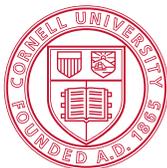


KNOWLEDGE WITH PUBLIC PURPOSE IN A CHANGING WORLD

CALS Strategic Plan 2014



Cornell University
College of Agriculture and Life Sciences

ACKNOWLEDGEMENTS

This document reflects the work of a broad spectrum of the CALS and Cornell community. The long process of producing this strategic plan began with the faculty Strategic Plan Coordinating Committee made up of **Shorna Allred** (Natural Resources), **Susan Brown** (Horticulture), **Aija Leiponen** (Dyson School), **Marie Caudill** (Nutritional Sciences), **Amy McCune** (Ecology and Evolutionary Biology), **Carmen Moraru** (Food Science), **Tom Overton** (Animal Science), **Todd Schmit** (Dyson School of Applied Economics and Management), **Todd Walter** (Biological and Environmental Engineering), **Wendy Wolford** (Development Sociology).

The Coordinating Committee morphed into the Strategic Planning Committee with the addition of a number of staff and faculty members including **Liz Braun** (CALS Communications), **Sahara Byrne** (Communication), **Peter Paradise** (CALS Facilities), Debra Perosio (Dyson School) **Mike Scanlon** (Plant Biology), **Chris Smart** (Plant Pathology and Plant Microbe Biology), **Pamela Tan** (CALS Admissions), **Andy Vail** (Plant Biology).

The Strategic Planning Committee made fundamental contributions to this plan. **Angie Putnam** oversaw the administration and logistics of the planning process and **Janet Edwards** provided administrative support. **Pamela Strausser** and **Rehana Huq** provided professional expertise and know-how in conducting more than 30 focus groups that provided valuable inputs about strategic goals and objectives from faculty, staff and students. **Julie Suarez** played a critical role in arranging meetings that allowed key New York stakeholders to give us direct feedback about our goals and objectives. **Margaret Ann Bollmeier** and **Jennifer Benson** helped us gather inputs from alumni.

Department Chairs, who we consulted throughout the process, provided valuable feedback. Academic Programs (**Susan Denton**, **Torrey Jacobs**, **Ann LaFave**) and Alumni Affairs and Development (**Jennifer Benson**, **Patty Weldon**) staff members and members of the CALS Student Advisory Council, including advisor Mark Wysocki, gave generously of their time in facilitating student feedback sessions.

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PREFACE

This strategic plan is the result of nearly a year of thoughtful, robust and wide-ranging evaluation of strengths and the challenges faced by the College of Agriculture and Life Sciences (CALs). It is incumbent upon CALs to remain nimble, proactive, and well positioned in the broad spectrum of what we do by continually honing our efforts to ensure that they align with available resources and meet the ever-evolving needs and aspirations of our students and many stakeholders.

The growing realization that basic and applied science together have key roles to play in addressing many of the grand challenges facing society today – including food security, climate change, environmental degradation, energy, economic growth and social connectivity – showcases the College's inherent strengths and reinforces why CALs is widely recognized as a regional, national and global leader on these issues. Cornell's Land-Grant Mission further compels CALs to be thoughtful and proactive as it seeks the means to better engage and educate the public on the contributions science and education must make to help solve these problems.

The timing of our efforts has been spurred by additional factors, including the aging of CALs faculty members — 70% of whom will reach retirement age within the next 10 to 15 years. Further, the growing financial pressures we face associated with a decline in public funding, and from the recent changes to the Cornell budget model, have shifted many formerly centralized costs to the colleges and have placed greater emphasis on aligning those costs with available revenue.

Taken together, these factors offered a timely and compelling case for critical thinking and an openness to change. Indeed, it is perhaps more critical now than ever before that we adopt the most efficient and effective means possible to pursue our research, teaching and extension programs, so that they remain essential to our stakeholders, germane to the leading scientific questions of our time, and have meaningful and positive impact on the lives of people in our state and around the world.

