A photograph of three men walking across a grassy field. The man on the left is wearing a yellow shirt and blue jeans. The man in the middle is wearing a light blue shirt, khaki shorts, and tall rubber boots, carrying a dark jacket. The man on the right is wearing a green shirt and blue jeans, holding a long stick. They are walking towards the camera. The background shows some trees and a utility pole.

AN IOWA LANDOWNERS GUIDE TO SUSTAINABLE FOOD CROPS

Edited by Executive Director Suzan Erem
and Farm Specialist Joe Klingelhutz
The Sustainable Iowa Land Trust





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SILT encourages allies and friends in our neighboring states to replicate this publication, adding species particular to your region and removing those that are not appropriate.

An interactive version of this booklet is available for free at silt.org

ACKNOWLEDGEMENTS

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When we launched the Sustainable Iowa Land Trust (SILT) in 2015, we knew we had an uphill struggle ahead. We were about to embark on a journey to permanently transform Iowa's landscape into one with many more prosperous, diverse market farms. We were going to ask Iowa landowners to voluntarily reduce the value of their land for a future of eco-friendly table food farms anyone could afford. One gift would solve many of Iowa's economic and ecological problems and do so for generations to come. Future farmers could access land, repopulate small towns, increase the supply of fresh, naturally-grown fruits, vegetables and meat and sequester carbon through managed grazing. Maybe someday, their land gifts would help end Iowa's standing as the No. 1 contributor to the Dead Zone in the Gulf of Mexico.

But we underestimated a greater challenge: After 70 years of market consolidation and the policies that encouraged it, Iowans had forgotten their land could grow table food. Our local food system had eroded. So-called experts proclaimed there was "no market" for food. Yet trucks full of fruits, vegetables and meat rumbled through our state at 70 mph every day. People hadn't stopped buying food. They just bought it from California, Mexico and China now — because those were their only choices left.

Farmers were growing commodities because those were *their* only choices left. But when farmers have more choices, food consumers do, too. Today's landowners have the power to provide those choices by taking land debt out of the equation for farmers. You hold Iowa's future in your hands and SILT is here to help. SILT Farms are, by definition, economically, ecologically and socially sustainable — all three at all times. They seek diverse income streams, mimic nature to build healthy soil and are anchored in their communities.

Farmers will tell you that owning land is a responsibility. What we do with our land while we're here says a lot about us when we're gone. If you value healthy soil, clean water, agricultural diversity and resilience, contact us at the Sustainable Iowa Land Trust to discuss the possibilities.



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LANDOWNER LESSONS

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THE MOST IMPORTANT CONSIDERATIONS

This book is designed for landowners who haven't thought much about what food their land wants to grow, so we include a measure of two factors for beginners:


INITIAL LABOR COSTS INITIAL CAPITAL COSTS

Since these vary from one person, crop or region to another, we've made them relative to each other on a scale of 1 (easy/good/less expensive) to 5 (difficult/poor/more expensive).

We also added a few **SPECIAL CONSIDERATIONS** to give you some sense of where the scores came from.

And finally, we look at farms as ecosystems, so we've added a simple icon on each page to show you where in the farm's ecosystem that particular crop fits.

AMERICAN PERSIMMON



American persimmons are much smaller than the Asian ones you might be familiar with that are grown in California or imported from Japan. They ripen over a 4-week period in September and October and can be extremely sweet. They don't travel well and are therefore best suited for U-pick operations and processing. Some seedlings require grafting for best fruit. These trees do best in the southern half of Iowa or Zone 5b.

INITIAL COSTS

1

2

3

4

5

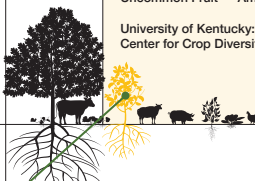
CONSIDERATIONS

- Possum/raccoon protection (as fruit is ripening)
- Marketing due to competition with Asian persimmons
- Processing

CREAM OF THE CROP RESOURCES

University of Wisconsin:
Uncommon Fruit — American Persimmon

University of Kentucky:
Center for Crop Diversification



SUSTAINABLE IOWA LAND TRUST

HOW TO USE THIS GUIDE

DETERMINING THE BEST CROPS FOR IOWA

We made tough decisions to limit the list of crops in this guide to a manageable number. Farmer advisers based their choices on crops that are relatively easy, can be grown in most of Iowa and have or can build markets. And remember, there's more to farming than growing the food. Value-added products, agri-tourism, education and just plain fun can be part of processing and selling the food you grow.

