

## Management of the Southern Region IPM Center, FY 2011

### (1) Mission and Goals

The mission of the Southern Region IPM Center (SRIPMC) is to foster development and adoption of IPM, a science-based approach to managing pests in ways that generate economic, environmental and human health benefits. We work in partnership with stakeholders from agricultural, urban and rural settings to identify and address regional priorities for research, education and outreach.

The goals of the Southern Region IPM Center are delineated in our Strategic Plan, which can be found on our website<sup>(1)</sup>:

- a. **Communication.** Serve as a focal point for interactive communication about IPM in the Southern Region and share reliable information on a national scale to promote sound IPM decisions.
- b. **Stakeholder Priorities.** Involve stakeholders (agricultural/urban/rural) to determine and prioritize research, outreach/education, and regulatory needs.
- c. **Solutions.** Find IPM solutions to pest problems through extension, research, and regulatory activities for the benefit of regional stakeholders and the environment.
- d. **Emerging Issues.** Organize responses to emerging issues of regional importance.
- e. **Efficiency.** Optimize innovative IPM research, extension and regulatory activities and minimize duplication of effort in IPM programs.
- f. **Impact Documentation.** Document the value of IPM strategies, techniques, programs and projects and prove that IPM works.
- g. **Generate Support.** Build support for IPM among the general public and public policymakers.

The Southern Region IPM Center is an integrated project, focusing primarily on research and extension and to a lesser extent on (academic) education. Through working groups, Pest Management Strategic Plans, Crop Profiles and other methods, SRIPMC promotes and enumerates stakeholder-identified priorities for research, extension and regulatory issues related to pest management. SRIPMC supports research and extension projects to address those priorities through direct funding (the Critical and Emerging Issues grant program); facilitation of working groups (e.g. Small Farms Working Group); and coordination of the Regional Information Network. We collaborate closely with the Southern Region School IPM Working Group, and two of the SRIPMC's co-PIs teach courses on the NCSU campus that address IPM.

SRIPMC's overarching goal matches the National IPM Road Map goals to improve the cost benefit analysis of adopting IPM practices and reduce the environmental and human health risks associated with managing pests. Because we work with researchers and educators from across the spectrum of disciplines and settings, our work usually addresses all of the impact areas (economic, environmental and human health) and all of the focus areas (production agriculture, natural resources and recreational environments, and residential and public areas) targeted by the Road Map.<sup>2</sup>

## **(2) Director and Other Key Personnel and Positions**

### **Center Director James R. VanKirk:**

SRIPMC Director since 2004, Mr. VanKirk is primary point of contact and responsible for overall leadership of SRIPMC. He is responsible for coordination of all activities, for staff supervision, and for grants management. With the Associate and Assistant director, he makes and releases decisions on behalf of SRIPMC.

Mr. VanKirk works in several projects, all of which are very closely related in purpose to that of SRIPMC. Roles include project director of 5 national ipmPIPE projects; current co-director of the Onion ipmPIPE project (Specialty Crops Research Initiative); project director of the Extension Pest Management Information and Decision Support System (EPMIDSS); and project director and panel manager for the Southern Regional IPM Grants Program (S-RIPM). He is Associate Director of the National Science Foundation (NSF) Center for IPM at North Carolina State University (NCSU).

One of the first Regional IPM Specialists in the New York IPM, Mr. VanKirk served in related positions from 1988 to 1996. He was the first Regional IPM Facilitator in the Northeast Region (1996 to 2000). He was Coordinator and later Co-Director of the Northeastern IPM Center. He is a member and past chair of the National IPM Center Coordinating Committee, a member and past chair of the ipmPIPE Steering Committee and a member of the ipmPIPE Executive Committee.

### **Associate Director for Regulatory Issues Stephen J. Toth, Jr.:**

Mr. Toth assists in all aspects of SRIPMC leadership. He leads the Regional Regulatory Information Network, is the primary contact for pest management information requests from federal agencies (e.g., U. S. EPA and the USDA's Office of Pest Management Policy), and coordinates the SRIPMC's responses to these requests.

Mr. Toth serves as Extension IPM Coordinator and is supported by NCSU at 33%. He oversees the national Crop Profile and Pest Management Strategic Plan (PMSP) databases and is supported in this by the EPMIDSS project. He manages the Pesticide Environment Stewardship Website project (eXtension Community of Practice) for the NSF Center for IPM.

He is an Extension Entomologist with 30 years of experience in the areas of pest management and pesticide impact, regulation, use and safety (20 years in the Pesticide Impact Assessment Program and 10 years in pest management information collection and distribution).

### **Assistant Director Danesha Seth Carley:**

Dr. Carley assists in all aspects of SRIPMC leadership and is particularly responsible for impact evaluation aspects. She works closely with the SRIPMC communications specialist to enhance outreach and disseminate information dissemination.

Dr. Carley is project director for the National Plant Disease Recovery System (NPDRS) contract and the Transition Plans contract (both with USDA Agricultural Research Service). She also leads a project funded by NRCS through ARS to analyze data from the National Conservation and Environmental Assessment Project (CEAP) Survey to evaluate IPM practices and impacts across the country.

