

**NEWBio**

Northeast Woody/Warm-season Biomass Consortium

# How NEWBio, a Complex Project in a Fledgling Industry, Designs Quality Bioenergy Extension

**Sarah J. Wurzbacher, Penn State Extension Educator**

National Extension Energy Summit, April 8, 2015



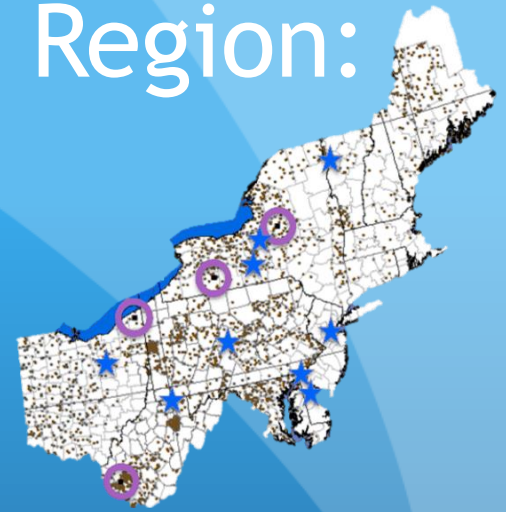
Cornell University



# Understanding the NEWBio Region:

New England to Ohio River

- 10% of U.S. land area
- 20% of U.S. population
- 4 of 11 largest metropolitan areas
- Landscape is dominated by rural communities with ample but often underutilized natural resources
- Many communities suffering from decades of decline



“Given this situation, biomass energy could provide the social, economic and ecological drivers for a sustainable regional rural renaissance. This is the NEWBio vision.”