THIS GUIDE IS JUST A START

Every page includes one or two non-profit or educational "Cream of the Crop" resources. At the back of the book is a more extensive list. The digital version at silt.org has the link to the resource at time of publication. Find a crop you're interested in and then *do more research!* People, institutions and organizations are willing to help you on your journey.

THEN WHEN YOU'RE READY

When the time comes, we hope you'll contact us at the Sustainable Iowa Land Trust to discuss the many ways to protect your land as a clean, healthy food farm for generations to come. Protection is available in two forms – either a conservation easement attached to your deed that spells out future uses of the land. You retain ownership. Or a land donation either now or in the future that assures your land stays in sustainable food production while helping sustain SILT as well.

WHOLESOME FOOD. CLEAN WATER. HEALTHY SOILS. OPPORTUNITY.

If you're interested in leaving this kind of legacy, there are many ways to make it work for you. Contact us for a confidential conversation to learn more about your options.

FRUITS

Almost all fruits grown in Iowa are perennial. Most will take 3 to 7 years to begin fruiting. In today's changing climate, it can be hard to predict what will survive and thrive, but we offer these suggestions based on the latest available information.



COMMON THREATS

In berries, spotted wing drosophila (SWD) — an invasive fruit fly that lays its eggs inside the fruit. In other fruits, a variety of insects and diseases.



BEST MANAGEMENT

Sustainable commercial growers use organic pesticides and Integrated Pest Management.



COMMON CAPITAL EXPENSES

Bird netting as fruit ripens and mulching for weed control, (though mulch may increase vole problems for tree fruit), processing equipment and licensing. Trees with tree tubes for protection and in areas with heavy deer pressure, 8-foot fence.



COMMON LABOR EXPENSES

Weeding, harvesting labor and/or equipment, pruning, mowing and insect and disease management.

AMERICAN PERSIMMON



American persimmons are much smaller than the Asian ones you might be familiar with that are grown in California or imported from Japan. They ripen over a 4-week period in September and October and can be extremely sweet. They don't travel well and are therefore best suited for U-pick operations and processing. Some seedlings require grafting for best fruit. These trees do best in the southern half of Iowa or Zone 5b.

INITIAL COSTS

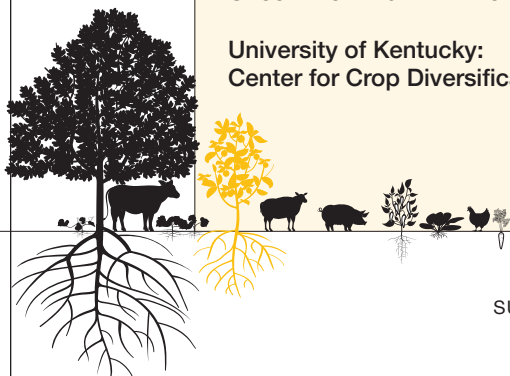
CONSIDERATIONS

- Possum/raccoon protection (as fruit is ripening)
- Marketing due to competition with Asian persimmons
- Processing

CREAM OF THE CROP RESOURCES

University of Wisconsin:
Uncommon Fruit — American Persimmon

University of Kentucky:
Center for Crop Diversification



APPLES



Apple trees have retained their presence on the Iowa landscape despite the massive transition of most of Iowa's agriculture to commodity crops. That said, growers using organic practices will have a difficult time competing with apples from the Pacific Northwest due to the high insect and disease pressure here. Many newer growers are planting apple trees with an eye toward the cider market instead. This requires an investment in cider production equipment. The mix of apple varieties will differentiate ciders from one another, and the ability to use apples that are not suited for the retail market makes this an attractive option. U-pick operations can also be profitable. Consider what the market may be in 10 years when your trees are mature, proximity to processing and anticipated transportation costs. Niche markets for dried apples, apple butter, apple sauce and pie apples are also available.

