

A city pledges to fund free produce, and how a greenhouse feeds the birds



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COMING UP THIS WEEK:

A City to Grow Free Produce
Greenhouses Saving Oil
Coronavirus Relief
Wildflowers, Birds, and
Greenhouses
Report from the MT Outpost

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Jersey City Funds Free Produce

In the last few months, as COVID-19 hit certain socio-economic classes much harder than others, we've been reminded that health is also a social and racial issue. Access to healthy food is not equal. And so, even as their city deals with a \$70 million budget shortfall, Jersey City just announced an ambitious vertical farming project that will be the first municipal vertical farm program in the U.S.



The city partnered with AeroFarms and the World Economic Forum, with plans to create 10 vertical farm sites throughout the city. The incredible thing? They plan to provide 19,000 pounds of fresh produce to residents each year for free.

The idea is to help change the diets of people living in areas with higher rates of heart disease, obesity and high blood pressure, which are the same conditions that made so many of Jersey City's citizens susceptible to COVID-19. Those who receive the free produce will have to take health food workshops and get quarterly health screenings.

"Society's structural food problems have become more clear with COVID-19," AeroFarms CEO David Rosenberg, [told NJ.com](#). "The world needs more distributed, localized food production systems. We also need new ways to get healthy food to our most disadvantaged members of society."



How We Saved 2.5 Billion Gallons of Oil

Here's a math lesson on the power of energy savings, from my colleague Chris Beytes' *Acres Online* newsletter:

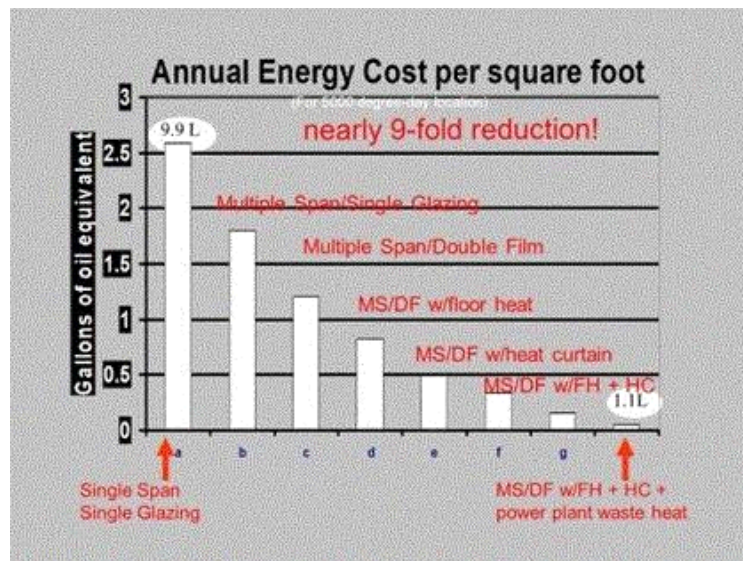
Last time, I told you of the passing of Dr. Bill Roberts, whose claim to fame is the invention of the air-inflated double poly greenhouse. News of his passing struck the greenhouse and ag engineering communities quite hard, because he was such a beloved and influential figure.

In the case of Wadsworth's George Dean and Arizona State ag engineer Gene Giacomelli, Bill's passing led to musings about just how much energy his invention might have saved growers (and the planet) in the 56 following years. Gene, always up to a numerical challenge, came up with the following, which he shared with me after getting his work vetted by a few trusted colleagues:

Assume that there are 5,000 acres of greenhouses in the U.S. today (that's real greenhouses, not counting the thousands of acres of the unheated high tunnels). NGMA says about 50% are plastic, the remainder are glass [some say 60%, but forget that for now].

Then, of the 50% plastic greenhouses, assume 50% are air-inflated double polyethylene film covered greenhouses, with the rest being single film or rigid double-walled polycarbonate panels. That would be $5,000 \times 0.5 \times 0.5 = 1,250$ acres.

