

Switchgrass Genetics Executive Committee (SGEC) Charter

A BACKGROUND

Beginning in 2009, the opportunities provided by the United States Department of Energy, especially through the BioEnergy Research Centers program, and the USDA have attracted more than a dozen new research groups into switchgrass, more than tripling the basic research community on this challenging organism. Some of these groups are performing their studies under an organized framework, for instance in the 13 switchgrass labs within the BioEnergy Science Center (BESC) center at ORNL, but there is little overall coordination. This has led to some duplication in efforts, but the most important possible problem is that the lack of coordination may have led to some serious gaps. Because no single project encompasses all that will be needed to be accomplished to provide optimal research and development for this organism, there is the very real possibility that a bottleneck will later be discovered that severely deters or even blocks the eventual genetic improvement and commercial development of this crop. Hence, the idea of a meeting to gather the switchgrass basic research community together to discuss the coordination of genomic research on this crop was proposed and, on January 18, 2011, the first Switchgrass Research Community meeting was held at the Plant and Animal Genome (PAG) XIX meeting in San Diego, CA. A follow-on workshop was held April 10, 2011 in Crystal City, VA.

One of the outcomes of the April 10 meeting was the formation of a volunteer *ad hoc* executive steering committee composed of three individuals that set in place a process for formal election of a 6 member committee, the Switchgrass Genetics Executive Committee (SGEC), made up of representatives from programs around the country involved in switchgrass research. In July 2011, an election selected six individuals to the committee and a seventh member was then appointed by general agreement. The seven individuals elected one chairman.

B PURPOSE OF THE EXECUTIVE COMMITTEE

The goals of this committee are:

- Helping to forge relationships and foster communication among various research groups performing fundamental biological research utilizing switchgrass as well as applied research on for the purpose of crop improvement.
- To facilitate open and free exchange of data, materials and ideas among the switchgrass research community.
- To coordinate programmatic aspects of switchgrass research and provide guidance to community particularly in ways that prevent duplicative research efforts and identify research bottlenecks that threaten to impede further feedstock development efforts or prevent fundamental breakthroughs.
- Help set overall switchgrass research objectives and priorities.
- Raise public awareness of benefits associated with utilization of switchgrass and value created through fundamental and applied research on biomass feedstock improvement.
- Be available to advise and inform policy makers, and provide information on the activities of the executive committee to interested parties.
- To be informed of and summarize progress of scientific activities within the switchgrass research community.
- To identify needs and opportunities of the switchgrass research community and communicate

them to funding agencies.

C KEY STAKEHOLDERS

Stakeholder	Roles	Responsibilities
DOE/Bioenergy Science Centers	Perform integrated research on projects involving feedstock development and conversion technology. Identification of new technologies.	Contribute representation to the SGEC, voluntarily provide information on their current research projects when requested by the SGEC.
Individual Investigators	Performing individual or collaborative research on switchgrass. Identification of new technologies/development of new cultivars.	Contribute representation to the SGEC, voluntarily provide information on their current research projects when requested by the SGEC.
Funding Agencies	Making research funding decisions across programs with competing priorities.	Seek information about as well as listen to community needs, research progress, priorities, and opportunities.
Graduate students/Postdoctoral scientists	Performing individual or collaborative research on switchgrass. Identification of new technologies.	Contribute representation to the SGEC, voluntarily provide information on their current research projects when requested by the SGEC.
Private Companies	Performing feedstock improvement, conversion and bioenergy production. Development and release of new cultivars. Commercialization of new cultivars.	Financial support through sponsorship of individuals, activities, and groups. Recognition of the contributions of federal research on feedstock development. Communication of priorities to federal agencies and decision makers.
Regulatory Agencies	Specify process for approval of bioenergy crops derived through biotechnology or that potentially threaten sensitive environments.	Formulate policies that are practical and fair and that are based on best available science.