Phase I of our strategic planning process began in Fall 2013, with the formation of the faculty Strategic Plan Coordinating Committee. This committee was tasked with reexamining CALs' current focal areas and strategic priorities, as well as identifying new strategic opportunities for the college. Made up of a cross-disciplinary sampling of CALs faculty from both the Ithaca and Geneva campuses, the committee identified areas of current strength and potential growth in the college. Phase II of the process began in early 2014, as the committee was expanded to include other members of the CALs community. This Strategic Planning Committee developed draft vision and mission statements, and articulated the goals and objectives detailed below.

Because CALs encompasses a wide array of disciplines, seeking input and feedback from beyond the committees was crucial in developing a well-rounded plan. Thus, a series of events were held to provide targeted opportunities for students, faculty, and staff to participate. Over 30 focus groups drew from the perspectives of members of the CALs community, both on and off campus, as well as external stakeholders. Presentations and visits with alumni and New York State officials also informed the final outcome. In addition



a web survey was sent to more than 13,000 members of the broad CALS community. In sum, we are confident that this plan does reflect insights drawn from all parts and perspectives of our college.

The history of the College of Agriculture and Life Sciences, whether recent or distant, is filled with significant milestones and accomplishments. This plan builds on the successes of the previous strategic plan (see the Appendix), and those accomplishments have created momentum from which we will continue to evolve. Through the goals articulated below and the specific actions that we will take, we reaffirm commitments to our Land-Grant Mission of providing sustainable improvement in the lives of the people we serve; to the provision of a liberal education with a strong foundation in the social, biological and physical sciences; and to prepare students with the knowledge and life skills to meet the grand challenges of our times.

Vision

Leading science and education toward a resilient future

Mission

CALS is a community dedicated to discovery, teaching and translation of knowledge with public purpose, that

- ◆ Imparts a world-class education and instills passion for life-long learning
- ◆ Furthers agricultural systems to ensure food and nutrition security, human health, and sustainability
- ◆ Advances knowledge in the life sciences about the unity and diversity of life
- ◆ Fosters the understanding of the economy and society for individual and community well-being
- ◆ Stewards environmental resources and sustainable energy solutions.

Values

Underpinning Cornell University's Land-Grant Mission, CALS shares the [core values held by the University](#) and strives to reflect those in all aspects of our teaching, research, and extension.

Core values are defined as inviolable commitments that express “who we are as an institution” and what principles or qualities should infuse all practices and activities within the institution.

- ◆ Seek knowledge
- ◆ Support free and open intellectual inquiry and expression
- ◆ Sustain excellence in teaching, research, and public engagement
- ◆ Use knowledge to enlighten ourselves and benefit the world
- ◆ Reward and recognize merit, creativity, and innovation
- ◆ Treat all individuals with dignity, respect, and fairness
- ◆ Embrace difference and diversity
- ◆ Promote cross-cultural and cross-national understanding
- ◆ Be a collaborative, collegial, and caring community
- ◆ Be accessible and affordable to all who meet high academic standards

Goals¹

In the next five to ten years, CALS will continue its long tradition of excellence and existing strengths by **propelling discovery and promoting the synergy of disciplinary knowledge in the agricultural, biological, management, physical, and social sciences**. To reach this goal, CALS will prioritize faculty hiring and scholarship in the following theme areas:

- ◆ Food and nutrition security enhanced through scientific discovery and the application of state of the art knowledge
- ◆ Climate change -- its causes and consequences and adaptation and mitigation to safeguard biodiversity, ecosystems, sustainable farm and food systems and human well-being
- ◆ Social and socio-ecological system resilience under climate change, globalization and technological change, with a particular focus on economic and community dynamics
- ◆ Biological systems and their evolution across all hierarchical scales, from the sub-cellular level to complex ecosystems
- ◆ “Big data” analysis and interpretation to support cutting edge research in biological, agricultural, social, communication, management and information sciences
- ◆ Media and communication technologies

In addition to these thematic thrusts, CALS will build on existing strengths by **fostering scientific and educational collaboration across and beyond existing paradigms**. Two important efforts will be immediate foci of interest. CALS will establish the School of Integrative Plant Science and strengthen the Environmental Science and Sustainability major.