From the chart below (provided by Dave Mears of Rutgers University), the single-span, single-layer greenhouse would use about 2.6 gallons of fuel oil per sq. ft. per heating season (in the northeast U.S.), while the multi-span, gutter-connected, double poly would use about 1.2 gallons of fuel oil per sq. ft. per heating season—about a 46% savings, or $2.6 - 1.2 = 1.4$ gallons of fuel oil per sq. ft. per heating season.



Therefore, 1,250 acres x 43,560 sq. ft. per acre x 1.4 gallon per sq. ft. per year savings = 76 million gallons of oil every year at current numbers and acreage of greenhouses.*

Going further with the estimation, it has been about 60 years [round number] since 1964 when the concept was made practical. Assuming a linear increase to 1,250 acres today from an estimated 125 acres of greenhouses 60 years ago, then there would have been 41,250 acres-years of heating seasons during 60 years. Thus, 41,250 acre-years x 43,560 sq. ft. per acre x 1.4 gallon per sq. ft. per year savings = 2,516 million gallons of oil saved, or 2.5 billion gallons in 60 years.**

*My first assumption here is that there was one climate location [Philadelphia airport] during one year that was the assumed weather conditions for each of the greenhouse designs. This means that all 1,250 acres throughout the US were within the same climate conditions for that one year, as Philly.

** My second assumption is that the same weather occurred at all the acres for every year during the 60-year time period.

Two and a half billion gallons of oil—that's enough to fill 50 million bathtubs! Of course, Gene, being a scientist, admits the numbers aren't exact. It would take a team of grad students several years and much beer to match every greenhouse and its acreage with its location-based weather for each of the preceding 60 years.

"But," jokes Gene, "that is what graduate students are for."



USDA Coronavirus Relief

Hopefully, you're all keyed into AmericanHort's communications. But if not, I'd urge you to check them out. For one, they have incredibly helpful info on relief programs related to coronavirus. For two, they also need hort industry members to provide public comments—on the impact of plant prices and lost sales—by June 22.

The Coronavirus Food Assistance Program (CFAP) hasn't yet extended relief funds to horticulture (and several other ag sectors). To catch up on the issue, submit a comment and read what AmericanHort has to say about it, go [HERE](#).

MORE RESOURCES (includes reopening resources):

[AmericanHort Coronavirus Resource Page](#)

[GrowerTalks Coronavirus Resource Page](#)



Wildflowers Help Tomato Grower Be More Sustainable

In Great Britain, one greenhouse tomato grower took some unusual steps to make their operation more environmentally friendly. At **Flavour Fresh's** Aldergrove Southport location, they have about 22 acres under cover, growing both tomatoes and blackberries. They also have a local bird sanctuary and reserve at the front of their nursery. So Flavour Fresh created an environment around their greenhouses where the sanctuary's birds could be released back into the wild. By planting wildflower mix and maintaining hedgerows and fields, they've created a diverse ecosystem that's home to not just birds but bees, water voles, moths and rare butterflies.



Now, Flavour Fresh's distributor and the Asda retail stores they support are promoting their "extra special" tomatoes with this as the background story.

Have an interesting collaboration like this? Tell me about it. Jwhite@ballpublishing.com

Report from the MT Outpost

Is it unprofessional to reveal that this issue of *GreenTalks* was written from a hammock? Or is that par for the course in 2020 during a pandemic? I normally opt for double monitors, but today was just too tempting. It's the kind of day you dream about all winter—a breeze softening the green grass and tickling the aspens, birds chirping, the sun making 65F feel like the beach.

If you're wondering how the Mountain Outpost garden is doing ... I lost a few plants to a spotty frost this week. I feel a little sheepish about it because I covered everything one night, and of course the frost arrived the next night when I thought it wouldn't get below 40F (and I wasn't paying close attention to weather). I'm still lobbying for a greenhouse.

But the wildflowers right now?



Until next time,

A handwritten signature in black ink that reads "Jennifer".

Jennifer Duffield White

jwhite@ballpublishing.com

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