

# Cover Crops for Central Texas

Three cover crops that are perfect for the soil in the Blackland Prairies ecoregion in Central Texas, include buckwheat, peas, and crimson clover. The benefits of peas and clover cover crops include adding nitrogen back into the soil. Peas and clover are members of the Legume family and increase organic matter in the soil, encourage beneficial insects, which increases pollination for your growing spaces when the flowers are in bloom. Clover also provides an excellent breeding ground for ladybugs, the larvae, and pupa thrive in the microclimate that they create. Allowing some of your winter and spring crops to bolt and flower may encourage aphids to visit but that's what ladybugs and larvae love to eat so you can boost your beneficial insects in your backyard just by making a few exceptions! This year has been incredible watching the lady bug populations go wild in our largest garden. It's hard to believe that just a year and a half ago our largest bed was a small butterfly garden, but mostly clay covered by grass.

A disadvantage of using clover is that it can only survive in cooler months like spring, fall and winter, and withers in the heat of the summer. This year I planted crimson clover mid winter due to the mild temperatures, but often it's recommended to start before winter. Since we have

mild winters in Central Texas growing them after the first frost isn't a problem, they just take longer to progress. Peas get stressed from heat as well and will freeze, but there are other varieties that contend with the heat much better. Crimson clover, Buckwheat and other green manures aka cover crops aid in attracting beneficial insects like bees to pollinate (Shirey n.d.). Some legume cover crops aren't good at suppressing weeds (Grubinger n.d.).

When the heat turns up Buckwheat is a more appropriate soil builder as it also blocks other weeds from trying to break through and takes one third of the time as clover to develop. Buckwheat produces large amounts of residue that adds organic matter to the soil (Sustainable Agriculture Research & Education 2012). Buckwheat also supports pollinator populations (SARE 2012). Buckwheat is very hardy, drought tolerant to some degree and efficient at separating clay to provide a better planting medium and bring nutrients closer to the plants (Taylor 2014). Within 30 days from planting Buckwheat is blooming which makes it a great time energy source for soil building in between other plantings. Chickens love it, and it produces a great seed to make gluten free flour with, or add it or the leaves to your smoothie. **Buckwheat** can make your landscape and food plate more sustainable!

Planting in the right season is paramount to

production growth and the ability to improve soil structure (Grubinger n.d.). Some downsides of cover crops and green manures are that they aren't produced for revenue but short term economic gain (Grubinger n.d.). Which is why alternating crops and planting a green manure during seasonal changes is a good time to grow these crops on your farm or in your garden because when your soil is bare, beneficial protozoa, fungi, and essential minerals are leached from the soil and it loses structure. This works against the Central Texas grower during drought season. The healthier your soil is, the more drought tolerant they are, and the healthier your plants become! Therefore diseases will potentially be decreased because of your balanced ecosystem.

It is important that cover crops are planted in succession of food crops in order to maximize biodiversity so allow enough time for the plants to enrichen the soil before you plant your next food crop. Green manures can be worked into the soil at any time and harvested early if need be but in order to reach their full potential for your soil it is best to wait until they are ready to bloom. Allowing them to grow beyond blooming increases agrobiodiversity and you will find that some make and excellent living ground cover. For instance, clover is an excellent living, green mulch that surpesses weeds that try to sneak through your nifty rows. It can be an organic and sustainable alternative to straw which is

generally sprayed with chemicals if purchased in Texas, or man made ground covers that use excessive amounts of energy to produce and distribute, therefore decreasing the sustainability of your farm and your carbon footprint. Using clover as a living mulch will encourage beneficial bacteria, beneficial bugs, improves soil health, and increases biointensive growing capabilities. Plus, it looks pretty!

Cover crops maintain and improve soil fertility, prevent wind erosion and encourage biomass (SARE 2012). In order for cover crops to be the most beneficial they also need to be trimmed or turned into the soil which can take time. Leaving soil bare prevents bacteria, earthworms, and fungi from encouraging micronutrient production (Relf 2009). Cover crops and green manures should be planted in succession of other crops.