As indicated in the CALS vision, leadership in providing a quality education is a central and firmly embraced college mission. To that end, CALS is committed the goals of **stimulating rigorous academics, creativity and critical thinking**. In this arena, CALS will increase student opportunities for engaged learning, internships and externships, and international experiences. Also, our vision is to play a leading role in linking science and education. In keeping with our broad scientific, educational and land-grant missions, CALS will **engage students and the public in dialogues about scientific understanding, discovery and application**. Efforts to achieve this goal will connect CALS faculty and students with policy makers and stakeholders in scientifically-informed public policy debates.

True to our Land-Grant Mission, CALS will continue to **extend scientific knowledge**

¹ We refer to goals as aspirational statements that articulate the component parts of our vision. Objectives are more directly achievable outcomes that lead us to realize our aspirational goals. We employ strategy as an approach to achieving our objectives. To implement our strategy, we take specific actions that can be assigned and tracked to evaluate progress in realizing our objectives and goals.

to sustain agricultural and economic development in New York. Achievement of this goal will result from a range of efforts led by Cornell Cooperative Extension involving newly organized regional extension teams and greater reliance on use of digital media and web technologies, to the involvement of our talented and entrepreneurial students in internship and experiential learning projects and the incubation of successful businesses. Also central to our Land-Grant Mission is the continued engagement of our diverse stakeholders about the relevance of our work and the importance of their partnership and support. In pursuing this goal we will continue to emphasize the value and importance of the Land-Grant Mission, the New York Agricultural Experiment Station (Geneva), the Cornell University Agricultural Experiment Station, and Cornell Cooperative Extension for impactful research, education and extension benefitting the state, national and global economy. To assure that policy debates and regulatory actions are scientifically informed, we strive to connect research and extension faculty with local, state, and federal policy makers. These linkages will be strengthened and expanded in various ways: increased involvement in various councils, conferences, and fora throughout the state of New York to make CALS programs more visible; work with existing CALS external advisory boards to share strategic goals and identify specific ways that these groups can support CALS; outreach to CALS alumni and others to share opportunities for advancing the work at CALS in key strategic areas; and enhancement of relationships with industry leaders in sectors that align with key research areas in CALS and continued building of corporate/business affiliate networks.

For the perpetuation of a strong and vibrant college community it is important that we continue **attract, support and retain diverse, top-tier undergraduate and graduate students, faculty and staff.** A diverse community is a strong one, and we will foster diversity with multifaceted efforts. Through hiring, we will increase the proportion of underrepresented populations among faculty and staff. We will continue our longstanding practice of creating a student body from a variety of geographical and socio-economic backgrounds. These efforts will be reinforced with further development and implementation of effective strategies for recruiting underrepresented minority graduate students to Cornell, including sponsoring networking opportunities at professional conferences. In support of the CALS Diversity Committee and University Diversity Council recommendations, we will provide a supportive and Inclusion environment on campus. In addition, we will develop research opportunities for under-represented and minority undergraduates. Finally, we will strive for greater diversity in concert with the university's internationalization efforts by developing effective strategies to recruit and support international students.

Underpinning success all our goals is the careful stewardship of our human, physical and financial resources. We will **continue to strengthen the CALS community by enhancing the well-being, skills and creativity of students, staff and faculty.** There are numerous ways that we will achieve this goal including expanding career advancement opportunities; creating opportunities for professional development and skill renewal; assessing resources and implementing mechanisms to foster work-life balance and opportunities for wellbeing; enabling participation in leadership development opportunities; and creating incentives to encourage immersion in communities, disciplines, and ideas outside of campus. A sound infrastructure must underpin our community making it imperative that we **build, maintain and operate facilities that support and reflect the excellence of our programs**

and people. To this end, we will continually assess space usage to assure utilization and infrastructure investments are aligned with “highest and best use”. The CALS Master Plan provides a guiding framework for continual improvement of facilities infrastructure to support research, teaching and extension. Based on the Master Plan, we will prioritize the improvement of undergraduate teaching laboratories to maximize efficiencies by creating flexible and comprehensive lab space. Such investment will allow us to update and renovate classrooms and teaching laboratories to facilitate cutting-edge pedagogy and learning. In supporting our programs and people in these ways, we will prioritize and champion the efficient and responsible use of physical and energy resources through a professional service oriented facilities organization.

