Dear Mayor,
Re: Investing in Hydroponics for Urban Agriculture in Boston

I am writing to highlight the numerous benefits of hydroponics for urban agriculture and to request you and the City of Boston to invest more in this innovative and sustainable farming method. As a concerned citizen and advocate for sustainable agriculture, I believe that hydroponics can play a crucial role in addressing the growing food demands of our city while also mitigating the environmental impact of traditional farming methods.

I would like to draw your attention to a study conducted by Halden, R. U. in 2015, which found that hydroponic lettuce production resulted in a significantly higher yield compared to conventional lettuce production. Specifically, hydroponic lettuce production was calculated to result in a yield of 41 kg/m2/y, while conventional lettuce production was projected to yield only 3.9 kg/m2/y. This significant difference in yield potential makes hydroponics an attractive option for urban agriculture, especially in a densely populated city like Boston where space is limited.

Furthermore, the same study also highlighted the water-saving benefits of hydroponics. In the production of lettuce in Arizona, the study found that hydroponic production used as much as 13 ± 2.7 times less water compared to conventional production when normalized by yield. This finding is consistent with information provided by the National Park Service (NPS), which states that hydroponic systems use up to 10 times less water than traditional field crop watering methods because water in a hydroponic system is captured and reused, rather than allowed to run off and drain to the environment (NPS, 2021). With concerns about water scarcity and conservation becoming increasingly important, hydroponics offers a sustainable solution for urban agriculture. Another significant advantage of hydroponics is its ability to eliminate the need for pesticides. Traditional farming methods often rely heavily on the use of pesticides to protect crops from pests and diseases, which can have detrimental effects on the environment and human health. In contrast, hydroponic systems are typically grown in a controlled environment, which reduces the need for pesticides and makes it a safer option for both the environment and humans. This aligns with the City of Boston's commitment to sustainability and creating a healthy environment for its citizens.

Additionally, hydroponics can be implemented in a variety of settings, including rooftops, vacant lots, and even indoors, making it a flexible solution for urban agriculture in Boston. This versatility allows for year-round production, reducing our dependence on seasonal produce and ensuring a stable food supply for the city. Furthermore, hydroponics can be used to grow a wide range of crops, including leafy greens, herbs, and even fruits, providing a diverse and nutritious food source for our communities.

Investing in hydroponics for urban agriculture in Boston also presents economic opportunities for the city. Hydroponic farms can create jobs in construction, operation, and maintenance of the systems, as well as in the distribution and marketing of the produce. This can stimulate local economic growth and contribute to the development of a sustainable food system that benefits all residents of Boston.

The one downside is that hydroponics may not be the cheapest system to implement to expand, however based on your Financial year 2023 budget of $3.99 Billion, we believe that an investment of $10 million based on the spending calculations by global hydroponics markets would be more than enough too really expand this initiative. In the long run, the return on investment would be far greater by the increase in food production and conservation of water.

In conclusion, hydroponics presents a compelling solution for urban agriculture in Boston, with its higher yield potential, water-saving benefits, elimination of pesticides, and economic opportunities. As the population grows and food demands increase, investing in hydroponics can address these challenges while promoting sustainability and resilience in our city's food system.
I urge you to consider investing more in hydroponics for urban agriculture in Boston and to explore partnerships with local farmers

Yours respectfully,
Shivam Mehrotra