She has a shared appointment with the NCSU Department of Crop Science as Research Assistant Professor. In this role, she is the Director of Environmental Physiology Field Studies with the Plant Physiology Laboratories, the instructor for the 400-level IPM course, and the Education and Outreach Coordinator for Environmental Activities and Research in Managed Ecologies on the Lonnie Poole Golf Course.

Dr. Carley has a strong research background and has worked in applied research in the field of IPM for more than 7 years. Her Ph.D. is a co-major in Plant Pathology and Crop Science, and she holds a MS degree in Entomology and Plant Pathology.

### **(3) Management Process**

This project will use the following management processes to establish broad-based advisory and steering committees, involve stakeholders and partner institutions, identify program needs and priorities, and develop a strategic plan.

**a) Maintain an Advisory Council (AC) and Steering Committee (SC):** We will continue to use the broad-based AC and the SC that are in place under the current project.

The AC comprises diverse stakeholders with a wide range of perspectives from across the region. Membership currently stands at 31, representing 1862 and 1890 Land-Grant Institutions, commodity organizations, federal and state agencies, crop advisors, agribusiness, and agricultural advocacy. Perspectives include the farm sector, agribusiness, environmentalists, public interest, government, research, and Extension. Geographic representation spans the region. Most members represent broad constituencies. The AC's role is to review Center progress, suggest priorities and otherwise advise Center staff and the SC. Current membership and bylaws can be accessed on the SRIPMC website.<sup>3</sup> The AC will continue to confer as needed via teleconference and email, but due to budget constraints will decrease the number of meetings from twice annually to once in this project.

The SC is responsible for setting policy for the SRIPMC. Current membership and bylaws can be accessed on the SRIPMC website.<sup>4</sup> The SC provides guidance for executive decisions and administrative management, suggests how to implement recommendations from the AC, and determines the application of priorities to Center efforts. Several members are *ex officio* representatives of particular groups so rotation is somewhat limited. Continuity between the SC and AC is enhanced in three ways: the chair-elect and chair of the AC share one voting position on the SC; all members of the SC are also members of the AC; and SC meetings are held immediately following AC meetings with the agenda built around developments from the AC meeting. The SC will continue to confer as needed via teleconference and email, but to conserve funds will hold only a single meeting annually.

AC and SC meetings serve several purposes. SRIPMC staff provides progress updates and solicits input on prioritization of future work. Members communicate with staff regarding key issues. This forum also provides an opportunity for this diverse group to engage each other in respectful and productive conversations about IPM and related issues. The result is a very tangible engagement of stakeholders in the SRIPMC. Examples of decisions using this structure include:

- 1) Inclusion of the "Evaluation" project type in the Southern Regional IPM Grants (S-RIPM) program.

- 2) The evolving structure of the IPM Enhancement Grants including: division into Part 1 (Information Network, IPM Documents, Working Groups) and Part 2; evolution of Part 2 project types from “Special Projects” to “Start-up” and “Capstone” projects; limiting the use of “multi-state” as a scoring priority for Part 2 projects; evolution of an Information Network of State Contacts at \$25,000 per state to a single Regional Information Network currently funded at \$150,000.
- 3) Continuing to include “multistate benefits” as an important competitive criterion in the S-RIPM RFA. Retention of the two-panel (relevance and technical) process in S-RIPM.
- 4) Involvement of Center staff with the (national) ipmPIPE program.
- 5) Conducting regional workshops to improve collaboration in IPM 1890 and 1862 Institutions; providing grant-writing training; and initiating the School IPM Working Group.
- 6) Inclusion in this proposal of an Evaluation Specialist position.

**b) Involve other stakeholders and partner institutions in its operations through working groups and other mechanisms:** This project will initiate one new approach, the Small Farms IPM Working Group, and will continue to utilize existing mechanisms, as follows:

- 1) We will initiate the new Small Farms IPM Working Group (SFWG) as a Signature Global Food Security Program as detailed in section 5. SFWG will respond directly to issues of related groups underserved by IPM in this region. It will focus on small, highly diversified farms including those using low input, organic, and sustainable methods. Collaboration of 1890 Land Grant Extension programs serving primarily small farms will be a key component of this work. Participants will become familiar with each other’s goals, resources, and challenges in IPM programming; will identify common needs and collaborative opportunities; and will enumerate a prioritized list of actions that will develop, enhance, and improve IPM utilization. This working group, with the support of the SRIPMC, will facilitate the implementation of alternative IPM practices by these small farms and organic growers across the southern region through extension / outreach activities and assisting in developing signature Global Food Security programs and fostering their sustainability.
- 2) Regional technical committees: SERA03-IPM, which comprises all state Extension IPM Coordinators and several researchers in the region, is clearly among our most important stakeholder groups. Each member is aware of issues and priorities in his or her own state and university, so as a group they bring comprehensive regional knowledge and perspectives regarding IPM. We have also worked extensively with NCERA 208 (Asian soybean rust) and S1010 (Soybean Insect Pests) in conjunction with our management of ipmPIPE projects.
- 3) SRIPMC has worked closely with EPA’s Strategic Agriculture Initiative program in the past. Though EPA has discontinued that program, we retain both personal contacts and goodwill at the EPA. We expect to continue working with EPA in productive ways.
- 4) Regional and national IPM Working Groups: SRIPMC was instrumental in initiating the Southern School IPM Working Group, and continues to provide funding and facilitation. Mr. VanKirk is Project Director and co-PI of a proposal recently submitted on behalf of this group to the EPA’s School IPM Grants program. We currently fund the multi-state Nursery Crops IPM Working Group and have funded other working groups. Except for the proposed Small Farms IPM Working Group, we have always funded working groups through competitive processes. Although funding levels will not permit full working

group funding, we do expect to participate in and support IPM working groups in other less formal but still effective ways such as facilitation, website space, etc.

