



**Agricultural Research Service
Office of Technology Transfer**

Technology Transfer: Patenting

*Celebrating over 150 years serving every American
Every Day, Every Way*



What is an Invention

Any new and useful process, machine, manufacture, design, or composition of matter, or any new and useful improvement thereof, or any variety of vegetatively propagated plant

Reasons for Patenting

- **Facilitates technology transfer:**
 - ✓ **Allows broader use**
 - ✓ **Incentive for investments by private sector**
 - ✓ **Increase research impact**
- **Directs technology use by others**
- **Expands use to foreign countries**
- **Enhances U.S. economic development, global competition, & sustainable economic security**

Patenting and publishing are not incompatible, consult with a Patent Advisor before publishing.

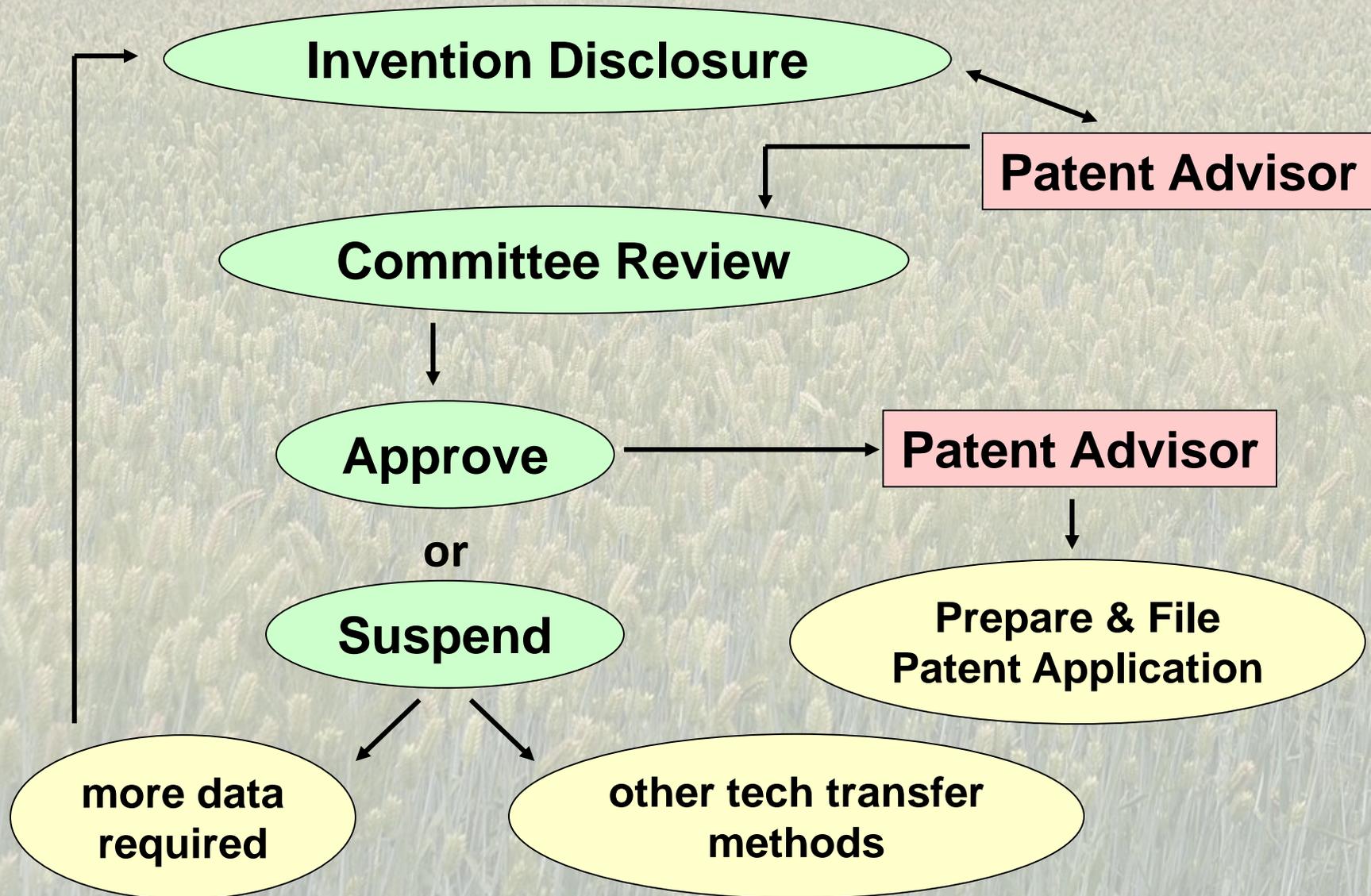
ARS Patent Policy

- **Pursues patent protection when it facilitates technology transfer**
- **Research 'tools' are usually not patented**
- **Generally allows non-commercial research without a license**
- **Research outcomes belong to ARS, not the scientist (scientists assign rights to ARS)**
- **ARS, not the scientist, decides whether or not to apply for a patent**

Types of Protection for Inventions

- **Utility Patent**
 - ✓ **Process, machine, manufacture, composition, gene, etc.**
- **Plant Patent**
 - ✓ **Vegetatively propagated plants**
- **Plant Variety Protection Certificate**
 - ✓ **Seed propagated plants & tubers**

Process for Protecting Non-CRADA ARS Inventions



National Patent Committees

Four “Subject Matter” Committees:

- ✓ Life Sciences
 - ✓ Chemical
 - ✓ Mechanical and Measurement
 - ✓ Plant Protection
- Committees members are scientists
 - Committees meets quarterly

Committee Review

- **Presentation of invention by scientist in-depth reviewer**
- **Discussion by:**
 - ✓ **Committee members**
 - ✓ **Line management (Tech Transfer Coordinator & Area Office)**
 - ✓ **OTT (Partnership, Patenting, & Licensing staff)**
 - ✓ **Office of National Programs**
- **Committee members vote to recommend:**
 - ✓ **Approve**
 - ✓ **Suspend**