# NEWBio Perennial Feedstocks



**Shrub willow**

**Giant miscanthus**

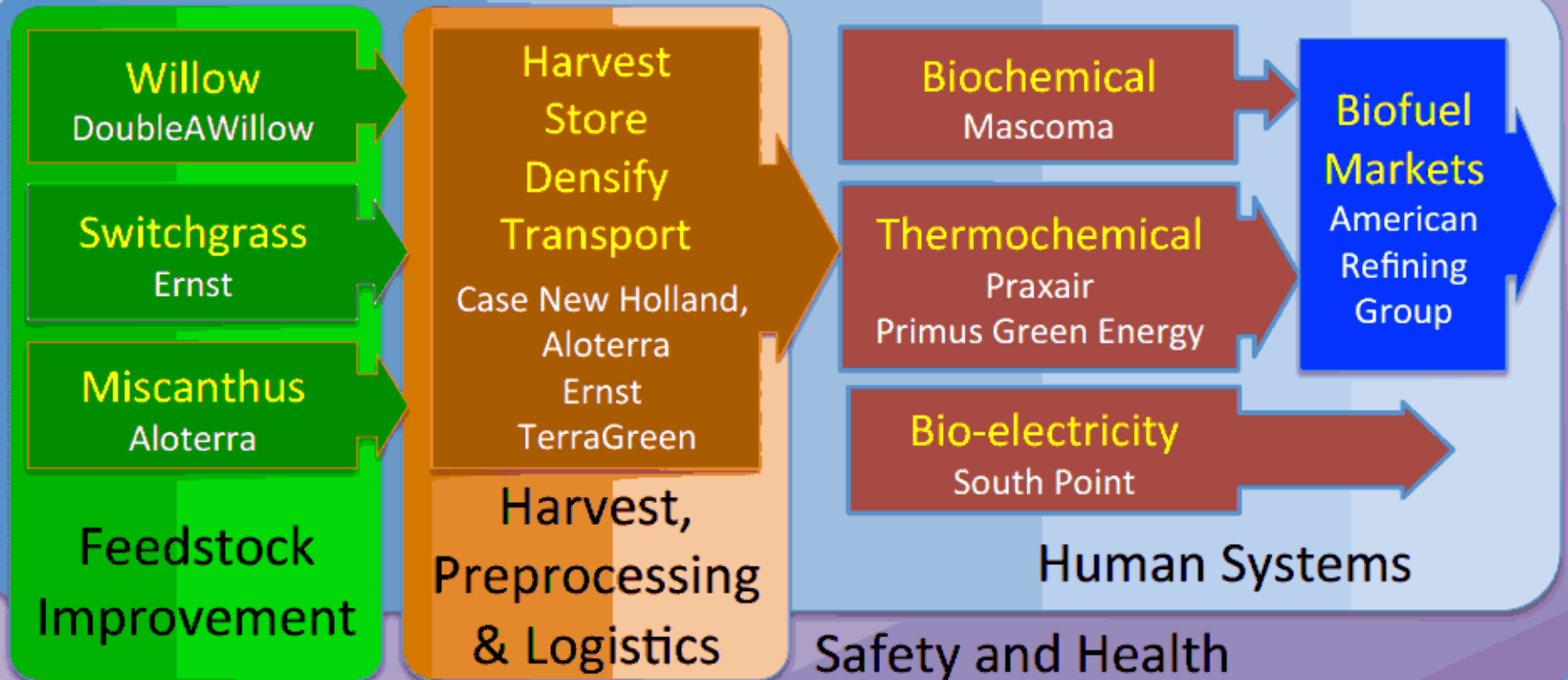
**Switchgrass**

- Perennial, stand life 15-20 years
- Low or no fertilizer, herbicide, pesticide inputs
- Growth on sub-optimal, “marginal” land
- Single, annual harvest
- High productivity
- Opportunities for partnerships, co-ops, long-term contracts