- 5) We will continue to work closely with the National Plant Diagnostic Network. This collaboration stretches nearly to SPDN's start, when we co-sponsored one of the first national soybean rust training workshops. It has continued with partnership on ipmPIPE projects, pest alerts, and on the Pink Hibiscus Mealybug project (NIFA Critical Issues). Dr. Carrie Harmon of the SPDN has successfully competed for grants from both our IPM Enhancement Grants program and S-RIPM. SPDN has often been represented on our grant review panels and has had a continuous presence on the AC and SC, including a term as AC chair.
- 6) We involve representatives of the National Alliance of Independent Crop Consultants (NAICC) and the Certified Crop Advisor (CCA) programs. Both organizations are represented on the AC, have provided grant review panelists many times since 2004, and are engaged in various aspects of the ipmPIPE.
- 7) We routinely have significant interaction with the Insecticide Resistance Action Committee (IRAC); Cotton Incorporated and the National Cotton Council; USDA APHIS, RMA and NRCS; United Soybean Board and the North Central Soybean Research Program; the Federal IPM Coordinating Committee, Southern SARE, and others. These interactions include representation on the SRIPMC AC and SC, participation in meetings and teleconferences, and partnerships on grant proposals and projects.

c) **Identify program needs and establish priorities:** A fundamental component of SRIPMC's mission involves engaging stakeholders to identify program needs and priorities. We accomplish this in several ways, including:

- 1) Links to stakeholder-identified research, education and regulatory priorities in Requests for Proposals. The ability of the project leader to make a strong link between the proposal and a readily identifiable stakeholder-identified priority has been and will continue to be an important review criterion for competitive IPM grants programs managed by SRIPMC staff.
- 2) Pest Management Strategic Plans: We will continue to support the development and publication of PMSPs by providing grants (Critical and Emerging Issues Grants Program) to stakeholders to fund PMSP development workshops, by facilitating some of those workshops, and by managing the national online PMSP database. PMSPs include research, extension and regulatory priorities. Presently 38 PMSPs have been completed for the Southern Region.<sup>5</sup> We maintain the national Crop Profiles and PMSP databases.
- 3) SRIPMC AC and SC: We will continue to solicit advice from the AC and both advice and policy setting of the SC, as described in 3.a.
- 4) Working Groups: We require all SRIPMC-funded working groups to identify research, extension and regulatory priorities.

d) **Develop a strategic plan that will be followed to address regional priorities:** SRIPMC's current strategic plan<sup>6</sup> addresses our goals and objectives, current activities associated with those goals (listed page 1 of this proposal), and future or ongoing activities needed to address goals. As part of the annual AC and SC meeting, the strategic plan will be revisited to measure progress

and to consider revision. We will report to the AC and SC on progress relative to the current plan.

#### **(4) Establish and Maintain of Interactive Information Networks**

a) **Regulatory Information Network:** The SRIPMC Regulatory Information Network (RIN) proposed represents a modification of our existing RIN. Its function remains to provide effective information flow among USDA, EPA, land grant universities, and all IPM stakeholders including farmers, farm advisors, colleges and universities, state regulatory, agriculture and environmental organizations, and other interested parties.

The RIN covers all 13 states and 2 territories in the Southern Region. The RIN is led, and much of the work will be completed, by a committee called the RIN Liaison Group (RINLG).

Under the leadership of Mr. Stephen Toth, the RINLG will comprise four sub-regional liaisons (each the PI of a sub-award) and a representative from the USDA Office of Pest Management Policy (OPMP, to be invited). RINLG will confer at least monthly via teleconference. It will organize regional reviews of science and regulatory documents and will share current pest management information with pest managers and other stakeholders. It will produce technical content to address important regulatory issues and make that content available through emails, websites, and social media outlets for use and distribution by extension and research faculty in all Southern Region land grant universities and colleges (1862 and 1890). The four sub-regional liaisons will serve as program liaisons responsible for communications with key state and university stakeholders arrayed in the respective sub-regions. Sub-regional liaisons will each manage a sub-award of approximately \$25,000.

Dr. Mike Weaver of Virginia Polytechnic University will lead the Southeast Sub-Region, comprising Virginia, North Carolina, South Carolina and Georgia. Dr. Fred Fishel of the University of Florida will lead the Florida-Caribbean Sub-Region comprising Florida, Puerto Rico and the U.S. Virgin Islands. The Mid-South Sub-Region led by Dr. Darrell Hensley at the University of Tennessee comprises Kentucky, Tennessee, Alabama and Mississippi. The Southwest Sub-Region includes Arkansas, Louisiana, Oklahoma and Texas, and will be led by Dr. Mark Matocha of Texas A&M University.

