

# MEETING REPORT



4/29/2015

CEA Stakeholder Forum



**CIFS**

The forum was held in the interest of sharing fully in the benefits of **Controlled Environment Agriculture**. Cornell Institute for Food Systems thanks participants and hopes to see continued dialogue on the subject of keeping NYS competitive in the agriculture sector. This report will be shared with the 25 attendees, as well as other constituents.

# Meeting Report

## CEA STAKEHOLDER FORUM

### ONE | WHERE ARE WE AND WHERE ARE WE GOING

Louis Albright, Neil Mattson, and Tessa Pocock provided an overview of how we arrived at the technologies used in agriculture today, where New York State (NYS) stands in the sector, and what research can hold for the future of CEA.

Dr. Albright provided a summary of the software and intelligence that has been developed at Cornell for various systems. The importance of collaboration with farms to collect data was highlighted – noting that both academia and the farmer can benefit from sharing data gathered from the now patented LASSI algorithm. The patent for the algorithm will be up for review in October, making this a pressing topic. Dr. Mattson discussed the current state of CEA in NYS, making references to drivers like demand for “local” and affordable agriculture. NYS is currently 2<sup>nd</sup> for growth in CEA in the U.S. There is opportunity for CEA as funding from venture capitalist moves into the sector, agriculture moves away from western states, and consumers move away from foreign produce. Dr. Pocock summarized her experience with LED technologies and their potential in CEA. She claims the industry needs to move away from a “one size fits all system” and into a more customizable LED package.

Many of the members felt that currently LED packages are not ready for real-world applications, but that the potential for future use needed much further research and trial studies. Prices also made LEDs inaccessible.

Attendees discussed the importance of supporting the Greenhouse Lighting and Systems Engineering [GLASE] Consortium. GLASE, a Cornell/RPI collaborative effort, is intended to add value to the greenhouse/indoor growing sector through advanced engineering that will yield significant energy savings.

### TWO | THE FINANCIAL STATE OF CEA

Mr. Ed Heslop painted a picture of the current state of funding for CEA in New York State, claiming that consumer drivers include local, safe, traceable, sustainable, and organic. According to Mr. Heslop there is a wide range of farms in New York and the North East, ranging from small “roadside farms” all the way to large farms of 30+ acres under glass. However – he sees a void in the middle where there is little chance of funding for farms needed capital in the upper hundred thousand and lower millions of dollars. He sees that capital is coming into agriculture – however not into products (e.g. farms) rather technologies (e.g. lighting). It was also noted that farmers need to consider the entire business (packaging, marketing, and distribution) in their business plan, not just their crop.

A discussion ensued about the possibilities for capital and where funding was available for NYS farmers. “Angel Funding” or private venture capitalists and families were one of the major sources referenced. During the discussion it was noted that although the state does receive applications for funding, the majority of farms do not come in with applications competitive with other businesses. Regional Economic Councils “need to see jobs, jobs, jobs” [being formed]. It was also said that foundations that support local agriculture or CEA can be sources of funding that are underutilized by NYS farmers.

Finally, participants did acknowledge that large financial institutions, such as Fidelity and Goldman Sachs, have all entered into CEA and more creative financing combinations may be required.

### **THREE | EXPERIENCES FROM CEA FARMERS**

Mr. Dirk Beimans of Intergrow Greenhouses and Mr. Jamie Critelli of Floral Beauty Greenhouses discussed their experience in CEA and the challenges posed by the industry. It was noted that there is more and more of a demand for year-round supply. It is clear that if NYS agriculture sector does not provide this supply, consumers and retailers will turn to Canada or Mexico for their produce needs.

Common operating costs for the CEA farmer included labor, heat, electricity and lighting. It seems that especially in NYS all of these can pose a challenge. With high electricity bills, difficult regulations for seasonal labor, and tax exemptions that are not consistent with the needs of the industry (plastic greenhouse exemptions) it seems that there are many obstacles, especially for young farmers, to enter the CEA sector.

### **FOUR | FUTURE FOR THE CEA STAKEHOLDERS**

When groups discussed the future for the CEA Stakeholders, some key points were raised:

- What can NYS do to standardize vocabulary such as “local” or “organic” in the context of CEA?
- The GLASE Consortium should come to fruition in order to better share the benefits of research and funding for farms.
- What sort of infrastructure across disciplines needs to be in place in order to tee up key issues. The challenges facing CEA need to be addressed by academia, farmers, and legislature alike. There may be a continuing role for the Cornell Institute for Food Systems.
- With more resources than other states in terms of people and water, there is an opportunity to emerge as a leader in agriculture. A major source for employees discussed was veterans coming home and looking for employment but requiring training. Perhaps rethinking the model and moving to other produce or strategies (e.g. vertical farming) can be explored.

- There is precedent for industries receiving safety net funding during start-up stages. Can CEA become an industry backed financially by the state? The business needs to be affordable, feasible, and in demand in order for farmers to take interest.

## **FIVE | PROPOSED NEXT STEP FOR OUR GROUP**

Throughout the meeting there were other points that could be addressed by this interdisciplinary team. The more people involved in CEA in the NYS area, the better for all those invested. Please look forward to opportunities for contributing to dialogue, research, and action facilitated by the Cornell Institute for Food Systems. Your expertise was especially sought out for this team's success; we hope your experience can contribute to the mission of making New York State a leader in food systems.

The following are thought to be opportunities where our skills could be put to use for the state of New York:

- **PROVIDING SUPPORT FOR GLASE CONSORTIUM:** For letter templates and more information contact: Sandra Meier, PhD, NYSEDA, [sandra.meier@nyserda.ny.gov](mailto:sandra.meier@nyserda.ny.gov).
- **CIFS WORKING GROUP TO CREATE STRATEGIES FOR**
  - Financial planning in CEA
  - Identifying areas where academics should focus research (e.g., economic scoping)
  - Identifying groups that drive growth (e.g. Veterans, Young People)
  - Proposing State incentives
  - Exploring scenarios, such as feeding all NYS institutions through CEA by 2020
- **SUPPORTING START-UPS AND THE EXPANSION OF EXISTING CEA ENDEAVORS:** Many start-ups lack the knowledge to stay afloat more than a year in a fickle market. Having a mentor in the field may help them contribute to a strong NYS market. Many farmers struggle to access available funding from NYS because of inexperienced planning and not knowing what to include in proposals. By providing a “Roadmap,” they might foresee and plan their **resources, transitions, growth, and sustainability** making them competitive with other companies for funding.
- **CONDUCT TRAINING FOR POTENTIAL GROWERS:** Groups of potential farmers and start-up entrepreneurs have a greater chance of success with training sessions. CIFS has provided training before with the proper lecturers and trusted members in industry. Cornell Cooperative Extension may be another trusted resource in this area. Or, existing associations focused on CEA may have existing programs that can be adapted for the NYS CEA market.