# The NEWBio Team Model

Extension

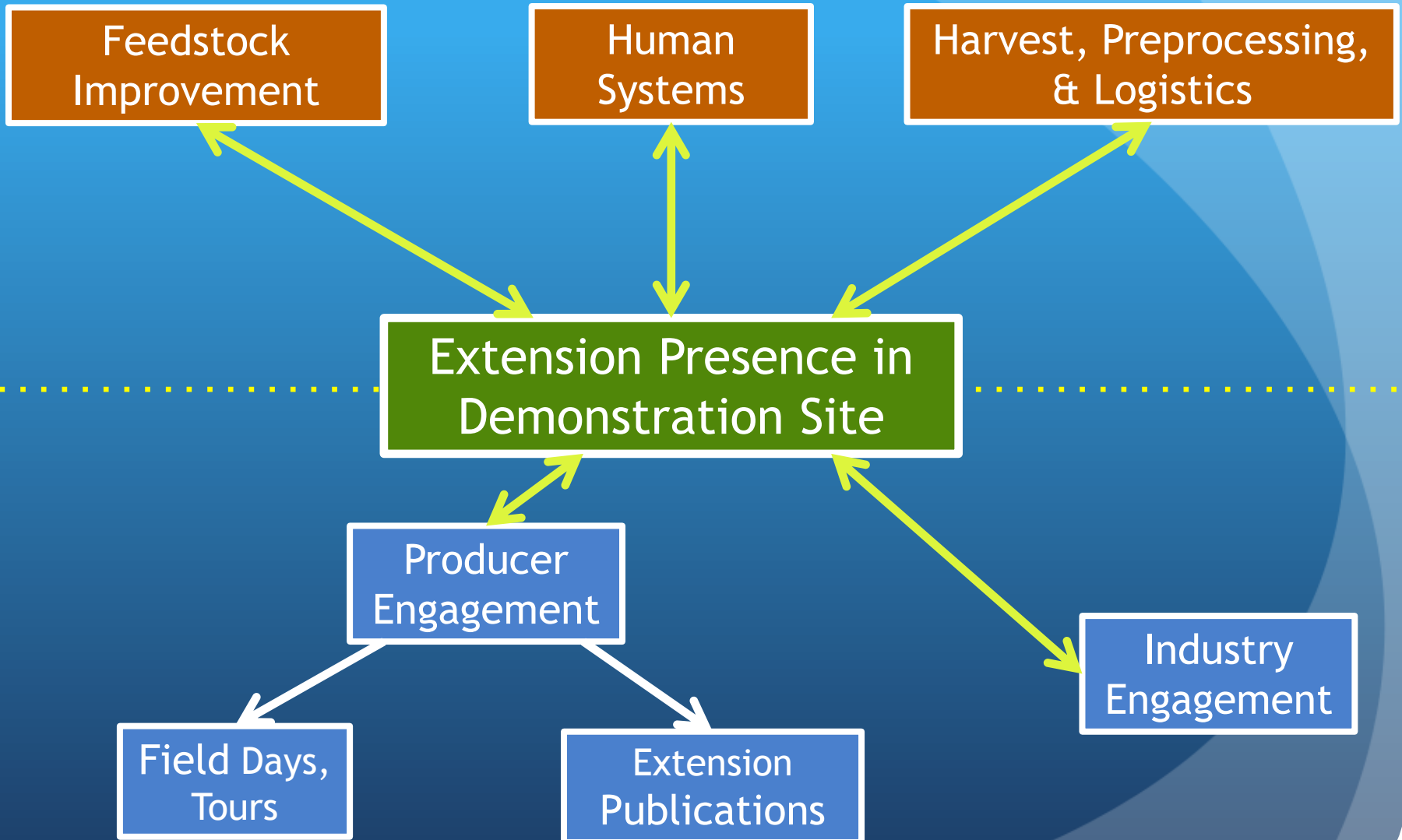
Education



Sustainability Systems

Leadership and Evaluation

# Responsive Extension Model





# Lessons Learned in Early Years

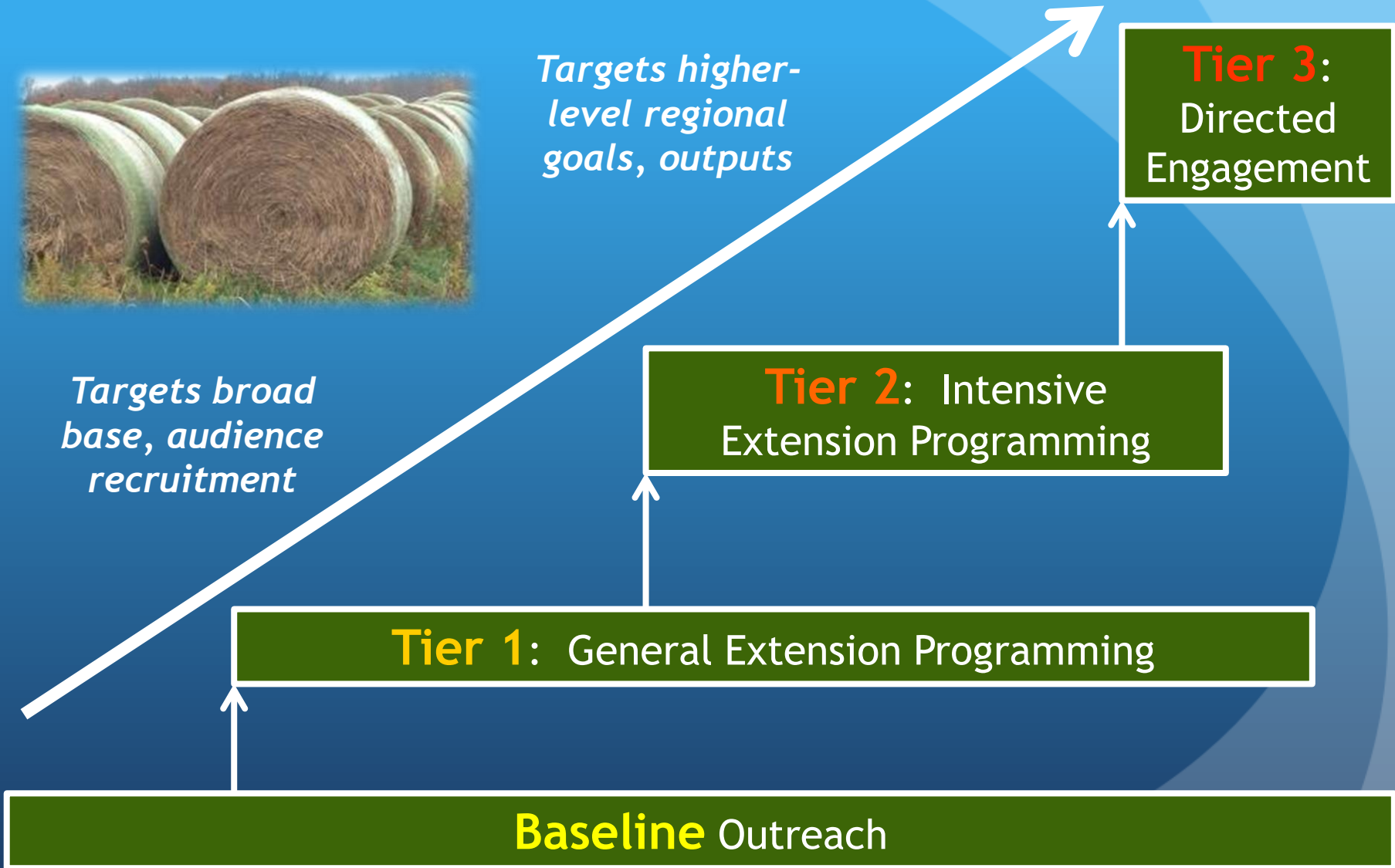
- Consistent output, brand recognition gains a better audience base.
- The bioenergy community is small but diverse.
- Alternate or “bridge markets” are essential to the industry’s success.
- Producers/entrepreneurs prefer real examples to modeled data and simulation studies.
- Traditional programming feels disconnected from higher-level project goals (*e.g. seeing X new biomass businesses, Y more acres of energy crops regionally*).
- Limited budgets constrain reach, especially when it comes to marketing and advertisement.