The highest priority of RINLG will to develop comprehensive regional responses to regulatory queries from the U.S. EPA, OPMP, state regulatory agencies, and others. A high volume of such queries (for instance if endangered species issues questions become as numerous as has been predicted) could preclude completion of lower priority tasks including crop profile updates.

Members of the RINLG will update at least 12 Crop Profiles recently rated as high priority by OPMP (see Appendix 3). For each crop profile, the sub-awardee will collaborate with appropriate Extension specialists or other experts to draft an update, review the draft for accuracy, and finalize the document for submission to the Center. Members of RINLG will attempt to identify non-federal support for development and update of additional Crop Profiles, Pest Management Strategic Plans, and IPM Elements.

The RIN focuses primarily, but not exclusively, on regulatory issues. For other types of issues including public awareness, outreach, education and extension of IPM, SRIPMC will continue with the mechanisms we have developed and used so successfully since 2004. These include our website, blog and twitter feeds, press releases, and presentation of the Friends of Southern

Region IPM awards program. Each of these crosses traditional institutional, disciplinary, programmatic and geographic boundaries to address regional IPM priorities.

b.) **eXtension Initiatives:** We are currently involved with four initiatives related to eXtension. None of the initiatives involves funds budgeted from this proposal, but all are integral to our mission.

- 1) We are organizing a workshop to promote improved collaboration between traditional IPM programs (including Extension IPM Coordinators, Extension Specialists, regional IPM committees, and researchers) and eXtension. The workshop, funded by our current EPMIDSS grant, will be held October 5, 2011 in Washington DC, the day before the National IPM Committee annual meeting.
- 2) Mr. Stephen Toth manages the development of the Pesticide Environmental Stewardship eXtension Community of Practice, funded by the NSF Center for IPM and in part by the EPMIDSS grant.
- 3) SRIPMC initiated and continues to work closely with the Southern Region School IPM Work Group, which has contributed to the eXtension School IPM Community of Practice.
- 4) Mr. James VanKirk is collaborating as a co-PI with Project Director Keith Douce of the University of Georgia on a proposal to form the National IPM Community of Practice.

#### **(5) Development and Sustainability of Signature Global Food Security Programs**

This project includes the following signature Global Food Security programs.

a) **Regulatory Information Network (RIN):** As described in section 4, the RIN and RIN Liaison Group will be SRIPMC's first responder for priority pest management challenges related to impacts resulting from regulatory actions. The RINLG will facilitate and manage information flow among regulatory agencies including the U.S. EPA and regional stakeholders, inform regulators of the practical needs of the agricultural sector, and update the agricultural sector of regulatory plans, actions, and requirements of federal regulators.

The RIN contributes to development of global food security by:

- *Promoting and fostering sustainable collaboration across state and organizational boundaries.* The RIN involves sub-awards to collaborators at four land-grant universities, each of whom will serve as liaison to multiple states or territories. Thus, all 15 states and territories in the Southern Region will be included in the RIN.
- *Responding to priority pest management challenges such as invasive species, endangered species, pest resistance, and impacts resulting from regulatory actions affecting pest management practices.* The RINLG continues a long history of success in this regard. RIN liaisons have responded to EPA and OPMP requests for information about usage of critical pesticides, giving the agencies accurate information on which to base registration decisions.
- *Responding to high priority pest management challenges.* Pest management issues addressed by RIN routinely entail high priority pest management challenges. For example, in addition to responding to regulatory information requests, the RIN keeps crop profiles updated and develops new crop profiles, pest management strategic plans or IPM Elements based on the needs of the growers or critical issues such as a new pest or the cancellation of a pesticide.

## **b) Critical and Emerging Issues Grants Program:**

We propose to suspend the IPM Enhancement Grants Program (IPMEP), a major change that merits explanation. Until now the SRIPMC's IPMEP ranged annually between \$330,000 and \$400,000 and included the RIN, currently funded at \$150,000. Funds available for the primary project (i.e. SRIPMC) are decreased for FY 2011 by about \$265,000. The \$265,000 decrease in funding and the \$100,000 proposed for the RIN equals \$365,000, more than the cost of the entire IPMEP in some past years. Moreover, this proposal includes additional expenses of greater than \$94,000 (including direct and indirect costs for sub-award, personnel, travel and associated indirect costs) for the Small Farms Working Group and the Impact Evaluation Initiative. Both of these new initiatives not only address AC/SC priorities but also respond to requirements of the RFA for addressing underserved groups (Small Farms Working Group) and impact evaluation (Impact Evaluation Initiative).

The Critical and Emerging Issues Grant Program (used sparingly in past years) will replace the IPMEP in funding regional projects of importance because of the small amount of funds available for this purpose. The Critical and Emerging Issues Grant Program will utilize a Request for Applications posted online that is constantly open until available funds are exhausted. Proposals of less than \$5,000 that address current issues and opportunities in IPM will be encouraged. Evaluation criteria will include whether the project's urgency renders it unsuitable for other competitive funding and whether the project offers promise of significant environmental, economic and/or human health benefit. Proposals will be evaluated by the SC using the process described in section 7. Any proposal will be funded only if the SC approves it and if sufficient funds remain in the pool.

