

The Dust Bowl Demanded Sustainable Agriculture

Our first records of weather tracking from the U.S. Weather Bureau were from 1898 for relative humidity, winds and temp. It wasn't until radiosonde initiatives were launched in 1938 that we were able to test temperature, humidity, pressure, and transmit information during inclement weather (Service 2007). But by then it was too late to see what New York City already had (A&E Television Networks, LLC 2015). The **Dust Bowl** was an ecological disaster that hit over 150 million acres and drove "exodusters" to urban life east or as far west as California (Eric Foner and John A. Garraty 1991). In 1931 the drought that swept the plains was the onset of the Dust Bowl (Hurt 2002). The Dust Bowl was a direct result of what happens when you mess with science and nature over a degradingly long period of time.

Several generations of farmers monocropped the grasslands of the Great Plains and planted seed into fertile topsoil which became the means to earn a meager wage. They didn't understand sustainable agriculture, biointensive growing, companion planting, or cultivating drought tolerant seeds. Cattle ranching and wheat farming contributed to the ecological imbalance of earth and sky because they stripped the grasslands dry and left them structureless too. Topsoil stripped of beneficial nutrients and moisture prompted soil erosion. Drought and wind erosion set in parching the dirt even more. After a period of time with no rain, the wind hit the prairies, statically lifting up dust up to 10,000 feet, traveling 65 miles an hour, and

causing enough electricity to power NYC (A&E Television Networks, LLC 2015).

By 1934, 300 million tons of top soil had been removed by the Great Plains which touched Kansas, Northeast New Mexico, Southeast Colorado, Oklahoma Panhandles, and parts of Texas (Hurt 2002). Roosevelt enacted "practical measures" to remediate drought, dust, and depression beginning with the Great Plains Drought Area Committee (Hurt 2002). Several organizations were formed to assist with the Dust Bowl and Great Depression including land and social services relief. Most of the Great Plains farmers were in some form of federal agricultural relief program. The AAA, RA, CCC, and FSA couldn't help enough and someone had to pay for it (Hurt 2002).

The goals for New Deal Agricultural Conservation included removing excess and marginal acreage from crop production, preventing soil erosion with improved agronomic practices, rural zoning, grassroots involvement, eliminating farm poverty, and practicing ecological resource management (Worster 1979). Conservation efforts that were enacted on behalf of the government to plant 220 million trees through the Shelterbelt Program of the Forest Service or let land grow fallow through the Taylor Grazing Act, were just a few attempts to help the Great Plains flourish again (Danbom 1995).

Rexford Tugwell, Lewis Gray and Henry Wallace were detrimental towards sustainable improvements during the 1930s (Worster 1979). Although there were a lot of initiatives in place to alleviate the pressures at the time there wasn't a consistent foothold in all acts because different people were in control of governmental legislation. The Soil Conservation

Service (SCS) was initiated to teach about soil conservation but one had to sign a five year contract in order to reap rewards. Sustainable education on behalf of agriculture and the environment should have been included in all relief efforts and initiatives. That would have helped prevent future reliance on government assistance and fueled a more sustainable economy. Perhaps they would have been more prepared for a "fundamental environmental reform," if they were educated along the way (Worster 1979). If our government continued to integrate conservation with sustainable agriculture as part of the New Agricultural reform then and implemented it into sustainable mandated policies to this day, our country would be a lot better off. We've come a long way since the Dust Bowl, but our sustainable challenges in agriculture in the twenty first century are far more difficult.

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Mid Summer Garden

Well I don't think I can ever get caught up in the backyard these days! My gardens have become so large that I'm constantly cultivating the soil! It seems as if just as I've finished one thing, another bed needs redone!

It has been a very successful tomato season for us even though many farmers have said the complete opposite due to all of the rain! Plenty of heirloom tomatoes here! At this time I have planted about 102 in my small space. The reason for that is a greenhouse lesson learned. In the years prior I seed started in the house where the environment wasn't ideal for sprouting. Davin was able to finish the greenhouse coop last fall and I was able to start my favorite varieties successfully for the first time. I put 3 seeds in each pod, and guess what, they all came up! So, I was able to sell a few at the farmer's market, and donated about 40 to a few local families. Lesson learned! We will be expanding our greenhouse coop into a full greenhouse with aquaponics in one section and a chicken care

station below, in addition to our seed starting stations. That will be our next big project after Davin remodels the new coop again. I swear, how many times can you rebuild something until you are satisfied with the end result?