INITIAL COSTS

CONSIDERATIONS

- Pruning
- Training and trellising (dwarf varieties)
- Pest control

CAPITAL LABOR

CREAM OF THE CROP RESOURCES

Iowa State University:
Organic Apple Production in Iowa

Cornell University Hard Cider Resources



ARONIA BERRIES



Aronia berries are very high in antioxidants. Certain varieties can be extremely astringent eaten out of hand. Many growers have attempted value-added products such as jelly, salsa, wine and juice, but aronias continue to struggle even in niche markets. They grow as a bush up to 5 feet and begin fruiting in their third year. Advantages include little pest pressure and the potential for machine harvesting.

INITIAL COSTS

CAPITAL

LABOR

CONSIDERATIONS

- Fresh fruit palatability
- Processing
- Lack of market

CREAM OF THE CROP RESOURCE

Midwest Aronia Association



ELDERBERRIES



Elderberries are native to Iowa. They can be seen growing as a bush along the roadsides in spring. Their flowers make clumps of white “umbels” like an umbrella and then turn to dark purple berries. These berries should not be eaten fresh, but can be processed into jellies and jams, juice, tea, wine and liqueur. The flowers can also be used in salads and to make liqueur. Best to use elderberry cultivars when considering growing for commercial sale. These berries are extremely high in antioxidants and freeze-dried berries are seeing a high demand from European markets.

INITIAL COSTS

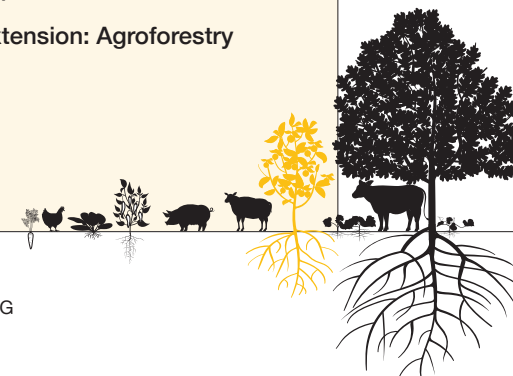
CONSIDERATIONS

- Harvesting
- Processing
- Marketing

CREAM OF THE CROP RESOURCES

Midwest Elderberry Cooperative

Iowa State University Extension: Agroforestry



GRAPES



Iowa was once the No. 6 wine grape producer in the nation, long before California's ideal climate and soils were discovered. Late freezes and high susceptibility to synthetic chemical drift added to the demise of the industry, but vineyards are slowly coming back. Depending on the cultivar, grapes can also be grown for fresh eating. Some cultures stuff grape leaves with spiced rice and meat. Others use grape leaves as a tannic addition to pickles and ferments. Agritourism opportunities include training grape vines to trellises high enough for customers to walk or sit under and enjoy a refreshment.

INITIAL COSTS

CONSIDERATIONS

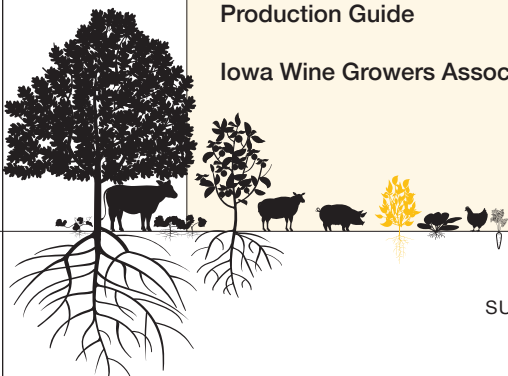
- Disease
- Synthetic spray drift
- Deer/bird protection

CAPITAL
LABOR

CREAM OF THE CROP RESOURCES

Ohio State University: Midwest Grape Production Guide

Iowa Wine Growers Association



HONEYBERRIES



Honeyberries are Iowa's low-input response to blueberries, which require a more acidic soil than is naturally found in Iowa. Also known as "haskap," they tend to have a tart mix of raspberry and blueberry flavor, are good out of hand, dried, freeze-dried, made into jelly and frozen. These berries have been grown in climates north of Iowa for many years, and significant research has been done to develop a number of cultivars. While they are a member of the honeysuckle family there is no evidence that they will "escape" and become a nuisance in wild lands. Still, they are new to this landscape and should be monitored.