- *Promoting and fostering sustainable collaboration across state and organizational boundaries.* Historically, requests for these funds have been for projects that cross state and organizational boundaries (for instance, a mid-Atlantic work group on slug issues, and agent training for methyl bromide alternatives).
- *Responding to priority pest management challenges such as invasive species, endangered species, pest resistance, and impacts resulting from regulatory actions affecting pest management practices.* The Critical and Emerging Issues Grants Program is designed for rapid initial response, often planning, for just these kinds of issues.
- *Responding to high priority pest management challenges.* The Critical and Emerging Issues Grants Program is designed as a first response to very urgent critical issues, which by definition are "high priority."
- *Enabling our partners to respond to challenges by bringing together needed expertise and organizations, resources, and communicating plans and successes to appropriate audiences.* We expect requests for funding to match this description very well, as they have in the past (e.g. slug working group.).

**c) Small Farms Working Group:** Dr. Henry Fadamiro of Auburn University will lead the new Small Farms Working Group (SFWG). SFWG will respond directly to issues of several related groups underserved by IPM in this region. It will focus on small, highly diversified farms including those using low input, organic, and sustainable methods. Farms served by 1890 Land Grant universities and colleges will be a key component of this work. Dr. Fadamiro will recruit members from across the region representing these groups and convene a workshop. The purposes of the workshop are to familiarize all participants with each other's goals, resources,

and challenges in IPM programming; to identify common needs; to identify opportunities for collaboration; and to enumerate a prioritized list of actions to develop, enhance, and improve IPM utilization. This effort will be sustained through continuing remote communications including teleconferences, email, websites, and social networking.

The SFWG will contribute to development of global food security by:

- *Promoting and fostering sustainable collaboration across state and organizational boundaries.* The SFWG will include membership from across the Southern Region. We expect members to include both 1862 and 1890 Land Grant Universities, small and mid-sized colleges, IPM programs, Southern SARE, farmers, agricultural consultants, EPA and others.
- *Responding to priority pest management challenges such as invasive species, endangered species, pest resistance, and impacts resulting from regulatory actions affecting pest management practices.* Farmers using sustainable practices often face challenges not experienced on large, conventional farms. The SFWG will define priorities for research, extension, and regulatory agencies that will assist with research topics, extension efforts and regulatory decisions that help small farm growers cope with those unique challenges.
- *Leading development and making sustainable IPM programs and activities conducted by public institutions and the private sector.* Public sector participation is described above. Farmers, private consultants, and other private sector participants will be included in the working group. The priorities document developed by the group will identify collaborative opportunities and enumerate a list of actions to develop, enhance, and improve IPM utilization. Dr. Fadamiro will lead the effort to sustain the network through continuing remote communications including teleconferences, e-mail, websites and social networking. The group will also represent the views of stakeholder groups to the Center and pass information from the Center to their own organizations and peers.
- *Responding to high priority pest management challenges.* The core purpose of this group is to identify and address high priority pest management challenges of underserved audiences. Subsequent communication after the formation of the priorities document will focus on ways to respond to some of the issues listed in the priorities document.
- *Enabling our partners to respond to challenges by bringing together needed expertise and organizations, resources, and communicating plans and successes to appropriate audiences.* The SFWG's diverse membership will identify similar and often overlapping constraints, opportunities and challenges in using IPM. The initial tasks of SFWG, to identify common needs and prioritize actions, are necessary first steps in developing sustainable IPM programs and activities throughout the region. The group will identify existing internal and external (e.g. funding opportunities) resources to be applied to priority needs. Ideally the group will continue to function beyond this first year of funding and will apply for appropriate grants to continue to function and develop new opportunities.

d) **ipmPIPE Projects:** The ipmPIPE (IPM Pest Information Platform for Extension and Education ) is an approach that involves mapping and modeling systems in IPM. By optimizing the efficiency and effectiveness of pest management decisions, the ipmPIPE enhances economic, environmentally sound and safe food and fiber production, and thus contributes to global food security. Initially conceived as useful for IPM of migratory pests, the ipmPIPE approach utilizes models that integrate pest and crop development, weather and climatological data to predict

infestation levels and the need for management intervention. The first ipmPIPE was developed in response to the invasive pest Asian soybean rust (SBR, *Phakopsora pachyrhizi*), and the system has since grown as an approach to IPM in many crop/pest combinations. These include several legume pathogens, onion insect and disease pests, light brown apple moth (LBAM, *Epiphyas postvittana*) on several crops, spotted wing drosophila (SWD, *Drosophila suzukii*) on several crops, pecan scab (*Cladosporium caryigenum*) and pecan nut casebearer (*Acrobasis nuxvorella*) on pecan, cucurbit downy mildew (*Pseudoperonospora cubensis*) on several cucurbits, southern corn rust (*Puccinia polysora*) on corn, and others.