Our chickens are 20 weeks old on Wednesday! One of our Campines has been laying for almost 2 weeks straight now but none of the other ladies have begun yet. The campine eggs are tiny, a little smaller than a guinea egg actually. The new flock is having a hard time adjusting to the heat I think because we had so much rain in the spring that it was actually pretty cool for much longer than it usually is. Since it's dried up for the past month or so it's been pretty hot and they are struggling, even though it hasn't reached 100 degrees yet. Luckily we have multiple fans in both the new coop and the old coop so all of our hens are getting some relief. It does help them to lay in the summer if they have places to cool off. We have multiple locations for water and I like to give them refreshing frozen or chilled afternoon fruit treats.

We also have ten different breeds, within the 20 birds we own. Four of them are 16 months old and three of them are consistently laying. The Ameraucana hasn't been laying eggs but has a deformed dorsal, which I've read is how some of the original Arcaunas were shaped. She did have some very soft shelled eggs and I'm not sure if she will lay again or not. So right now she's helping to control the bad bug population, and fertilization. She is one of the original ten pullets that we bought 8-10 weeks old and lost 60% for different reasons. Davin calls her Corky. For anyone considering raising chickens, get them as chicks, not as older pullets. They'll have a much better chance of

survival and be much healthier if they grow up in the same environment.

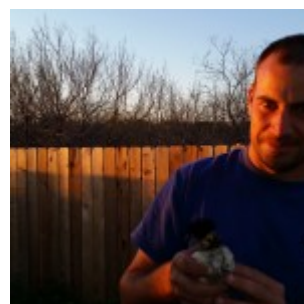
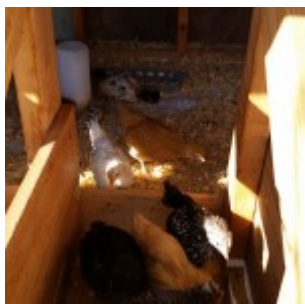
Here are a few pictures to show you what's new at our market garden-backyard homestead and some of the things we've done this spring and summer!



A few plants that
we got from
Sunshine
Community Gardens
annual spring
plant sale, 2015



Seed starts in
the greenhouse



Davin's favorite.



Adjusting the new
system.



Drip system runs
off of rainwater
and is very
efficient.



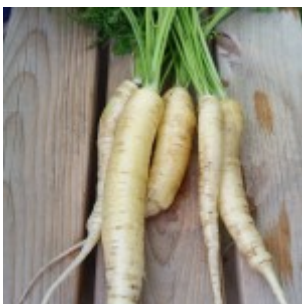
Drinking
harvested
rainwater, packed
full of
electrolytes!



Another compost
pile located in
Sustainable
Garden Bed



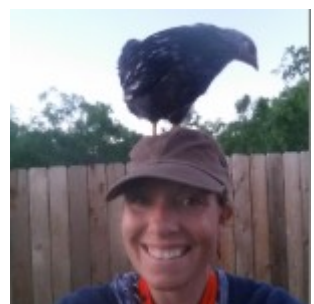
New grape bed and
added garage sale
decor to the gate



French Heirloom
Creme de lite
Carrot



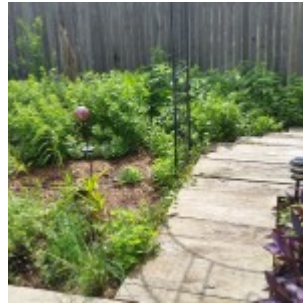
Walking onion



Yes, early
bonding. They
like to jump on
my head!



Table grapes from Stark bro's.



Herb garden in the spring 2015



Citrus and succulents



New coop



Just a little wet from the rain



Grew buckwheat to build the soil with nitrogen, as a beneficial insect promoter, and for chicken scratch



Compost for the chickens to scratch in

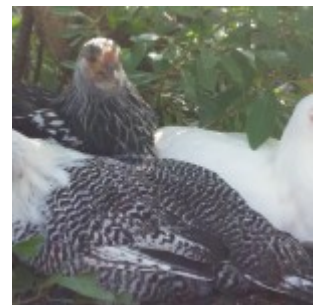




Everbearing
raspberries



1015, Red, White,
Texas Sweet
Onions, were
harvested early
because of all of
the rain and
flooding.



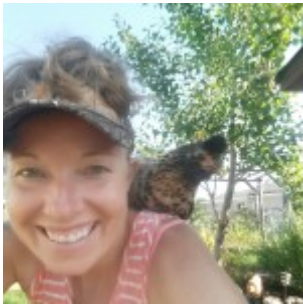
Silver Campine,
Leghorn, Heritage
Breed Hens



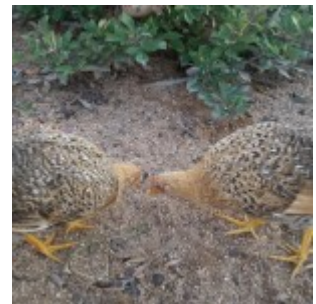
This was our
broody Australorp
hen this spring!
We got her back
on track after a
couple of weeks!