Finally, all of this can only be accomplished if we **steward financial resources to best meet the many needs of the college.** Fundamental to meeting this goal is to ensure that our strategic plan goals and objectives guide annual operating and capital budget decisions. This approach will allow us to reallocate resources based on priorities in the strategic plan and performance based metrics. Such metrics will allow us to better manage our programs and to eliminate hidden subsidies by understanding and directly measuring revenues and expenses. In this way we will be able to make investment decisions based on explicit judgments that account for opportunity costs. We will also evaluate options for enlarging our financial resources through attention to both revenue enhancement and cost control including the annual development of a strategy for state and national resource allocation priorities that assists the Dean in articulating funding goals.

Timeline and Implementation

This strategic plan has identified 10 overarching aspirational goals. We will pursue these by achieving more than 50 objectives over the next five years. Because of its range and magnitude, implementation of the strategic plan will be a systematic multi-year effort. Our approach is to annually identify priority objectives, develop implementation strategies and plan detailed actions to achieve our goals. These actions will have designated champions, and we will review progress in their completion on a regular basis. We will update the action plan annually as we progressively implement the strategic plan.

We will begin immediately to take actions in four broad areas of interest to CALS and Cornell University: 1) the academic stature of our programs; 2) engaged learning and research involving students, faculty and stakeholders, true to the Land-Grant Mission; 3) a scholarly community broadly inclusive of persons from a diversity of backgrounds; and 4) stewardship of our human, physical and financial resources. In 2014-2015 academic year CALS will directly address the following 20 specific objectives as the first step in a five year plan of action.

Academic Stature

1. Faculty hiring in priority theme areas
2. Establish the School of Integrative Plant Science (SIPS) and encourage additional collaboration with nearby plant science units (e.g. the Boyce Thompson Institute, Agricultural Research Service)
3. Strengthen the Environmental Science and Sustainability (ESS) major and lead its expansion to other colleges
4. Strengthen food systems research and teaching by building closer collaboration among nutritional, plant, animal, food, economic, social, and management sciences

Engaged learning and research: the Land-Grant Mission

5. Increase engaged learning through the identification, coordination and expansion of student internship and externship opportunities
6. Increase the number of CALS undergraduates participating in international experiences
7. Facilitate faculty and staff participation in media and other outreach opportunities and provide the tools and trainings to equip them with the skills to succeed
8. Connect research and extension faculty with local, state, and federal policy makers, assuring that policy debates and regulatory actions are scientifically informed
9. Support current and foster new regional and statewide extension teams by building upon existing university and local Cornell Cooperative Extension capacity

Inclusion

10. Attract a diverse and top-tier student body through the undergraduate admissions process
11. Provide a supportive and inclusive environment on campus in support of the

CALS Diversity and Inclusion Committee and University Diversity Council recommendations

12. Increase the proportion of underrepresented populations among faculty and staff
13. Develop and implement effective strategies for recruiting underrepresented minority graduate students to Cornell

Stewardship of our human, physical and financial resources

14. Expand opportunities for career advancement, professional development and skill renewal
15. Assess resources and implement mechanisms to foster work-life balance and opportunities for wellbeing
16. Continue to improve facilities infrastructure to support research, teaching and extension utilizing the CALS Master Plan as a guiding framework
17. Improve undergraduate teaching laboratories and maximize efficiencies by creating flexible and comprehensive lab space
18. Champion the efficient and responsible use of physical and energy resources while supporting CALS goals and objectives
19. Ensure that strategic plan goals and objectives guide annual operating and capital budget decisions
20. Enlarge our financial resources through attention to both revenue enhancement and cost control including evaluation of additional MPS programs and professional and executive education programs

Appendix: Achievements from Previous CALS Strategic Plan

In November 2009, the college of Agriculture and Life Sciences (CALS) released a plan for the restructuring of the college intended to position CALS for future growth in the context of anticipated a 15% reduction in available revenues. This plan, entitled “**Restructuring the College of Agriculture and Life Sciences**,” described a series of forward-thinking recommendations that were developed with the aim of achieving four, broadly defined goals:

- ◆ Align college programs and activities to reflect a cumulative 15% reduction in revenue;
- ◆ Adapt undergraduate and graduate curricula to be more interdisciplinary, better coordinated, more responsive to changing student and societal needs;
- ◆ Promote research that is interdisciplinary and integrated from discovery to application and meets dual objectives of disciplinary excellence and mission-oriented impact;
- ◆ Refine extension and outreach activities to be most responsive and effective to stakeholders.