The SRIPMC will continue to contribute to the facilitation and national leadership of the ipmPIPE approach as it has since 2005. Mr. James VanKirk is Project Director for five past and current ipmPIPE projects. As such he manages budget planning and has managed well over 100 subcontracts involving almost every state in the mainland U.S.; helped organize the ipmPIPE Steering Committee (PIPE SC); has served on both the PIPE SC and the Executive Committee since their inception; has served as PIPE SC chair; and has made numerous presentations here and abroad explaining promoting and explaining ipmPIPE. He has participated with membership of NCERA 208 in development of design of the SBR ipmPIPE including budgets, location of plots, online user interface, and other aspects. He is co-PI of the Onion ipmPIPE project currently funded by USDA's Specialty Crops Research Initiative. In June and July of this year he organized the Pipefitters Working Group, an informal network of leaders of ipmPIPE and similar projects dedicated to sharing expertise and other resources in order to sustain the ipmPIPE approach. Funds are not included in this proposal for direct support of ipmPIPE projects, but we expect that SRIPMC will maintain a very significant and effective contribution to ipmPIPE.

Our work with ipmPIPE contributes to development of global food security by:

- *Promoting and fostering sustainable collaboration across state and organizational boundaries.* All ipmPIPE projects, except the Pennsylvania PIPE, are multi-state. All involve multi-agency collaboration with involvement of universities, federal agencies (NIFA, ARS, APHIS, RMA, EPA), and state agencies (agriculture and environmental departments from many states).
- *Responding to priority pest management challenges such as invasive species, endangered species, pest resistance, and impacts resulting from regulatory actions affecting pest management practices.* The ipmPIPE was initiated in response to the invasive SBR pest. Each of the existing ipmPIPE projects routinely addresses pest resistance and effect of regulatory actions (e.g. pesticides registered for management of target pests).
- *Leading development and making sustainable IPM programs and activities conducted by public institutions and the private sector.* The ipmPIPE involves many public sector institutions as described in the first bullet. The private sector is also heavily involved, including not only hundreds of farmers but also the United Soybean Board, American Seed Trade Association, National Alliance of Independent Crop Consultants, North Central Soybean Research Program, and Certified Crop Consultants.
- *Supporting key management tools that help foster Global Food Security including the Pest Information Platform for Extension and Education (IPM-PIPE) and other high priorities for integrated pest management programs relevant to Global Food Security.*
- *Responding to high priority pest management challenges.* Our work with the ipmPIPE “facilitate(s) further development of mapping and modeling systems for the IPM-PIPE.”

e) **eXtension Collaborations:** SRIPMC will continue to work with eXtension and to explore ways to improve this partnership as described in section 4. They include presentation of a workshop to improve IPM collaboration with eXtension; leadership of the Pesticide Environmental Stewardship Community of Practice (COP); participation in the proposed IPM COP; and collaboration with the School IPM COP.

Our work with eXtension contributes to development of global food security by:

- *Promoting and fostering sustainable collaboration across state and organizational boundaries.* All of these efforts components are multistate and multi-institutional. The aforementioned Communities of Practice require the collaboration of experts throughout the region to respond to questions involving pest management issues.
- *Responding to priority pest management challenges such as invasive species, endangered species, pest resistance, and impacts resulting from regulatory actions affecting pest management practices.* The Pesticide Environmental Stewardship COP deals directly with issues of pest resistance and proper pesticide usage for managing pests.
- *Supporting key management tools that help foster Global Food Security including the Pest Information Platform for Extension and Education (IPM-PIPE) and other high priorities for integrated pest management programs relevant to Global Food Security.* By delivering high quality, science-based information, eXtension provides a key tool used by farmers, consultants and others in making pest management decisions.
- *Responding to high priority pest management challenges* Pesticide environmental stewardship and IPM in Schools are high priority pest management challenges. Each IPM-related eXtension COP addresses its own high priority challenges.
- *Enabling our partners to respond to challenges by bringing together needed expertise and organizations, resources, and communicating plans and successes to appropriate audiences.* The eXtension system's mission is closely related to bringing together organizations and improving communications.

f) **IPM Impacts Evaluation Initiative:** The SRIPMC proposes an impact evaluation initiative to be led by an Evaluation Specialist (ES). Though benefits of impact evaluation seem self-evident and are almost universally accepted, rarely are adequate resources devoted to collection and analysis of impact evaluation data. This initiative represents the assignment of significant program resources to explicitly address evaluation of IPM program and project impacts. Duties of the ES are detailed in section 6 below.

Our IPM impacts evaluation initiative will contribute to development of global food security by:

- *Promoting and fostering sustainable collaboration across state and organizational boundaries.* The ES will collaborate with the SRIPMC's AC and SC as well as with SERA03-IPM and other multi-state multi-institution committees, providing advice, training and technical support on impact evaluation.
- *Leading development and making sustainable IPM programs and activities conducted by public institutions and the private sector.* Benefits of impact evaluation include documentation optimization of project design and implementation, thus contributing to real sustainability.
- *Responding to high priority pest management challenges.* Perhaps the single greatest challenge to IPM presently is the significant decline in resources to support research, extension, education, and outreach. This initiative will help us target precious resources

on effective approaches in the future, and may even help sway decisions for future support.