INITIAL COSTS

CONSIDERATIONS

- Bird protection
- Undeveloped market

CAPITAL
LABOR

CREAM OF THE CROP RESOURCES

University of Saskatchewan Fruit Program

Honeyberry U.S.A.



PAWPAWS



Pawpaws are Iowa's "exotic fruit." These trees take from 7 to 12 years to fruit and are one of the few fruits pollinated by carrion flies. This is a soft fruit tastes like a light custard. It is an oval shape ranging from 3 to 6 inches long and 2 to 5 inches in diameter, with large almond-shaped seeds. There are many cultivars available that allow a grower to select for harvest windows, size, flavor and flesh. They bruise easily and therefore are best for U-pick operations or processed into a pulp for sweet breads or ice cream or for sale to chefs.

INITIAL COSTS

CONSIDERATIONS

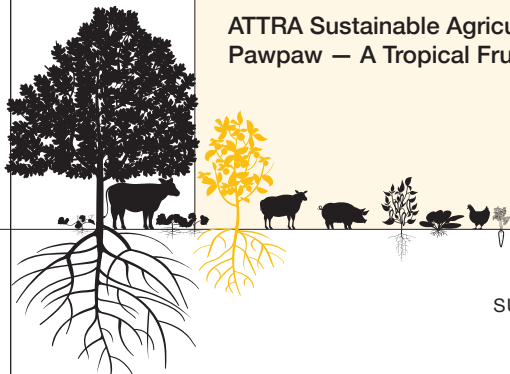
LABOR
CAPITAL

- Undeveloped market
- Shade needed for young trees
- Pollination

CREAM OF THE CROP RESOURCES

Kentucky State University

ATTRA Sustainable Agriculture Program:
Pawpaw — A Tropical Fruit for Temperate Climates



PEARS



Both Asian and European pears can grow in Iowa, but Asian pears are slightly less cold hardy, so they may fare better in the southern half of the state. Asian pears have less insect pressure since they are new to the continent. They have an energetic upward growth habit that requires pruning even during the growing season to keep in check. Some growers are planting pears with a plan to sell "perry" which require their own variety that is not edible, or pear cider, which can use edible pears. While pears do not enjoy the same size market as apples, including them in a diverse orchard will provide additional protection from arbitrary climate and market fluctuations. Like most fruits, options for value-added products such as jam, jelly and dried are possible.

INITIAL COSTS

CONSIDERATIONS

- Pruning
- Fire blight
- Over production (Asian pears)

LABOR
CAPITAL

CREAM OF THE CROP RESOURCE

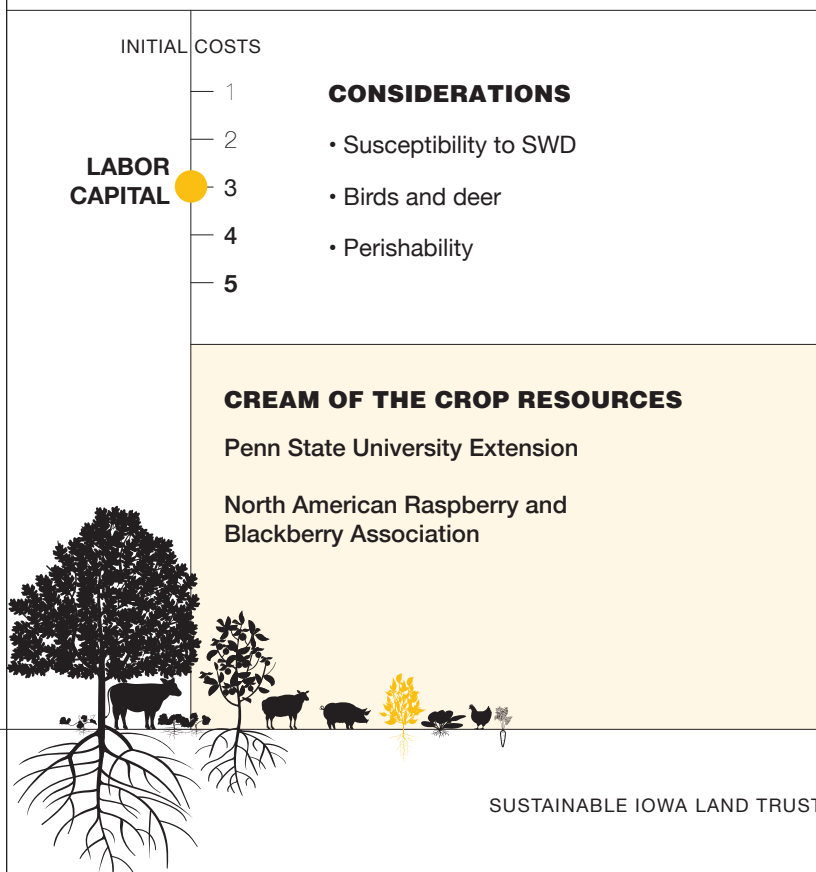
University of Kentucky Center for Crop
Diversification: Asian and European Pears