A significant number of the most important initiatives undertaken by the college since the plan was implemented were directed explicitly by these goals.

During the 2013-14 Academic Year, CALS undertook a renewed strategic planning process to develop a new strategic plan for the College. As part of this process, the college leadership conducted an assessment of the progress made on achieving the goals set forth in the current plan, with the following results:

Goal:

Align college programs and activities to reflect a cumulative 15% reduction in revenue

Progress:

- ◆ The college took a series of steps to reduce the size and cost of its physical plant by closing redundant facilities, monetizing capital assets and implementing innovative measures to reduce facilities operating expenses.
 - CALS privatized dairy operations at the Cornell University Ruminant Center in Harford, NY, with a resulting \$500K to \$750K annual savings in operating costs;
 - The College completed a lean process improvement analysis and is moving forward with the execution of a greenhouse consolidation plan called for in the CALS Master Plan. These measures will result in more efficient use of existing space and the replacement or elimination of older, energy inefficient greenhouses;
 - The college completed several energy conservation projects in greenhouses and plant growth chambers resulting in annual utility cost savings.

- CALS will sell the lakefront portion of the property at the Willsboro Research Farm, as well as adjoining lots;
 - CALS closed the Schwardt Lab complex on Turkey Hill;
 - The College partnered with the Department of Natural Resources to develop a new, self-sustaining business plan for the Arnot Forest that includes facilities demolitions and remodeling, among other cost-saving measures;
 - CALS negotiated with a consortium of private stakeholders in the Hudson Valley to create a new funding model for the Hudson Valley Laboratory to help reduce the College's overall financial commitment there;
 - CALS sold the site of the former Fredonia Vineyard Research Lab;
 - CALS scaled its campus-based and outlying animal facilities to reflect its current research and teaching needs;
 - CALS is leveraging a \$1.3M allocation from the SUNY Construction Fund for HVAC improvements to the Plant Science Building, to also increase classroom and administrative space in the facility. These changes will reduce long-term utilities expenses and address emerging teaching and administrative space needs in the plant sciences.
- ◆ In Fall 2013, CALS launched the CALS Faculty Early Retirement Incentive (CFRI) program aimed at addressing an historic demographic challenge within CALS which anticipates upwards of 70% of college faculty retiring within the next 10-15 years. The CFRI has achieved its goal of 30 faculty retirements, resulting in approximately \$3.2M in savings to be reinvested in strategic new faculty hires.
 - ◆ Since 2009, CALS reduced overall staffing levels by 10% and has continued to function at this reduced level.
 - ◆ CALS shifted funding for technical support from core college resources to research grants.
 - ◆ By partnering with the College of Human Ecology, CALS streamlined its business support services by establishing a joint Business Service Center.
 - ◆ The college implemented a new Facilities and Administration (F&A) cost recovery policy on all grants from state agencies and commodity groups. This policy with charge a minimum of 18% F&A on such grants, generating much-needed revenues to fund facilities maintenance and administrative support needs essential to maintaining the College's research support infrastructure.
 - ◆ CALS reduced and streamlined its organization.
 - In 2010 CALS announced the closure of the Education Department, which was completed in 2012.
 - CALS consolidated the four departments shared between Ithaca and Geneva (Food Science, Horticulture, Plant Pathology and Plant-Microbe Biology, and Entomology). The recent decision by the Geneva Food

Science faculty to relocate their research programs to Ithaca, will achieve further consolidation.

- In 2010 the Department of Applied Economics and Management was transformed into the Charles H. Dyson School of Applied Economics and Management, thanks, in part, to a generous donor gift.
- The five current plant-science related departments in CALS have been consolidated into the School of Integrative Plant Science (SIPS). This consolidation will result in a School that:
 - ▷ Provides a unifying framework to integrate and coordinate key administrative functions across the current plant science units, while preserving their unique character and purpose;
 - ▷ Enables these units to work together in a more strategic and cohesive way on matters related to faculty hiring, curricular development and resource allocation;
 - ▷ Creates a new face for plant science at Cornell, increasing its prominence to a level equal with its scientific and educational importance, and raising its profile to encourage greater student interest in pursuing study in the plant sciences.
- When combined, these actions will reduce the administrative size of the college from the 26 departments CALS had when the current strategic plan was first implemented in 2009 to 15 departments and 2 schools by the end of the FY13-14.