## **(6) Impacts: Review, Evaluation and Communications**

a) **Review and Evaluation:** SRIPMC will continue with evaluation mechanisms developed over the last two cycles in order to identify and document project impacts. These include evaluation plans as a scoring criterion in competitive programs we manage; requiring progress and termination reports for all funded projects; requiring PDs to present results at our AC/SC meetings; and including the Project Evaluation project type in the S-RIPM grants program.

In addition, we propose a new Impact Evaluation Initiative, led by an Evaluation Specialist (ES), hired at the post-doctoral level. Primary duties will include:

- 1) Identify, analyze, and prepare reports evaluating economic, environmental and or human health impacts of several IPM projects. The ES will work closely with each Project Director including on-site visits. Projects studied will be spread among several states, address several crops, and will involve varied pests (insect, pathogen, weed, etc.).
- 2) Develop the primary output, content (articles, press releases, etc.) that communicates positive outcomes to key stakeholders, funding organizations and policy makers. The ES will work closely with our Communications Specialist to appropriately target writing style, format, and outlets. We expect to use press releases, our website, our blog, and our twitter feed to distribute this information. This work will also contribute to development of the proposed eXtension IPM Community of Practice.
- 3) Advise regional IPM faculty. The ES will respond to queries from IPM faculty about both impact evaluation methods and about ways to use impact evaluation to strengthen grant proposals.
- 4) Provide training. The ES will offer training sessions as part of existing meetings such as SERA03-IPM, the National IPM Committee meeting and the National IPM Symposium. Training at the university/department level may also be offered in conjunction with on-site visits described above.

b) **Communicating Successes:** Our Communication Specialist will continue to handle most of the communication to various audiences. We see as a priority the dissemination of information to the following audiences:

- 1) Stakeholders including IPM users, IPM coordinators, pest management professionals, school IPM specialists, industry representatives, agricultural and extension personnel, growers and the general public
- 2) Federal agencies, including USDA agencies, Environmental Protection Agency, Housing and Urban Development, Southern SARE, the National Clean Plant Network, the National Plant Diagnostic Network and other federal agencies with a stake in IPM
- 3) Policymakers including state and federal government personnel
- 4) Other regional IPM Centers

The Communication Specialist will work with the Evaluation Specialist to produce stories about projects that have produced impacts. These stories will be released to the public in the following ways:

- 1) Blogs. Two years ago we began a blog.<sup>7</sup> Blog posts are updated at least weekly and cover an array of topics, from urban and agricultural issues to policy. This year we initiated a

news blog that communicates news of IPM events, funding opportunities and employment openings. Through the blog, we publicize RFA releases; state and local IPM program events; pest alerts affecting multiple state or areas; and news from the popular press covering specific topics of interest for IPM specialists in the Southern Region.

- 2) Social Networking. The blogs interface with a Twitter account that sends blog post titles to 148 followers, comprised of garden centers, land grant universities, extension offices and state departments of agriculture. This year, we plan to open a Facebook account as well to link to potential stakeholders on Facebook.
- 3) Communication with the media: We have successfully placed feature articles about IPM activities in grower magazines, online media and newspapers. We will continue to work with media outlets, including newspaper, radio and television to place success stories in publications specifically read by growers.
- 4) Collaboration with other IPM Centers. The existing IPM Centers have initiated an effort to improve collaboration and coordination in outreach. We will continue to support this collaborative approach among Centers.

In addition, SRIPMC will present the Friends of Southern IPM Awards Program once again. Funds to support the program are not shown in this proposal as we will use funds remaining from the FY2010 SRIPMC project. Each year we highlight the accomplishments of winners, who can be nominated in one of 6 different categories. We use an open submission process to accept nominations from anyone in the region. A subcommittee of the AC serves as a review panel, recommending awards that are approved by the full AC and ratified by the SC. Nominees are recognized and receive an award certificate at a venue of their own choosing, usually in front of their peers at professional or university-sponsored workshops or symposiums. In addition, several award presentations have included deans and extension directors, some who had not previously been involved with the state IPM program. Awardees receive a small honorarium for collaborating with our Communications Specialist to develop a success story that we distribute to appropriate venues. A list of winners can be found in Appendix 3.

The awards program provides us with a mechanism to transform interesting success stories into interesting and *timely* success stories, rendering them much more attractive to mass media. The program also highlights the winners' expertise regionally, through SRIPMC newsletter stories and blog posts. Some winners, including the Mid-South Entomologist Working Group, have been featured in national grower publications such as *Farm Press*.

#### **(7) Process to Ensure Effective Management of IPM Center Resources**

CIPM, which will continue to manage the SRIPMC grant at NCSU, has more than 20 years of experience in developing and managing competitive grants programs from its own membership funds, and for managing large multi-institutional projects for numerous agencies, including USDA/APHIS, USDA/FAS, USAID, and Cotton Incorporated. For the last 4 years, the SRIPMC has managed several ipmPIPE projects, with subcontracts to most states in the continental US.

We propose to continue the protocols for handling the SRIPMC Critical and Emerging Issues grants program currently in use by the SRIPMC that have been approved by NIFA. The RFA will be similar to that used previously and shown in Appendix 2 (RFAs for Funding Opportunities). We will continue to value diversity in the projects we support.