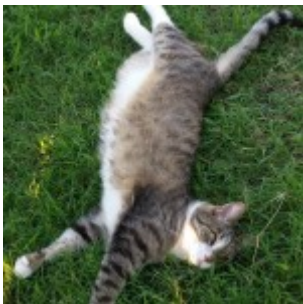
Buff Orpington,
Ameraucana, J



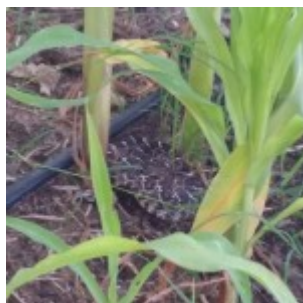
Brabanter
Heritage Breed
Hen



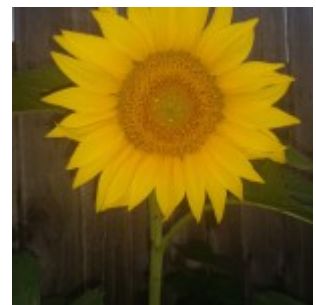
Norwegian
Jaerhons,
Heritage Breed
Hens



Mic relaxing



rattlesnake that
I went face to
face in while
cultivating the
corn bed



sunflower



late spring/early
summer harvest



Some of the first
harvests in the
spring.



Heirloom Garlic



Giant Zinnia



A peek in the new
coop



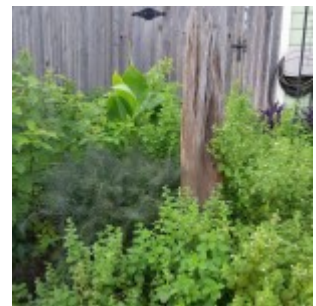
Garden in June



crimson
watermelon that
came up on its
own free will



For some reason
we have two
banana spiders
hanging above our
nesting boxes on
both coops. I'm
ok with that too!
They are well
fed!



Melissa, fennel,
raspberries,
roses, cana, and
an old log that
we turned into
garden art in the
herb garden



Cinnamon basil



Pink lemonade
blueberries

SNAP, WIC, and Nutrition Build Community Based Food Systems and Food Security

Turning community supported agriculture into agriculture-supported community would allow community food security to thrive within the local food movement (Ackerman-Leist 2013). Community food security targets the local population and strives to, “make healthy, fresh food available to individuals, organizations, businesses, and government entities (Ackerman-Leist 2013).”

The food justice movement is present in Austin with organizations like Urban Roots, which targets lower-income families and troubled teens. The Sustainable Food Center (SFC) has created Farmer’s Market Incentive Programs (FMIPs) through the Farmer’s Market Nutrition Program (FMNP) to increase local food access among

nutrition assistance beneficiaries (Jeanie Donovan 2013). They have also targeted mobile vending, community-based farm stands and grocery stores to reach beyond the farmers market (Jeanie Donovan 2013).

New policy recommendations include increasing electronic transfer benefits (EBT) availability at local food retail locations and making it mandatory for all farm stands and farmers markets (Jeanie Donovan 2013). This will be one of the biggest challenges because out of seventeen farmer's markets/food stands in Austin only six are EBT equipped. Additionally Supplemental Nutrition Assistance Program (SNAP)-enrolled and WIC (woman, infants, and children) customers must be included in all the programs and locations in order for it to be the most effective (Jeanie Donovan 2013). However in order to be SNAP qualified one must apply to determine their eligibility and TBB (The Benefit Bank) assists our diverse population (Jeanie Donovan 2013). Installing EBT technology with the USDA's Food and Nutrition Service (FNS) program requires excess funding. Targeting public and private sources, available grants, annual reporting and reapplications can help sustain funding possibilities (Jeanie Donovan 2013).

Since other cities show the benefits of increased sales between SNAP customers as a result of FMIPs the SFC believes that this would be a successful program here. SFC doubles the value of SNAP, WIC, and FMNP benefits totaling up to \$20 per market per day through the Double Dollar Incentive Program (DDIP), but only for fruits and vegetables (Jeanie Donovan 2013). Consumers can save keep their incentives to use on other days as long as they use them by the end of the year.

By increasing the frequency of access for low-income

consumers to obtain locally produced fruits and vegetables, the programs will redirect consumer spending to local agricultural producers (Jeanie Donovan 2013). This could also provide environmental opportunities like reducing food loss in conjunction with local composting programs and gleaning opportunities, as well as turning excess food into animal chow. It will decrease energy output by cutting transportation costs and minimizing distribution beyond a fifty mile radius. Direct market sales and relationship development between consumers and farmers will be socially beneficial. Additional education benefits will help individuals learn new life skills; understand where their food comes from and empower better nutrition decisions.

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