Goal:

Adapt undergraduate and graduate curricula to be more interdisciplinary, better coordinated, more responsive to changing student and societal needs

Progress:

- ◆ CALS sought to consolidate or restructure existing majors to gain greater efficiencies in instruction and update our curricula to reflect the evolving needs and interests of today's students.
 - The new Environmental Science and Sustainability (ESS) major resulted from the merger of three previous conservation-themed majors (Natural Resources, Science of Natural and Environmental Systems and Environmental Explorations).
 - The Plant Sciences undergraduate curriculum has been restructured to provide a common foundation to all students and create new concentrations with delineated career paths.
 - CALS is also currently evaluating further curricular consolidation and/or restructuring.
- ◆ In recognition of the growing demand for business skills training among non-business students, the College has worked with partners across the

university to establish a new undergraduate business minor available to all Cornell undergrads.

- ◆ CALS is working closely with partners at Ithaca College to develop a new, joint Master of Arts in Teaching degree program.
- ◆ CALS has achieved considerable success with efforts to expand its offerings of Masters of Professional Studies (MPS) programs.

Goal:

Promote research that is interdisciplinary and integrated from discovery to application and meets dual objectives of disciplinary excellence and mission-oriented impact

Progress:

- ◆ CALS has played a central role in the development and support of the Atkinson Center for a Sustainable Future at Cornell.
- ◆ CALS social scientists have enjoyed fruitful interdisciplinary collaborations with colleagues across the University on projects sponsored by the Institute for Social Sciences (ISS) at Cornell.
- ◆ CALS has worked to promote research by restructuring and streamlining our administrative support services across departments and disciplines.
- ◆ CALS has added additional skilled support personnel to assist faculty with grants preparation and management.

Goal:

Refine extension and outreach activities to be most responsive and effective to stakeholders

Progress:

- ◆ CALS and Cornell Cooperative Extension (CCE) have worked to develop and promote agricultural outreach teams to respond to evolving market, regulatory and environmental challenges faced by the farming community of New York State.
 - CALS and CCE have partnered on the successful Harvest NY pilot program. This program has achieved considerable success driving economic development in Western, NY, by helping the dairy and produce industries there to address emerging challenges in dairy modernization, the development of food hubs, and the explosive growth of yogurt processing in the region.
 - The new Eastern NY Horticulture team is composed of specialists in fruit and vegetable production, pest and disease management, and marketing and has been developed to meet the needs of new and existing growers in these fields. The team's service area stretches from the Canadian border to Dutchess County in the Hudson Valley.

- The Northwest NY Dairy, Livestock & Field Crops team has taken the lead in statewide efforts to help farmers grow malting barley. They have developed the first extension bulletin on best management practices for malting barley. As a result of their efforts, acreage of malting barley has increased from 800 acres in 2013 to 2,000-3,000 acres this year, with an estimated growth in value to NY farmers of \$16M.
- ◆ CCE has improved its ability to help communities respond to disasters by enhancing the Extension Disaster Education Network, or CCE EDEN. CCE EDEN is a county-based network of communication nodes for Federal, State and local alerts, as well as preparedness and resilience guidance tailored to specific disaster events.
- ◆ CCE has now sponsors social media trainings and webinars for staff in county offices to develop and integrate Facebook and Twitter into their efforts as a tool to connect to new audiences across the system.
- ◆ CALS and CCE are supporting the role of women in the agriculture industry, through participation in programs such as Annie's Project, a national effort to provide farm business and management training to women that is now being offered in over a dozen rural counties via the CCE network.
- ◆ Through the Cornell Small Farms program, the College continues to increase its offering of training and networking resources to beginning and experienced small farmers across the state and region.
- ◆ CALS has greatly enhanced its relationships with, and responsiveness to, key New York State agencies and important industry and growers' groups with the creation of the new leadership role of Assistant Dean for Government and Community Relations.