

Nature Based Solutions

5.7.26





Established 1985

Northwest Yolo County

Certified organic

100 different crops

Year round rotations

400 acres

Annual crops

Tomatoes

Melons

Peppers

Eggplant

Broccoli

Greens

Carrots

Potatoes

Winter Squash



Perennial orchards
like peaches,
pomegranates,
almonds and
walnuts



Lots of
flowers





A bunch of
egg layers



And plenty of extracurricular activities like tours, classes, farm dinners and festivals



Lightning tour of Full Belly Nature Based Practices

Hedgerows



Compost



Cover Crops



And a few other things along the way

Hedgerows – dense plantings along roads, fences, field edges

- Native trees
- Shrubs
- Grasses

They provide
undisturbed areas
on the farm



Researchers have measured many benefits

Pollinators and beneficial
insects

Buffer against dust

Carbon sequestration

Shade for our crews

...and they beautify the farm!



40 years of COMPOST!

Compost adds carbon to the soil which feeds soil microbes

It also reduces the need for added fertilizers







We can talk Cover Crops

Our cover crops include a mix of nitrogen fixing legumes along with deeply rooted grasses. The cover crops and compost together are hugely important for soil health – plant health – human health



They can get pretty tall!



So many benefits

Our nutrient cycles are enhanced by soil microbes enabling crop roots to find the carbon and nitrogen that we have banked in the soil and that is broken down as needed.

Non water soluble nitrogen eliminates leaching into groundwater

Increased water infiltration – We have no soil erosion or irrigation drainage water running off of our fields because of improved water holding capacity of the soil (which is important when you have historic lack of snow pack!)



Soil tilth demonstration

Friable

Holds moisture

Aerated

Supports root development



Root nodules fixing nitrogen



Our most recent Variable Frequency Drive installation

Reduces energy consumption by up to 80%

90 to 100 tons of CO2 emission reductions per year – Direct solar-
no batteries

Can operate during frequent power outages and would operate in a wildfire

No diesel fumes for operators or risk of diesel spills into the creek. Saves 6700 gallons of diesel fuel/year

Less labor – runs with minimal supervision



Sustainable Technologies

	Project name	Annual KWH savings	Annual \$ savings	KWh Savings to date	Savings to date	Installation date	Project cost after rebates
1.	LED warehouse Lighting upgrade-Phase 1 and 2(11 months of savings)	20,064.00	\$ 5,016.00	200,256.00	\$ 70,064.00	Jul-2015	\$ 14,220.00
2.	Evaporator and condenser fan motor upgrade	67,617.00	\$ 16,904.25	676,170.00	\$ 236,617.00	Nov-2015	\$ 31,822.00
3.	Domestic Well pump VFD upgrade	1,772.50	\$ 483.41	12,404.49	\$ 4,350.22	Feb-2018	\$ 1,200.00
4.	30 HP Creek Pump VFD panel with set pressure pumping (5 months season)	20,537.00	\$ 5,134.25	143,074.00	\$ 50,315.50	May-2018	
5.	15 HP Kinney Pump VFD panel with set pressure pumping (6 months season)	21,714.00	\$ 5,428.50	151,428.00	\$ 52,999.00	May-2018	
6.	15 HP Rose Pump VFD panel with set pressure pumping	24,651.00	\$ 6,162.75	172,552.00	\$ 60,325.50	May-2018	\$ 20,816.00
7.	27 KW VariSun Direct Solar Pump-	46,000.00	\$ 11,500.00	322,000.00	\$ 106,000.00	Jan-2018	\$ 50,000.00
8.	61 KW Rooftop Grid tied	98,000.00	\$ 30,000.00	490,000.00	\$ 171,500.00	Jan-2021	\$ 80,000.00
	Grand Total	300,355.50	\$ 80,629.16		\$ 752,582.22		\$108,058.00

Climate Smart Agriculture programs of CDFA

- California has invested \$727 million into climate smart ag
- Programs are oversubscribed by 161% to 876%
- The vast majority of participants intend to continue using their new practices after their grant ends
- Nearly three-quarters of participants felt their farm was more resilient after implementing the new practices
- Over half of the participants felt their project had a significant impact on the adoption of climate-smart practices by other growers
- AMMP, SWEEP, and HSP rank 15, 19, and 23, respectively, out of 115 state climate programs in terms of GHGs reduced per state dollar spent

But the funding is uncertain every year...

AB 2184 allocates consistent funding for nature-based and sustainable ag solutions.

Agriculture can be a big part of the climate solution, but not without steady public investments.

Farmers and ranchers want to implement these solutions but lack the necessary resources or technical assistance.

AB 2184 is an important step towards ensuring land stewards receive that support.

Thank You!