D SCOPE OF ACTIVITIES

In practice the purposes of the executive committee are carried out through performance of the following activities.

- Monitoring and review of research activities at regular executive committee meetings;
- Requesting information as needed from various individuals and groups.
- Advisory services as emergent issues force changes of research direction to be considered, ensuring that scope aligns with the project requirements of sponsors and key stakeholder

groups;

- Identifying and consulting with key contacts working with switchgrass in the following subdisciplines for their knowledge of current research and state of the art.
 - Bioinformatics
 - Metabolomics/Biochemistry
 - Phenomics
 - Proteomics
 - Quantitative Genetics
 - Systems Biology
 - Agronomy
 - Tissue Culture
- Supporting the use of existing planning and coordinating forums, such as providing content for and management of a dedicated website and associated newsgroup.
- Coordinating to the extent possible with other planning groups and professional societies in the plant research and bioenergy communities.
- Not engaging in active management of individual projects, while providing guidance and support to those that do.
- Assisting with the organization of community meetings coordinated with national conferences.

E PROJECT ASSUMPTIONS

The executive committee's work is based on the assumptions that a nascent bioenergy industry utilizing lignocellulosic material would desire a defined, differentiated feedstock that could be integrated with their conversion processes and would meet their availability and cost requirements; that this industry would eventually become self-sustaining and be willing to enter into contracts with switchgrass producers for affordable feedstock. Further assumptions are that the US government will make funds available for both basic and applied research on lignocellulosic feedstock production and utilization.

F SUCCESS CRITERIA

- The success of the executive committee's efforts can be measured indirectly in a number of ways. Though each of the indicators listed below may be influenced by external forces, over time they may be a useful measures of the the research community's cohesiveness and growth. Quality and date of completion of large scale assembly of switchgrass genome that meets community-defined standards.
 - Size of active switchgrass community.
 - Quantity of materials deposited in genetic stock centers.
 - Activity of switchgrass newsgroup and usage statistics for switchgrass-genomics website.
 - Overall level of switchgrass funding in constant dollars relative to total spending on bioenergy research.

- Scope and uniqueness of overall switchgrass research efforts.
- Number of peer reviewed research articles published annually that include switchgrass.
- Switchgrass production statistics.

G EXECUTIVE COMMITTEE

Role of an Executive Committee member

It is intended that the Executive Committee leverage the experiences, expertise, and insight of key individuals at organizations committed to building switchgrass research capacity and breeding progress. Executive Committee members are not directly responsible for managing others research activities, but provide support and guidance for those who do. Thus, individually, Executive Committee members should:

- Understand the strategic implications and outcomes of initiatives being pursued through current research efforts;
- Appreciate the significance of research efforts for major stakeholders and represent their interests;
- Be genuinely interested in current research efforts and be an advocate for broad support for the outcomes being pursued by these efforts;
- Have a broad understanding of the management issues and approach being adopted for current research efforts.

In practice, this means members:

- Review the status of current research efforts on switchgrass.
- Advise individual research groups, larger community and users of available switchgrass resources to help them meet the requirements of key stakeholders.
- Help balance conflicting priorities and resources.
- Foster positive communication outside of the committee regarding progress and outcomes of switchgrass research.
- Report on research progress to those responsible at a high level, such as agency program managers, heads of agencies, or panels.
- Maintain confidentiality about sensitive or controversial topics and shared confidential information.
- Judge ideas, not people.
- Practice consensus team decisions.
- Members are expected to attend every meeting; members should contact Chair prior to the meeting if attendance is not possible.
- Members should contribute to the achievement of goals and objectives.

- Executive Committee service is voluntary. Reimbursement from the SGEC for expenses incurred as a result of attending SGEC meetings or performing other SGEC functions is not possible.

Election of the Executive Committee

The Switchgrass Genetics Executive Committee (SGEC) will include 6 members with no more than two members from any single institution elected by the broadest feasible vote of the Switchgrass Genetics Community.

