



## EAGLE STREET ROOFTOP FARM

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Eagle Street Rooftop Farms is a 6,000 square foot green roof organic vegetable farm located on a warehouse rooftop in Greenpoint, Brooklyn. On the shoreline of the East River and with a sweeping view of the Manhattan skyline, the farm realizes the benefits of a green roof while bringing hyper-local produce to the Greenpoint community. As a model for the urban farming movement and the utilization of green roofs in a unique manner, Eagle Street Rooftop Farms operates a small community supported agriculture (CSA) program, and an onsite farm market, and caters to area restaurants. Additionally, in partnership with Growing Chefs ("food education from field to fork"), the rooftop farm hosts a range of educational and volunteer programs designed to bring city-dwellers closer to their food source.

### **OPERATION AND OWNERSHIP**

- Eagle Street Rooftop Farm is a product of brainstorming between Brooklyn-based company Broadway Stages and the green roof design and installation firm Goode Green. The farm was initially named "Rooftop Farms" in 2009 by its founding farmers, Annie Novak and Ben Flanner.
- The farm is installed on a building is owned by Gina and Tony Argento of Broadway Stages, a Greenpoint-based sound stage company with a longstanding history of community investment. Broadway Stages financed the green roof installation.
- Goode Green designed the green roof and installed the base system and growing medium.
- Annie Novak is the operating farmer for 2010. Annie Novak and Ben Flanner were the farm's growers for the inaugural 2009 season and planted the first seeds on April 27, 2009.
- To run the farm, Annie works with a team of trained interns, urban farming apprentices as well as staff from Growing Chefs ([www.GrowingChefs.org](http://www.GrowingChefs.org)). Each week during the growing season, the farm hosts volunteers, who assist with seasonal tasks, harvest and composting.

## **DESIGN AND INSTALLATION**

- The green roof base system is comprised of 2” of built-up components: polyethelene, drainage mat, and retention and separation fabrics.
- With the approval of the building's engineer, 200,000 pounds of growing medium were lifted onto the roof by crane, in "super-sacks", over the course of a single day. The growing medium, laid directly onto the green roof base, is a mixture of compost, rock particulates and shale and is manufactured in Pennsylvania. It is a green roof component that at the same time retains water, allows for air circulation and is lightweight.
- The green roof can hold over 1.5” of rain, providing a significant reduction in storm water runoff. The captured water, in turn, can help to cool the warehouse below yielding a reduction in cooling costs.
- Installation cost was approximately \$10 per square foot. This is significantly lower than most green roof installations due in part to two main factors. One that the three story building and open expanse of roof were very accessible and, two, that recycled materials such as used rafters were utilized for edging.

## **FARMING DESIGN AND SET-UP**

- Once Goode Green completed its installation, the growing medium was moved into by place by a team of farming volunteers over the course of three days. It was arranged into 16 north-south beds measuring a maximum of four feet in width and divided down the middle by a single long aisle. The beds have a soil depth of 4-7”. The aisles were filled with mulched bark.
- Since overhead watering on a rooftop often evaporates or blows away, irrigation is provided via black plastic drip lines, using city tap water. A water collection system is being constructed for 2010.

## **PRODUCE**

- In its first season, the Eagle Street Rooftop Farm yielded over 30 different kinds of produce. Botanically speaking, the most successful plants were tomatoes, microgreens, alliums, and herbs. Production per square foot yielded highest on tomatoes, kale and chard, while winter squash fared the worst. At market, mixed salad greens yielded the best price per foot planted.
- Plans for 2010 include a narrower crop list, with a wide diversity of heirloom and rooftop-acclimated varieties of produce within each crop type. In choosing her crops, Annie designed a special rooftop salad mix of seed stock designed to do well on rooftop conditions, yet provide the same colors and spice of traditional popular salad mixes. In addition, a special section of the beds will be dedicated to growing a wider range of vegetables for the CSA. A "square-foot garden" will model how to grow a variety of produce in the small space typically available to city-dwellers.
- The farm sells its harvest via its own CSA and Sunday farm market, as well with community-based local markets, such as at the monthly Greenpoint Food Market. It also provides produce for several local restaurants, including Williamsburg's *Marlow & Sons* and Greenpoint's *Anella*.
- Rooftop honey is harvested from two beehives. The bees are a domesticated Italian variety, raised in the American south. The hives were installed by Andrew Cote of Silvermine Apiaries, president of the New York City Beekeepers Association. Annie plans to install two more hives in 2010.

## **COMMUNITY-SUPPORTED AGRICULTURE (CSA)**

- In 2010, the farm launched the nation's first rooftop farm-based CSA program.
- CSAs provide a wealth of benefits to farmers and members. Members provide the farmer with seed money by paying upfront for the season's produce. In return, members reap the benefits of a direct relationship with a local farm and enjoy fresh local produce from a known source throughout the growing season.
- Data from the 2010 CSA will be collected and analyzed to increase our understanding of how many people that an urban farm project can feed.

## COMMUNITY OUTREACH/EDUCATION

- Over the course of the 2009 growing season, over 30 different schools and groups learned about their food's journey from the soil to the kitchen at rooftop workshops presented by Growing Chefs.
- In 2010, Growing Chefs will host a range of workshops for children and adults. Topics include growing food in New York City, seed-saving, the art of cooking locally, city composting, the benefits of green roofsing, bees and beekeeping, and guest lecturers.
- The farm runs a composting program, collecting contributions from restaurants and its weekly volunteer base.
- On Sundays during the growing season (May through October), the Eagle Street Rooftop Farms welcomes volunteers to learn to maintain the farm from seeding to harvest. Beginners and green thumbs are welcome. Each Sunday the farm hosts a free 2pm workshop, to encourage the spread of urban agriculture knowledge (and give the volunteers a break from the midday heat).
- In addition to weekly volunteer opportunities throughout the growing season, the farm offers several internships and apprenticeships. For more information, email Annie Novak ([volunteer@rooftopfarms.org](mailto:volunteer@rooftopfarms.org)) to join the weekly volunteer list, or contact the education program directly ([education@rooftopfarms.org](mailto:education@rooftopfarms.org)).