# Integrated Extension Model



*Targets higher-level regional goals, outputs*

*Targets broad base, audience recruitment*



# Baseline Outreach

- Monthly programs, outreach
- Cultivated social media presence, consistent output
- Freely available factsheets, publications, resources, tools
- Many passive methods

- \* *Cost effective*
- \* *Maintain, grow audience base*
- \* *Platform for advertising higher-level programs*



Looking for more information? Have a question on biomass or bioenergy? Ask our NEWBio researchers.





# Tier 1: General Extension Programs



- \* *More focused but still “mile wide/inch deep” or single-subject*
- \* *Maintain, grow audience base*
- \* *Recruit to higher program tiers*



- Field days, facility tours, workshops
- Invited table display/presentation
- Often 1 or a few days only
- Majority of “quality” programs

# Tier 2: Intensive Extension Programs



- \* *Targets specialized stakeholder groups, involve more cost and time*
- \* *Better incorporates industry, professional networks*
- \* *Targets higher-level project goals*
- \* *Recruit to highest-level engagement*



- Subject “deep dives,” focused, high-value content
- Business Incubation Workshop
- Graduate Distance Education
- Secondary Educator Training
- Equipment Access Program

## EDUCATION PROGRAMS



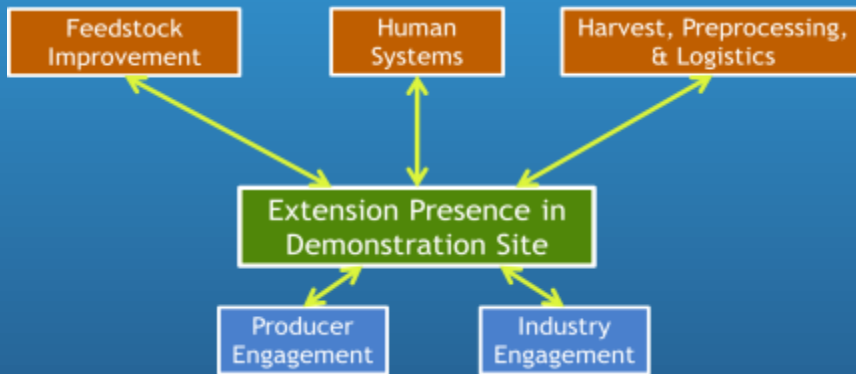
Undergraduate Bioenergy Scholars

Teacher Training

Graduate Distance Education

# Tier 3: Directed Engagement

- \* *Individual stakeholder engagement*
- \* *Best when dynamic, responsive*
- \* *Targets higher-level project goals*
- \* *Activity beyond the life of the project*



- One-on-one engagement (business development, feasibility studies)
- Stakeholder engagement
- Project networking, expansion, new partnerships



**Small Business Development Centers**  
*Helping businesses start, grow, and prosper.*





# Adapting Based on Lessons Learned

- Consistent output, brand recognition needed
  - Tier structure promotes single, known brand w/ strong baseline
- Engaging a small but diverse bioenergy community
  - Higher-tier programs retain advanced audiences, keep them engaged in the project with new or value-added material
- Alternate/bridge markets necessary for development
  - Local markets/activity make relevant Tier 1 programs; Tier 2-3 programs enjoy established supply chains, stronger network
- Audience preference for real, on-the-ground examples
  - Site-based Tier 1 programs, individualized Tier 2-3 engagement
- Traditional programs not reaching high-level project goals
  - Advanced engagement gets closer to change on a larger scale
- Limited budgets for marketing, major programming
  - Integrated programs advertise, recruit to each other