Our general protocols for Critical and Emerging Issues projects (CIP) include:

- (1) Open RFA Process. The CIP will utilize an open submission (no deadline) Request for Applications posted online. The RFA will be written by the Center Staff (Director and Associate Directors). These individuals will not be eligible for funding under the RFA and will not serve on the Scientific Review Panel. The RFA will be posted on the Center website and circulated to all Land-Grant Institutions in the Southern Region, State agricultural experiment station directors, State Extension directors, current state project leaders, IPM Coordinators, and members of the Center Advisory Council and Steering Committee. These individuals will be asked to further disseminate the RFA to the appropriate people within their state or organization. The RFA will remain open until funds are exhausted. Proposal of less than \$5,000 that address current issues and opportunities in IPM will be encouraged. Because amounts are so small and need is often urgent, proposal requirements are kept simple and short. Proposals usually consist of a two-page summary of the issue and the proposed work. Every proposal must include the project director's conflict of interest form, a review of the issue and its urgency, project objectives and procedures, a budget and a budget justification. The SRIPMC leadership (Director, Associate Director and Assistant Director) distributes the proposal along with its recommendation to the SRIPMC SC, which acts as a review panel.
- (2) Scientific Review. Members of the SRIPMC Steering Committee will review all proposals submitted for a Critical and Emerging Issues project. See 3(a) for an explanation of Steering Committee membership. Where any possible conflict of interest shall occur (as defined by USDA/CSREES policy), that reviewer shall be excused from deliberations involving the proposal in question. The Steering Committee will decide which proposals will be funded and the award amounts in consultation with the Center Director and Associate Directors.
- (3) Sub-award Processing and Administration. After decisions have been made about a Critical and Emerging Issues project, sub-award agreements will be issued to provide funding for that project. NCSU's Office of Contracts and Grants (C&G) is responsible for the fiscal administration of grants and contracts received to fund sponsored research and education projects at NCSU. As part of these responsibilities, C&G will provide the following services to the SRIPM Center:
  - i. Draft sub-award agreements for Project Director's approval. Sub-award agreements are based on a boilerplate format in accordance with applicable laws and NIFA award terms and conditions.
  - ii. Negotiate acceptance of sub-award agreement terms and conditions with collaborating organizational representatives.
  - iii. Desk audit sub-award recipient requests for payment to ensure compliance with each sub-award agreement terms and conditions.
  - iv. Conduct reviews of sub-award recipient organization's A-133 audit reports in accordance with circular requirements.

We will also continue the Friends of Southern IPM Award Program, but using funds budgeted from the current project. We will release a separate Call for Nominations in September using the

same distribution mechanism used for our grants program. The Call for Nominations will be similar to that used previously and shown in Appendix 2 (RFAs for Funding Opportunities). People writing nominations may choose from one of six categories: Bright Idea (innovative project or product), IPM Educator (instructor or Extension), IPM Implementer (“on the ground” involvement in IPM), Future Leader (beginning IPM career), Pulling Together (group award), and Lifetime Achievement (pioneer in IPM).

The deadline for nominations will be the week before our Advisory Council meeting, since we select a random group from the AC to be on an Award Panel. The Award Panel will recommend winners, and SRIPMC staff members will notify winners after the Steering Committee ratifies the panel’s choices.

Each winner will be presented with the award at a venue of the individual’s choosing. In addition, winners in every category except the Lifetime Achievement award will be given a small (\$500) honorarium, which they earn by assisting the Communication Specialist with a publishable story about their projects.

**(8) Plan to Assess Progress and Accomplishments Throughout the Project**

SRIPMC will participate in a review of the Regional IPM Centers coordinated by USDA/NIFA. Funding for this component is limited to travel for one trip by SRIPMC leadership. In light of the budget constraints, we are expecting that this review will be scheduled to coincide with or replace one of the three annual meetings of the National IPM Centers Coordinating Committee. We will assess progress and accomplishments throughout this project using the following timeline:

September 2011	Contract for SIPMC awarded; participate in SERA03-IPM evaluation and priorities setting workshop.
October 2011	eXtension and IPM Workshop, Washington D.C.; National IPM Committee (NIPMCC) and National IPM Centers Coordinating Committee (NIPMCCC) (travel funded by the 2010 project); SFWG and RINLG in place; Critical and Emerging Issues Program RFA posted; S-RIPM RFA posted.
November 2011	Monthly teleconferences of RINLG commence; FOSIPM nominations accepted.
December 2011	Evaluation Specialist hired; S-RIPM submission deadline. S-RIPM panels recruited and assignments made; AC/SC meets (funded by the 2010 project); FOSIPM awardees chosen.
February 2012	NIPMCCC; Evaluation Specialist releases first success story; S-RIPM panels
March 2012	National IPM Symposium; Participate in SERA-03 meeting.
May 2012	SFWG Workshop held; Success stories from Evaluation Specialist released
June 2012	SFWG priorities posted; NIPMCCC meets, IPM Centers review.
August 2012	Updates of 12 Crop Profiles posted online; Success stories from Evaluation Specialist released.
October 2012	NIPMCC and NIPMCCC (travel funded by this proposal).
November 2012	AC/SC meets (funded by this proposal).
March, 2013	All sub-awards completed and terminated.
June, 2013	All required reports completed and submitted.