

# The Conservation Cropping Systems Initiative: A Model Approach for Conservation Technology Transfer

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## SYNOPSIS

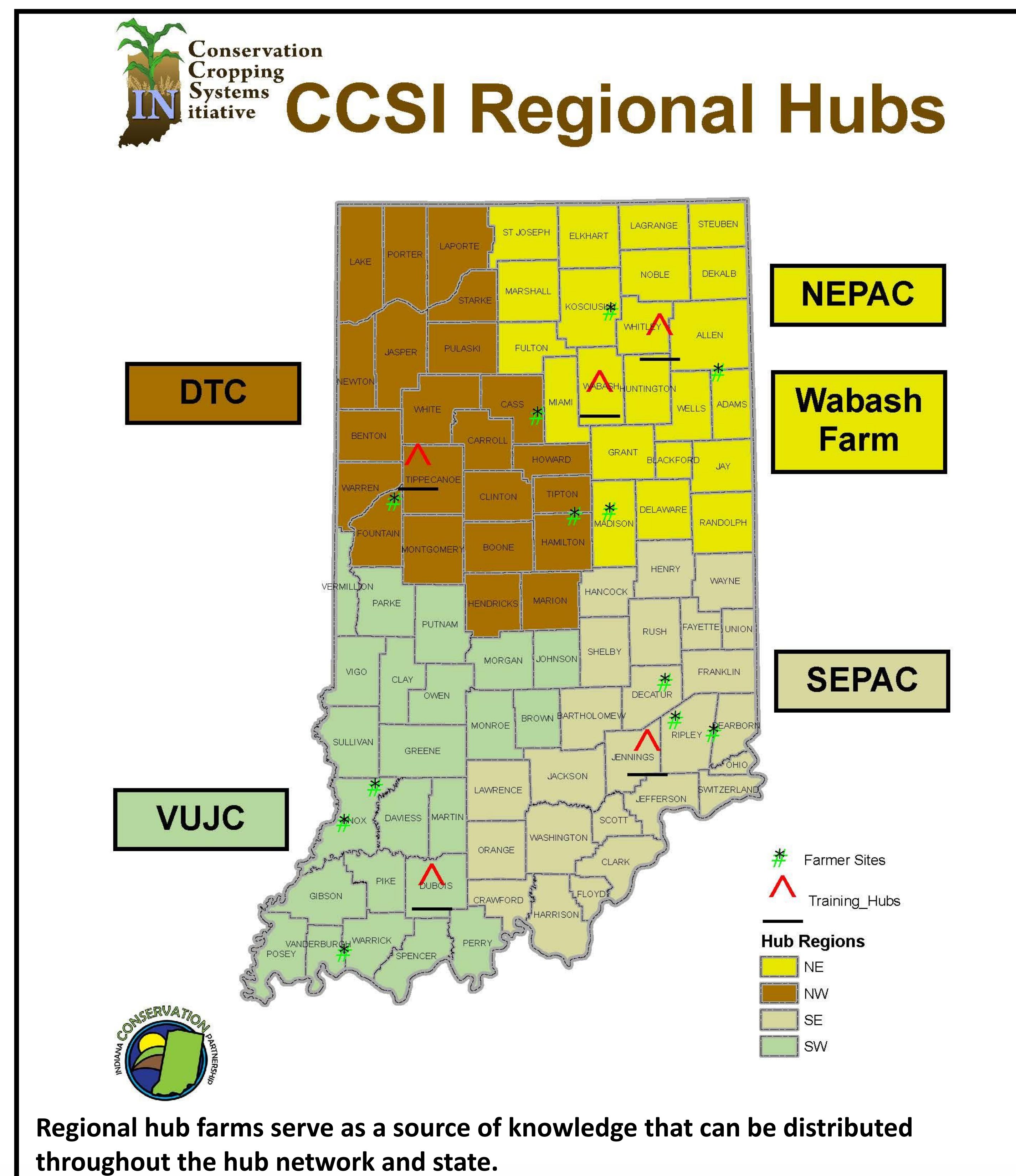
The Conservation Cropping Systems Initiative (CCSI) is a partnership between numerous organizations in Indiana all working toward improving soil health and soil productivity.



Clockwise from left: sunhemp with N-fixing nodules rehabilitating reclaimed mine soil, top Indiana farmers helping with a slake test demonstration, CCSI partners explaining the benefits of cover crops, and farmers getting a close look at how cover crops build healthy soil.

## APPROACH

To carry out these goals CCSI created four regional hubs in the four quadrants of Indiana and each led by delegates from the Natural Resource Conservation Service (NRCS), Indiana State Department of Agriculture (ISDA), Soil and Water Conservation Districts (SWCD), Purdue Extension, and Watershed Groups. Delegates assist with data collection at the 17 CCSI research sites; identify, promote and support soil health educational events; and act as liaisons between CCSI and their home agency. The research site consist of farmer cooperator and Purdue research farms. Experiments are carried out in replicated strip trials and investigate various tillage regimens, cover crop combinations, and crop rotations.



An on-farm replicated strip trial. Left: No-till corn into a cover crop mix of cereal rye, forage rape, Austrian winter pea, and terminated at the boot stage of cereal rye. Right: No-till corn into a cover crop mix of black oats, daikon radish, and terminated in winter.

## GOALS

CCSI aims to increase adoption of conservation practices like cover crops, no-till, precision nutrient management, and integrated pest management by 1) building and strengthening farmer networks 2) increasing the knowledge base of farmers and technical experts on soil health principles and 3) executing landscape scale, on-farm research on conservation practices.

## OUTCOMES

Since its inception, CCSI partners have taken over 3800 samples in replicated strip trials with over 148 strips (data collected includes cover crop biomass and nitrogen (N) uptake, plant available soil N, soil moisture, soil temperature, basic soil fertility, corn leaf chlorophyll, stalk nitrate, and results from four soil health tests) and conducted over 200 educational events with audiences totaling over 7000 farmers and agriculture professionals. Through the assembly of a network of conservation minded farmers and technical experts, CCSI is addressing the challenges facing widespread adoption of conservation agricultural practices.