# Integrated Extension Model

**EVALUATION**

*Targets higher-level regional goals, outputs*

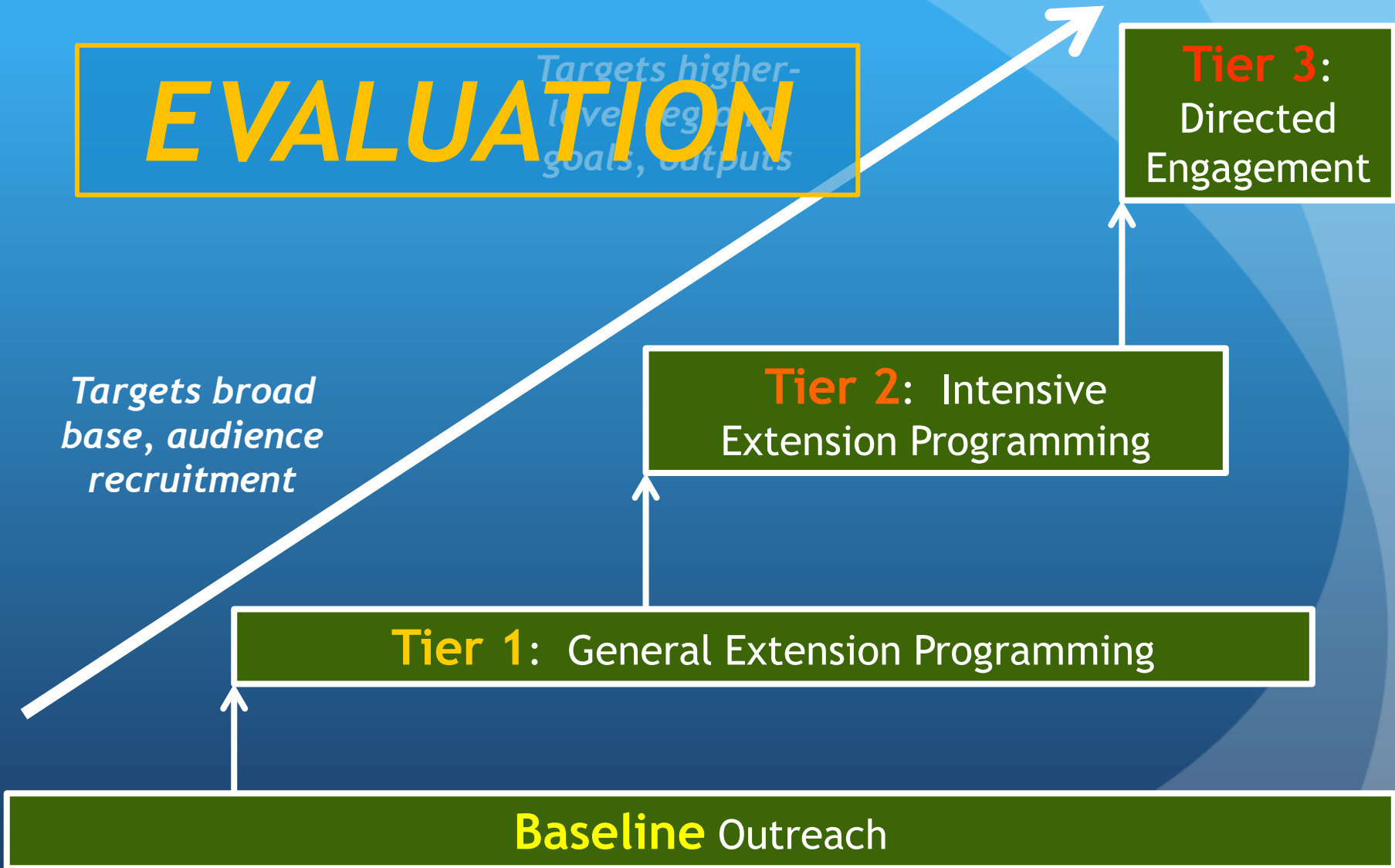
*Targets broad base, audience recruitment*

**Tier 3:**  
Directed  
Engagement

**Tier 2:** Intensive  
Extension Programming

**Tier 1:** General Extension Programming

**Baseline** Outreach



# Presenter Contact Information

Sarah J. Wurzbacher

Extension Educator, NEWBio Consortium  
PSU Crawford County Cooperative Extension

13400 Dunham Rd., Suite A / Meadville, PA 16335

Office: 814-333-7420 / Mobile: 814-573-8421

Email: [sjw246@psu.edu](mailto:sjw246@psu.edu)