Members will be elected for three-year terms. Two members will rotate off each year and will not be eligible for nomination for two succeeding years. Elections will take place in February of each year for any available seats, including the two that open each year and any that become available for other reasons. Nominations will be solicited from the entire Switchgrass Genetics Community, and all willing candidates will be present on the ballot. If there are more nominees than twice the number of open slots, a runoff ballot of twice the number of open slots will be conducted, for those nominees who receive the highest number of votes in the initial ballot. Elected candidates will be those with the most votes whose primary affiliation is with an institution that is not represented by more than one individual on the SGEC.

The Chair of the SGEC will be elected by a vote of the members of the SGEC.

The SGEC has the option to appoint other members to the SGEC so that an appropriate representation of the Switchgrass Genetics Community will be obtained. These appointed positions will be filled via an election within the SGEC, and will be for a maximum of four years.

Each year, the SGEC will report its activities to the Switchgrass Genetics Community via its web site and, if needed, by a short presentation at an annual workshop or meeting.

H EXECUTIVE COMMITTEE MEETINGS

Meeting Schedule and Process

The committee will meet bimonthly to keep track of emerging issues, research progress, status of ongoing projects, and support provided to its stakeholders typically via conference call. The date and time for the next subsequent meeting shall be established at each Executive Committee meeting.

The chairperson facilitates the Executive Committee Meeting. The committee will adopt Roberts Rules of Order when requested to conduct meetings, motions, discussion and voting.

Meeting Agenda

At each meeting, the chairperson will provide an agenda usually at least 48 hours prior to the meeting such as the following:

- A. Introductory Items such as:
 - Introductions
 - Review Agenda
 - Minutes from last meeting

- Review of actions arising from previous Executive Committee meetings.
- B. Review(s) status
- Overall Status
 - New issues arising since the last meeting
 - Budget
 - Accomplishments against last meeting's plans
 - Plans for the next reporting period
 - Outstanding issues, open points, conflicts
 - Specific requests for assistance of the Executive Committee
- C. Consideration of other relevant items.
- D. Review and summarize new actions from this meeting
- E. Plans, date and location for next meeting

The role of the Chair and/or Vice Chair

- Propose an agenda for each meeting using input from the committee members.
- Ensure that the meeting agenda and any relevant materials are distributed to all members of the committee at least two working days prior to the meeting.
- Maintain the focus on meeting topics.
- Ensure the meetings begin and end on time.
- The role of the recorder
- Maintain minutes of all meetings in hard copy and in an appropriate electronic format.
- Provide a list of action items. For each action item identify the description, who is responsible and the estimated completion date.
- Distribute the minutes and action items for all meetings within five business days after the meeting.
- Lead Executive Committee process and enforce Executive Committee process rules.

Notice shall be given to the chairperson for committee members who wish to be removed from Executive Committee membership. Executive Committee members requesting removal, without a designated replacement, shall be removed from all future minutes and public rosters of the Executive Committee. Executive Committee representatives not planning to attend a noticed meeting shall notify all other Executive Committee representatives via email no later than one calendar day before a meeting of the Executive Committee if an alternate voting member will be designated to attend a meeting in their place.

Alternate voting members, designated by a standing Executive Committee member, shall possess the same voting powers as their designee, at the Executive Committee meeting they are designated as an alternate to attend.

The Executive Committee shall be responsible for approving:

- The addition of member representatives to the Executive Committee.
- Minutes of the Executive Committee processes.
- Appointment of co-chairs.
- Changes to the Charter
- Delegation of authority for any of these duties.

Voting shall be taken by members attending each meeting via phone poll, and noted in the official minutes. Items for voting by the Executive Committee shall be outlined on the Executive Committee agenda sent out by the Chair, or added to the agenda by a motion and second of the Executive Committee representatives.

A quorum of 2/3 of Executive Committee members, including designated alternates, is required to initiate an approval of any item by unanimity of the Executive Committee.