



SOCIETY OF NEMATOLOGISTS

The **Society of Nematologists** is an international organization formed to advance the science of nematology in both its fundamental and economic aspects. To serve this purpose, the Society of Nematologists acts as an agency for the exchange of information, holds regular meetings, and promotes and extends knowledge in all phases of nematology. The Society operates on a nonprofit basis exclusively for the accomplishment of these educational and scientific goals.

Research by scientists within the Society of Nematologists impacts all six current **CSREES Strategic Goals** related to Plant and Pest Biology, and most directly relates to:

4. Enhance Protection and Safety of the Nation's Agriculture and Food Supply

- by reducing the societal impact of plant-parasitic nematodes
- by increasing and utilizing a knowledge of fundamental nematode biology
- by understanding and enhancing the beneficial roles of nematodes in agroecosystems
- by providing accurate identification of invasive and damaging nematodes of economic concern

6. Protect and Enhance the Nation's Natural Resource Base and Environment

- by promoting environmental stewardship when implementing nematode management practices
- by assessing nematode communities as bioindicators of environmental health and change
- by understanding and enhancing the beneficial roles of nematodes in diverse ecosystems

CRITICAL NEEDS:

- A) Genomics & Bioinformatics:** Continued investment in plant and pest genomics, including genome sequence of additional nematode species, will provide a foundation for significant discovery in the agricultural sciences. Extensive and efficient mining of genome resources will require increased emphases in bioinformatics and functional genomics to fully capitalize on agency and stakeholder investment and to make the fruits of genomic research available and beneficial to a broad constituency.
- B) Nematode Management:** Serious limitations exist for pest management options in many crops, including severe restrictions in the use of many pesticides. Research should emphasize the incorporation of natural and bioengineered plant resistance to nematodes in multiple crop species, parallel investigations of nematode population genetics, and practices to enhance the roles and efficacy of beneficial nematodes, microbes, and environmental influences in integrated management systems.
- C) Nematode Ecology & the Environment:** The central role of nematode communities in soil ecosystems and nutrient cycling makes them key players and indicators of soil health and change in agricultural and natural environments. Fundamental ecological studies of soil nematode communities will not only lay the foundation for sound agricultural practices, but analyses of nematode community structure provide a proven monitor of environmental change due to anthropogenic and natural influences.