- **Based upon Committee's recommendation, final decision is made by HQ and Area tech transfer professionals. An email letter is sent to the inventor telling of the final decision and to arrange a teleconference to discuss the decision.**
- **Decision may be appealed**



United States Department of Agriculture

Research, Education, and Economics
Agricultural Research Service

Date

SUBJECT: Decision of National [TYPE] Patent Committee on 02/04/2015

TO: *Inventors*

FROM: Gail Poulos,
Supervisory Patent Advisor, Office of Technology Transfer

The Invention Disclosure is USDA Docket No. XXXX.XX, entitled "*TITLE*"
Inventor(s)

Approved (See Appendix A)

Suspended:

No data or insufficient data. Please consult with your patent advisor to submit a new Invention Disclosure once the conditions below are met.

Additional research data is required to draft a strong patent application.

Partner is needed to reduce the invention to practice (e.g., field test, prototypes, scale-up, etc.).

Other: _____

Recommend technology transfer by means other than a patent (e.g., scientific publication and/or conference, trade journal or like publication, newsletter, field day or workshop, university extension, etc.).

Other: _____

For a Decision to Suspend, the Deputy Assistant Administrator, the Patent Advisor and the Technology Transfer Coordinator will contact the inventor(s) to discuss the decision. A letter appealing the final decision of the National Patent committee can be submitted after the teleconference with the Deputy Assistant Administrator, Patent Advisor, and Technology Transfer Coordinator.

Thank you for taking the time to submit your invention disclosure. Your effort in documenting the invention with a disclosure is an essential step in the process of transferring the results into practical application. It helps the USDA Agricultural Research Service fulfill its mission to develop and transfer solutions.

Office of Technology Transfer
5601 Sunnyside Avenue, Beltsville, MD 20705-5131
USDA is an Equal Opportunity Employer

Patent Committee Criteria

Q1: Would a patent likely play a significant role in transferring the technology to the ultimate user beyond what could be achieved through publication? How would a patent enhance the transfer of the technology?