RASPBERRIES



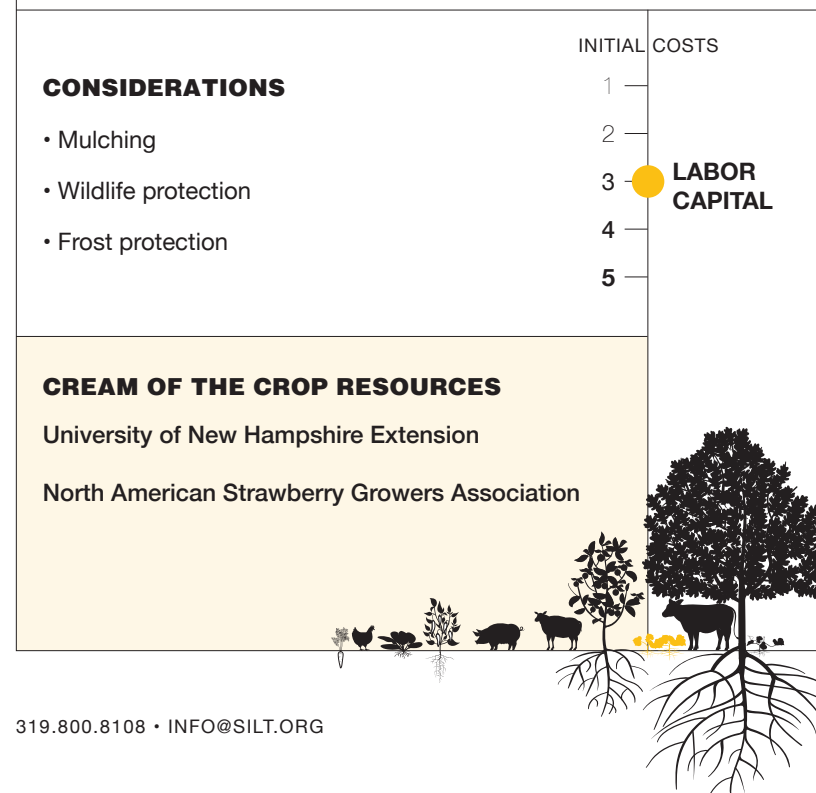
Black raspberries are native to Iowa and therefore suffer little insect pressure, though birds and deer enjoy them. They are best sold fresh but can also be freeze-dried, frozen, dehydrated or made into jam or jelly. They tolerate transport just a little better than red raspberries. Some thornless cultivars sacrifice flavor or size for convenience, are a little bit sturdier but not as cold hardy as the others.



STRAWBERRIES



Strawberries are a high-value crop sold fresh. As a fresh or processed fruit this crop must compete with lower-cost options from California, Florida and other states. However, the taste of locally grown June berries can justify a higher price than an out-of-state product. Once planted, growers should wait 1 year before harvesting. A single bed can stay in place for 3 to 6 years depending on management and disease pressure, and then should be rotated to a new location. Strawberry plants like to be protected in winter with a layer of mulch and do not compete well with weeds. Niche markets include freeze-dried, frozen, as well as a sweet sauce.



