Deal
How hard is it to make a network map?

4 STEPS + LIVE DEMO
Download NODEXL at: Nodexl.codeplex.com
from your online survey into Excel.
Import your matrix data from Excel into NODEXL.

Make sure you are on the NODEXL tab.
Visualize your data.
Dude, where can I find some resources?
Module 8: Social Network Analysis

Social Networks and Social Network Analysis

There are two distinct, but related uses of the term "Social Network". The term is sometimes used as a collective name for the software and users of popular online networking sites such as Facebook, Twitter and LinkedIn. There is a more technical and more generic meaning for the term in which it encompasses any group of people who are connected to each other by any social property. We are concerned with the second and broader meaning. The Wikipedia page on the subject of Social Networks provides a good overview.

Why Do a Social Network Analysis?

In studying social networks we are usually concerned with questions such as: Who asks who for advice?

- What information sources do people consult?
- Who knows who?
- Which organizations are connected, and how?

The adoption of new practices or technologies often depends on the extent to which potential adopters have the chance to meet each other, discuss their experiences, and learn from each other, so changes to the social network which lead to a higher number of effective interconnections might be expected to promote more rapid adoption. It is for this sort of reason that social network analysis can be useful in evaluation studies.

About this Module

The rest of the pages in this module will guide you through some basic elements of Social Network Analysis.