Q2: Is the invention of sufficient scope to justify patenting?

Q3: Would a patent on this invention be enforceable, i.e., is the invention drawn to, or does it employ, a unique and readily identifiable material or device which could be bought or sold?

Q4: Would stakeholders support the patenting and licensing of this technology? Is there current commercial interest in the invention or a high probability of commercialization in the future? Provide the names of any companies and contact information that you think may be interested in this technology for licensing. Provide the names of any companies and contact information that you think may be interested in collaborating to further develop/commercialize this technology through a CRADA and/or SBIR proposal.

Q5: Is the magnitude of the market relative to the costs of commercialization large enough to warrant a patent?

Q6: Do you know of any ARS or non-ARS patents, pending patent applications, invention disclosures, or research that could impact the technology described in this invention disclosure?

Q7: Is the invention ready to write as a patent application right now if approved by the committee?

Plant Committee Criteria

Q1: How is the cultivar different from and/or better than the closest currently available cultivar?

Q2: Is there current commercial interest in the cultivar or a high probability of commercialization in the future?

Q3: Is the potential market for the cultivar of sufficient size to warrant protection?

Q4: Would protection likely play a significant role in making the cultivar available to growers and consumers beyond what could be achieved through public release?

Q5: Have key stakeholders, such as commodity groups, growers, university partners, seed companies, and nurseries, been consulted about protection of the cultivar?

Invention Disclosure

- **Scientist initiates through ARIS**
- **Invention is described in detail including a description of how it is different from the state of the art**
- **Provides the basis for assessment of an invention and drafting a patent application**
- **Invention does not need to be market ready**
- **Scientists are legally required to disclose all subject matter that could constitute an invention**

Reasons for Consulting with a Patent Advisor

- Inventions are seemingly easy to recognize but difficult to define
- Additional research and/or data may be required for a patent
- Get advice on preserving patent rights **before** making presentations (papers, posters, formal and informal talks, etc.)
- Help in preparing an invention disclosure

Patent Advisor Teams

Life Science

Evelyn Rabin

Elizabeth Sampson

Albert Tsui

David Marks

Mark McNemar

Engineering

Robert Jones

Chemical

Byron Stover

Howard Owens

Supervisor

Gail Poulos

Contact information:

<http://www.ars.usda.gov/business/Docs.htm?docid=24716>

Inventorship vs. Authorship

Inventorship

- Legal determination, cannot be decided by the scientists
- Wrong inventorship may have serious consequences for the patent owner
- Inventorship is based on the claims in a patent application

Authorship

- Can be decided by the scientists
- Based on contributions in designing or performing the experiments or in writing the manuscript
- Authorship can be based on any part of a scientific paper

Protecting Intellectual Property

- **U.S. Patent Law is first inventor to file**
- **No public disclosure before a patent application is filed**
- **Inventors must respond to Patent Advisors in a timely and complete manner**
- **Inventorship determines ownership**
- **Lab notebooks are important for determining inventorship**

Laboratory Notebook Guidelines

- Consecutive numbered bound pages
- Single line through errors, **NO** erasable media
- Date, title of experiment, objective, detailed description of experiment, results/data (include data downloads) and conclusion
- Notes of meetings and emails that discuss the research project
- Scientist's signature
- Signature & date of witness (**NOT** a co-inventor)