WORDS TO THE WISE

“Flexibility and adaptability were key to the growth of our business.”



VERN AND MARY ZAHRADNIK

We wanted to farm how our parents farmed. We had seen that this was a successful model and we wanted to replicate it. In 1977, we rented 200 acres and raised corn, soybeans, oats, hay, and sheep. The problem with replicating past successes is that markets and land prices change. So, over the 40 years that we've farmed, we have adapted and changed our operation, including the land we farm and the types of crops we produce.

By the time we purchased our own land in 1996, we were raising corn and hogs. With our new farm we found more freedom to trial new crops, including vegetables, apples, and grapes. We used our hog operation to fund our new specialty crop enterprises. We were excited to have the ability to grow, harvest, and sell our products directly to customers.

At the same time these new enterprises flourished, feed prices for the hogs skyrocketed. Our hog operation was quickly becoming unprofitable. We were at another turning point in our farming career. We could invest in new buildings and infrastructure and attempt to make our hog operation profitable or we could liquidate the livestock and increase our specialty crop production. We chose the latter and in 2007 we relied entirely on our fruit and vegetable operation for our income. We also continued to use income from the vegetables, which we sold entirely at farmers markets, to help continue to grow our apple orchard. In 2008, our daughter and son-in-law, Emma and Marcus, decided they would like to join the operation. They returned to the farm several times a year to help with pruning and planting of apple trees. In 2012, they moved back to Iowa and worked on the farm full time. They have continued to grow and adapt the business. They have greatly expanded the apple and pear orchard and they have grown our market outlets to include both a CSA and wholesale markets. Today, the orchard has close to 5,000 trees and we grow over a dozen different type of vegetables, including 2 acres of potatoes. We also process our own apples into apple chips and have an on-farm store.

Starting small with new enterprises allowed us to fund the growth with our current production. It also gave us experience and know-how to scale up when markets changed.

NUTS

Iowa nut production has taken a back seat to China, the Middle East and the West Coast, but that is quickly changing. Chestnuts, in particular, are making a comeback and research and breeding work with hazelnuts are making them a viable option. Most nuts trees and bushes fit well into a larger system of animal and fruit production or simply a sustainable, soil-retaining back yard. Primary labor considerations are harvesting and processing. Many nuts do well in cold storage, potentially extending the sales season for farmers who grow fruits and vegetables. The trees have the potential to be harvested for lumber at the end of their production life.



COMMON THREAT

Weed control during establishment.



BEST MANAGEMENT

While trees are young, heavy and wide mulching or a synthetic weed killer like Oust. This will not be necessary once the canopy is well-developed.



COMMON CAPITAL EXPENSES

Seedlings and tree protection.



COMMON LABOR EXPENSES

High upfront planting and weed control, dropping off as the plants grow older.

CHESTNUTS



Iowa-grown Chinese Chestnuts are more flavorful than California-grown Japanese-Europeans hybrids. While most third generation Americans only know chestnuts from a holiday song, recent immigrants from Europe and Asia have known and loved chestnuts all their lives. There is a strong demand for chestnuts in Iowa among these immigrants and their children. Like most Iowa nuts, they don't rely on fresh sales to local markets, but if sold more broadly, they will have to compete with national and global markets. They are an excellent overstory to a diverse permaculture-style orchard or silvopasture system that could support animals, fruits and nuts. Chestnuts can also be processed as a gluten-free flour.

INITIAL COSTS

CONSIDERATIONS

- Chestnut weevil
- Gall wasp
- Deer protection while young
- Mowing

CREAM OF THE CROP RESOURCE

The Center for Agroforestry:
The University of Missouri



HAZELNUTS



Hazelnuts, also known as filberts, are native to Iowa but are smaller and harder to shell than ones grown in the Pacific Northwest. Researchers are working on developing hazelnuts for Midwest production that will compete more effectively on the open market. These tall, woody bushes grow in a similar fashion and shape as elderberries. Almost every part of the hazelnut is useful. They can be sold whole or shelled, raw or roasted or can be pressed for their oil. The mash that remains can be used for livestock feed.

