

# USDA Electronic Repository for Agricultural Literature (ERAL)

## **NAL's Pilot Project for a Repository**

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# The “Spark” ...

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- ❑ February 3, 2005---Elias Zerhouni, director of the National Institutes of Health, issues directive that establishes a full-text repository of NIH funded extramural research within PubMed Central. Submissions are final prepublication manuscripts. Program is *voluntary*.
- ❑ <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-022.html>
- ❑ Shortly thereafter, NAL Director Peter Young asks that a task force be formed at NAL to plan and conduct a pilot project for the establishment of a digital repository of ARS intramural research.

# What is ERAL?

## Electronic Repository of Agricultural Literature

- ❑ The preliminary name for NAL's pilot digital repository project.
- ❑ An electronic repository that provides reliable, long-term access and storage to digital materials produced by USDA and maintained by NAL. It will contain USDA-authored and/or USDA-published content, as well as unpublished content such as datasets, lab notes, presentations, and other materials in any digital format (text, image, audio, or video).
- ❑ A response to the movement toward open or public access to government-produced research.
- ❑ A response to the movement toward immediate access to online full-text content.
- ❑ A response to the demand for access to published content and to the underlying materials resulting from research in the sciences.

# ERAL Task Force Charge

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## Initial charge

“Establish a repository of publicly accessible online full-text articles and other publications authored by ARS scientists.”

## Revised charge

Establish the workflow of full-text articles submitted by ARS scientists. This includes creation of AGRICOLA indexing records with links to full-text.

# Project Goals

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- ❑ Develop a workflow of the entire e-article submission process -storing the digital article and linking it to the AGRICOLA record.
- ❑ Map metadata from the ARS Project Management System (ARIS) and Tektran to MARC and load into NAL's Voyager platform.
- ❑ Create a Web-based article submission form for ARS scientists/staff to electronically submit articles to NAL.
- ❑ Stored articles are displayed in Zylab - NAL's pilot repository platform.
- ❑ Prepare instructions for ARS scientists/staff to submit articles to ERAL.
- ❑ Conduct site visits.
- ❑ Evaluate metadata and article submissions from labs.
- ❑ Develop recommendations for future development of NAL's digital repository.

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## Authors

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**Interpretive Summary:** Fruit tree orchard floor management should enhance fruit tree productivity and also protect natural resources. Mulching can be used as an alternative to herbicides to manage weeds, and the use of organic material such as composted poultry litter (CPL), could also help with proper disposal of waste. Nitrogen (N) and phosphorus (P) release rates from field applications of composted manures can be highly important because both N and P can contribute to degradation of freshwater and marine ecosystems. The objectives of this study were to determine the effect of CPL application as a mulch below peach trees on weed control, peach yield, and soil N and P. CPL mulch suppressed weed growth so that after two years weed abundance was only 27% weed cover compared with 86% for the commercial fertilizer-treated plots. Six weeks after treatment, soil N was five times higher in soil treated with commercial fertilizer than with CPL mulch, indicating that N release to the environment was not a problem with CPL. However, 47 weeks after treatment, the soil from plots with the CPL mulch had twice as much water-soluble P as soil treated with commercial fertilizer. High applications of CPL could elevate P in surface runoff to levels that cause environmental degradation. Results indicate that CPL could be used as a weed suppressant without adversely affecting nitrogen release to the environment. However, P concentration in soil water may be problematic.

**Technical Abstract:** Proper management of poultry manure and bedding (litter) can prevent environmental degradation such as hypoxia in aquatic communities. Composted poultry litter (CPL) may be applied as a mulch in fruit orchards to manage waste and to provide a slow-release nutrient source and weed control. Plots beneath peach trees (*Prunus persica* L. 'Sunhigh') all received preemergence herbicides and then the following treatments in May 1998: commercial fertilizer (15 g N m<sup>-2</sup>), low rate CPL (15 g N m<sup>-2</sup> as 2.9 kg CPL m<sup>-2</sup>), high rate CPL (62 g N m<sup>-2</sup> as 11.6 kg CPL m<sup>-2</sup>), and no fertilizer or mulch control. Weeds were completely controlled by mulch and herbicide during 1998 but, during 1999, weed abundance increased. By September 1999, the high rate of CPL had only 27% weed cover compared with 86% for the commercial fertilizer-treated plots. In plots treated with commercial fertilizer, soil N was highest (16.4 mg NH<sub>4</sub>-N and 18.6 mg NO<sub>3</sub>-N kg<sup>-1</sup> soil) 6 weeks after treatment (WAT). Soil N did not differ among the two CPL treatments and the control at any time. At the high rate of CPL, there was 3.2 mg NH<sub>4</sub>-N and 0.7 mg NO<sub>3</sub>-N kg<sup>-1</sup> soil at six WAT. Water extractable P (WEP) in the

# Intellectual Property Issues

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*Issue: Final prepublication manuscript or final published version.*

- ❑ By statute, copyright protection is not available for any work of the United States Government. (17 USC 105)
- ❑ Articles authored by USDA employees in the course of their official duties are not subject to copyright protection.
- ❑ If copyright protection cannot be claimed for a work produced by the Government, then that work is considered to be in the public domain.
- ❑ Employee articles are “work for hire” and owned by the employer (i.e. the Federal government).

# Intellectual Property Issues

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*Issue: What rights can the publisher assert?*

- ❑ Any agreement signed by a USDA employee assigning publishing rights is unenforceable.
- ❑ The actions of a publisher in providing the title, pagination, and layout for an article form a slim basis for claiming copyright.
- ❑ NAL can post a PDF of any article authored by federal employees as the work is in the public domain and a work for hire.