Electronic Laboratory Notebooks

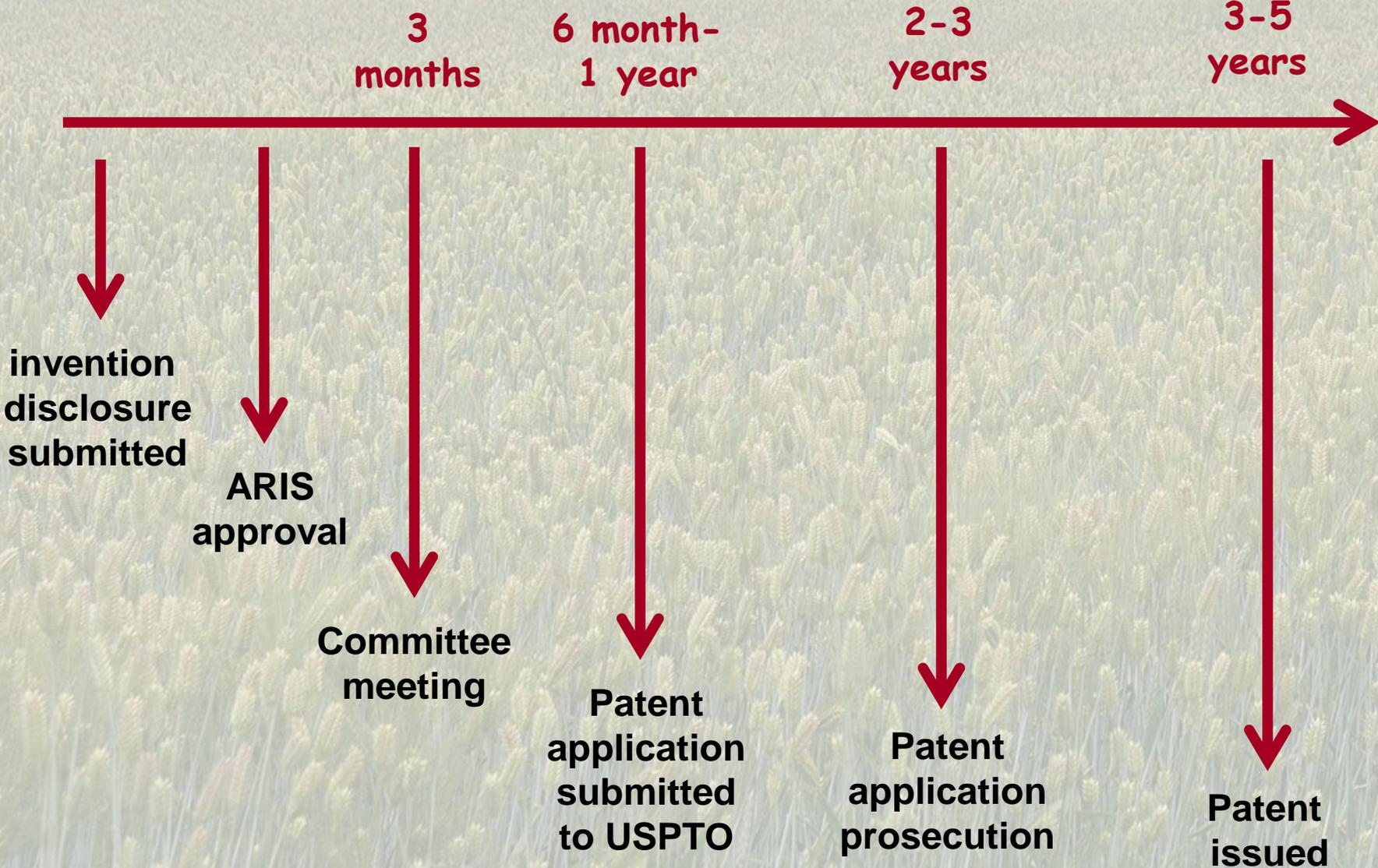
- **Now available from Docollab: Contact Katherine.ChuHickman@ars.usda.gov**
- **License is \$60.00/each per year.**
- **Sign and witness same as paper notebooks**

IMPORTANT!!

CRADAs & BRC Projects Require Separate ARS Lab Notebooks

- If you are conducting research under a CRADA or with a DOE Bioenergy Research Center (BRC), all information and data must be recorded in a separate ARS notebook that is used only for that CRADA or BRC research.
- If you are working on more than one CRADA or BRC project then you will have to use separate ARS notebooks for each project in addition to the ones you would use for non-CRADA, non-BRC research.

Estimated Patent Time Line



Thank you!

To learn more about patenting in ARS:

<http://www.ars.usda.gov/business/Docs.htm?docid=24716>