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# Benefits of Using the Polyface Farm Model in Central Texas

Organic Red Hard Wheat growing in our largest garden bed and planted as the first crop to build the soil! We purchased this seed from [Thayer Feed and Seed LLC](#) at the Mother Earth News Fair in Kansas 2014.

There are many benefits to the Polyface Farm model. Joel Salatin isn't caught up in labels but believes in the essence of husbandry practices and stewardship (Salatin, *A New Old-Fashioned Food System* 2015). His model aides the local community with access to affordable food and he shares his knowledge with those willing to learn how to incorporate biodiversity while turning a profit. Central Texas is a difficult region to be a "grass farmer." Land varies depending on the ecoregion and is a mix of rocky cavernous ridges, limestone, savannah, piney woods, and blackland prairies (Library of the University of Texas n.d.). Drought and a hot climate bring about other challenges that Salatin doesn't necessarily face in Virginia.

Salatin claims that his beef is “**salad bar beef**” because of the variety of leafy greens that are found in his fields (Salatin 2014). So every day he provides a different polyculture, diversified, paddock for nutrition which consists of dandelions, Kentucky blue grass, onion, narrow leaf plantain, wide leaf plantain, orchard grass, fescue, red clover, white clover, and buttercup (Salatin 2014). Although our region has the capacity to produce a variety of forage crops, different seasons really dictate what is grown but rebuilding the soil is a necessity.

Native grass seed by **Native American Seed** company would be introduced to the grazing system because it's what the buffalo used to forage, is extremely hardy, requires minimal watering and does well in Central Texas. We have access to organic feed from a local mill just a few miles away so it is ethically important we purchase soybean free, Non GMO feed from **Coyote Creek** as the most sustainable option. However gleaning food from other farmers and businesses is another great sustainable feed source that works well in a zero waste system.

A mixed farming system is sustainable as long as the number of animals and crops produced stays in balance with nature and production demands. A grazing pasture management system must be in place on any farm with livestock. Efficiently maintaining a sustainable pasture requires incorporating the forage-producing capacity and stocking rate to achieve the target level of animal performance over time without causing deterioration of the pasture's ecosystem (David L. Greene 2002, 1).

Salatin grows on a large scale farming system and a smaller scale farm could; be more attainable; require

less labor input; be more manageable; be financially feasible and sustainable. I also believe that food crops should be integrated in order to be more self sufficient. Salatin raises beef, chicken broiler meat, chicken eggs, rabbits, and pigs on between 100-500 acres (Pollan, Joel Salatin's Polyface Farm 2006). By reducing farm scale to accommodate smaller percentages of livestock while encouraging heritage breed diversification is imperative to the preservation of endangered species. In my experience, raising heritage breed chickens in Central Texas creates more resilient food systems. Reducing farm size would allow the farmer to have a better quality of life. (Pollan, Joel Salatin's Polyface Farm 2006). There is a demand for access to healthy and affordable food in Central Texas as well as markets to sell value added products through CSA, farmers markets, and restaurants (Austin Energy Depletion Risks Task Force, Roger Duncan 2009).

Austin needs to minimize food security issues in order to be more sustainable but Austin only represents a fraction of Central Texas. Having access to a farm store and being able to visit the farm to understand where your food comes from plays a crucial role in establishing a better food system. Building a farm brand using a sustainable whole farm model will encourage community members to become a part of the food movement. Educational opportunities aid in the development of future farmers which is essential to making our bioregion more sustainable.

"When we say we are grass farmers, what we're saying is we are honoring and producing the most historically normal, carbon cycle, nutritive cycle, energy cycle that is solar driven in real time and actually builds soil like nature has done forever (Salatin, Episode 516

– Polyface Farm 2014).”

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