# The Article Submission Process

Welcome to the **ARS E-Repository document submission page**

The National Agricultural Library (NAL) has established a full-text digital archive of research papers authored by Agricultural Research Service (ARS) scientists. Using the form below, ARS staff can submit publications to the archive.

## Instructions

1. Complete the submission form. **All fields are required.**
2. Click the Submit button. You will be prompted to enter the complete path to the document file on the next page.

Contact Name	<input type="text"/>
Contact E-mail	<input type="text"/>
Contact Phone	( <input type="text"/> ) - <input type="text"/> - <input type="text"/>
ARIS log number**	<input type="text"/>
<input type="button" value="Submit"/> <input type="button" value="Clear Form"/>	

\*\*The ARIS log number is required before you can proceed to the next step in submitting the document file to the repository. To locate the ARIS log number for your document, search either the ARIS database or [TEKTRAN](#). Note that in [TEKTRAN](#), the ARIS log number will appear at the end of the URL for your document entry in the browser's address field, as shown in the example below.



# The Article Submission Process

**The record associated with ARIS log number "123456" is:**

**Title:** COPPER ION REMOVAL BY ALMOND SHELL CARBONS AND COMMERCIAL CARBONS: BATCH AND COLUMN STUDIES

**Authors**

\* Toles, Christopher - CABOT CORPORATION

\* Marshall, Wayne

**Submitted to:** Separation Science And Technology

**Publication Acceptance Date:** November 19, 2001

**Publication Date:** N/A

**Interpretive Summary:** .....

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If this is not the correct record, please [go back](#) to the previous page and search again.

Otherwise, please enter the complete path to the document file.

NOTE: please submit the electronic copy of the **publication version** of the document. The preferred file format is **PDF**.

If you are resubmitting an existing document, please include the reason (e.g., new version) in the Notes/Comments field.

Press the Submit button to send your document file to the repository.

Notes/Comments

Upload file

Browse...

Submit

Reset

# Site visits---Feedback

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- ❑ NAL should get articles and not bother them. “This is duplicative.”
- ❑ “What’s my liability if I sign an agreement with a publisher?” Copyright is a concern.
- ❑ Scientists are not going to remember six months later to submit their article. “It’s just not going to happen.” An option is to have the labs submit a list of titles to NAL on a semiannual basis and NAL would get the TEKTRAN metadata and articles on its own.
- ❑ There was concern that publishers would not supply authors with articles in electronic form, or would provide formats other than PDF. We explained for the pilot we were requesting PDF, but the repository would accept other formats.
- ❑ “What agency do you work for?”

# Site visits--Feedback

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- ❑ ARS scientists have to do more with less. Site visit provided them an opportunity to vent.
- ❑ There was interest at two sites in NAL doing retrospective digitization of USDA authored publications.
- ❑ The response was more positive with the presence of the lab director.
- ❑ Administrators are supportive of digital repository concept.
- ❑ This feedback reflects a “push back’ response from ARS scientist that possibly reflects the low submission rate NLM has received to their PMC.

# Results of the pilot

- ❑ **Summary of the 14 ARS documents that were received and processed**
- ❑ 7 new AGRICOLA records were created using data from TekTran and serial records in Citation Server (average cleanup time - 14½ minutes)
- ❑ 1 pre-existing AGRICOLA record was correctly found and updated (cleanup time – 5 minutes)
- ❑ 3 other pre-existing AGRICOLA records weren't found and duplicate records were created that had to be manually merged and then deleted (average cleanup time – 8½ minutes)
- ❑ 1 AGRICOLA record wasn't created because the TekTran record couldn't be found so the record had to be created manually from scratch (time – 9 minutes)
- ❑ 2 additional records were created for the late submissions from scratch (average time – 5 minutes).

# Lessons learned---Positive

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- ❑ A workflow for the receipt of ARS publications was established. It works!
- ❑ There's considerable support for ERAL among ARS research leaders and managers.

# Lessons learned ----Negative

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- ❑ The metadata in the ARS Project Management System and TekTran isn't suitable for inclusion in the AGRICOLA Index.
- ❑ ARS labs do not operate on NAL time.
- ❑ ARS laboratory staff had difficulty submitting articles, i.e. scanning articles, FTP, etc.
- ❑ Each laboratory has different conference facilities, so have backup plans.
- ❑ Lack of a definitive legal precedence for display of government authored research causes lengthy discussion of copyright.

# Conclusions

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- ❑ Exposed the staff to the issues of electronic repositories and copyright.
- ❑ NAL made fundamental decisions on how to interpret copyright law.
- ❑ The framework for a repository workflow was established.
- ❑ Determined that the submission/repository process is not self-service and will need ongoing support from NAL staff.
- ❑ Learned more about ARS culture and how we may better work with ARS scientists in the future.
- ❑ For the repository to become a reality:
  - ❑ submission of articles by scientists must be a mandatory
  - ❑ high-level ARS support is essential
  - ❑ estimated annual growth will be 7,500-10,000 articles



# Where do we go from here?

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- ❑ Management conducted a study for a large-scale repository at NAL
  
- ❑ NAL is implementing
  - ❑ D-Space as the repository platform
  - ❑ AGRICOLA Index as the search interface
  
- ❑ NAL will conduct training/marketing sessions for ARS/USDA on the repository and DigiTop.