

USDA Agriculture Research Service

Retrospective Assessment of National Program 305 – Crop Production

December, 2006

Executive Summary

A Review Team of six scientists external to the USDA, ARS, with expertise in the areas of integrated production systems, horticulture, entomology, agroengineering and agrochemical, bees and pollination, and genetic resources was convened in Beltsville, MD on October 31 and November 1, 2006 to conduct a 5 year retrospective review of USDA-ARS NP 305 (Crop Production). NP 305 is a complex and disjunct program located at 23 USA locations by 62 full-time scientists and with an annual budget of approximately \$23 million. NP 305 is currently divided into three components: Integrated Production Systems, Agroengineering, Agrochemicals and Related Technologies and Bees and Pollination.

The review team was provided with a retrospective accomplishments report and a listing of the detailed project with staff and locations that focused on the overall impacts and accomplishments of selected projects within NP305. This was a broad-based review rather than a project-by-project review. In addition to the report and project listings, the review team members used other resources, including recent, related and relevant publications, databases, financial expenditures per project and professional working knowledge of the research areas within NP 305.

The Review Team members thank national ARS program staff, Kevin Hackett, Sally Schneider for outlining the structure of the ARS national programs and specifically NP305 and staff members Marilyn Low and Rosemary Callahan for their patience and efforts in working with the team by providing timely information, arranging travel and accommodations, and assisting with logistical details to help make the review process effective and meaningful as possible. Their efforts significantly assisted the team to accomplish its goal of assessing the program.

The NP 305 accomplishment report was developed by National Program Staff based on impact statements submitted by lead ARS scientists. These accomplishments were assessed against commitments (expected impacts and outcomes) identified in the initial action plan created at the beginning of the five-year cycle. The review team has access to the action plan in addition to the accomplishment report. Our recommendations are outlined under each of the Components and Problem Areas and are based mainly on the following criteria:

- Did the research contribute to the development and/or implementation of regulations?
- Were government and/or industry programs influenced by the research?
- Did the research influence/impact other researchers?

- Did the research advance knowledge?
- Were major agricultural, environmental or natural resource problems ameliorated, mitigated, or solved?
- Has the research resulted in technology that has been patented, licensed, or cleared for registration and if so, has it led to commercialization?
- Are there other products (e.g., germplasm, valuable collection, disease or pest control products, bee housing or diets, etc.)?
- Has the research yielded health, social or economic advantages for consumers?
- Have new or improved scientific methods or technologies been developed by ARS and adopted by others (e.g., customers, stakeholders, consumers, and/or other scientists)?
- Were the accomplishments of the program commensurate with the investment?
- Did the stated accomplishments reflect the goals in the Action Plan?
- Did the research contribute to reducing regulations?

Each problem area was rated from low to high or along the scale, for example medium to high impact. A low rating should not be interpreted as a lack of support for the problem area, but rather the limited impact that the review team observed in the given problem area. This may in part be a result of limited data presented. Similarly scientists should not perceive criticism of aspects of the program they are responsible for as criticisms of themselves. This aspect was assessed independently of this review team, and no information was provided to suggest scientists were not performing at a high level.

In addition to the documentation provided, National Program staff for NP 305 prepared review team members for the review through two phone conferences about 1 month prior to the meeting in Beltsville. Two conferences were required as not all review members were available on the same day. The Program Staff emphasized the purpose of the retrospective review process – assessing program performance measures relative to the projected program outcomes and impacts developed at the beginning of the five-year cycle for the various problem areas. Before the teleconferences, primary and secondary reviewers had been assigned by the review team chairman, specific Problem areas for indepth review. Team members also reviewed and commented on the evaluation criteria during the teleconference and the chairman reviewed his expectations and outlines time lines for completion of the final report.

National Program Leaders, Deputy Administrator and Associate Administrator, reemphasized the purpose of the review and provided program overviews at the start of the 2 day review meeting in Beltsville. The review team chair served as a tertiary reviewer on all projects and provided comments to each team member prior to the meeting on those sections they were primarily responsible for reviewing. The primary review team member provided their assessments of the program, followed by input from the secondary and other team members. Reviews of all programs were completed within the 2 days of meeting. During the morning of the second day the team members discussed and identified major points to be addressed during the structured feed back to the National Program Staff. Some time was available for writing specific comments. The primary reviewer was charged with developing a draft report for the Problem area for

which they agreed to provide leadership, considering their assessment of the program and the input from the other review team members. Completed drafts of Problem areas were submitted to the chairman who compiled all information into a single document and who reviewed and added important elements. A draft of the final report was circulated to review team members for their final input and comment prior to submission to National Program staff.