CONSIDERATIONS

- Eastern Filbert Blight
- Competitive markets

CREAM OF THE CROP RESOURCE

Upper Midwest Hazelnuts



INITIAL COSTS

1
2
3
4
5

LABOR
CAPITAL

HEARTNUTS



Heartnuts are not well-known yet in the United States. These Japanese walnuts have the advantage of easy cracking and shelling. Their common name derives from the shape of the nut, which will often shell in half without breaking further. These nuts are good fresh, sold retail or wholesale as well as processed like English walnuts. Their canopy tends to spread out more than grow upright, giving an added layer to a fruit and/or nut orchard. Look for grafted trees for a consistent crop.

INITIAL COSTS

CONSIDERATIONS

LABOR ●
CAPITAL ●

- Bunch disease
- Undeveloped market

CREAM OF THE CROP RESOURCE

Society of Ontario Nut Growers: Heartnut



WALNUTS (BLACK)



Black walnuts are native to Iowa. The trees are best known for their high value as lumber. The nuts are difficult to shell, making retail sales an unlikely market, though grafted trees will provide the best odds of success. There is a wholesale market for walnuts as seed. Some processors will purchase walnuts for their meats as well as the dye, which can be made from the shells and is used by crafts people. There is a growing awareness of black walnut for oil and medicinal products.

INITIAL COSTS

CONSIDERATIONS

- Processing
- Marketing

LABOR ●
CAPITAL ●

CREAM OF THE CROP RESOURCE

Center for Agroforestry at the University of Missouri



WORDS TO THE WISE

“Start small, grow gradually, and keep your day job.”



TOM WAHL AND KATHY DICE

We met at Iowa State University where we both earned degrees in Fisheries and Wildlife Biology. To get our start in this business, we went on a journey of purchasing land and envisioning the future for that land, which needed to include protection for wildlife and the environment.

Our “aha” moment was when we were thinking of our little bit of wilderness and how we could be good stewards of the land, and maybe make a living off of the land too. We wanted to put permanent ground cover in place, but put in a species that provides income as well.

After realizing the intense upkeep chestnut trees require — due to invasive species and the lack of protection for the trees — we were thrilled when a neighbor offered to sell us land containing established fruit and nut trees. In 2000, a neighbor offered to sell us land planted to non-producing chestnut trees. We purchased the land and began maintenance on the trees. We also planted other nut and fruit trees among them. Thus started the journey to our current operation. We’ve tried growing every edible perennial possible in our zone. Some of the most successful ones include persimmons, chestnuts, pawpaws and heartnuts. We have tried mulberries, Aronia and hazelnuts, but found them not commercially successful.

Soil health on our land is important. We make certain there is ground cover underneath all of their trees so the soil does not erode during rain events...and avoid monocultures by planting a diversity of species, which improves the health of organisms in the soil, as well as the soil itself.

We are proud of our work and the fact that we are sustaining a living off of this land.

*Based on an article originally published by Center for Rural Affairs
<https://www.cfra.org/>*

VEGETABLES

Iowa's fertile soils can grow a wide variety of vegetables. We have had to choose just a handful that have the best chance of succeeding at the farm scale. Gardeners have their favorites. So do farmers, but for different reasons. Consider applying for a hoop house from your local NRCS to help extend the season and managing weeds in creative ways that don't include synthetic chemicals. Because most vegetables are annual, they are best grown on flat ground with the use of cover crops to reduce soil erosion.



COMMON THREATS

Pests and disease, pesticide drifts, weed pressure.



BEST MANAGEMENT

Integrated Pest Management, crop rotation, weed barriers, cover crops, irrigation



COMMON CAPITAL EXPENSES

Tractor, implements, hand tools, hoop house, irrigation, seed and transplant costs, organic soil amendments, cold storage



COMMON LABOR EXPENSES

Planting, weeding, harvesting

ASPARAGUS



Asparagus is one of the first crops of Spring and often greeted by customers with smiles and relief that winter is over. This is a perennial crop best not harvested until its third year to improve production in later years. Plants can last for 20 years or more, with some lowans reporting they are able to revive their grandparents' asparagus beds! Some cultivars come in purple to provide some distinctiveness. The season is short-lived and the need to weed asparagus beds should not be underestimated.

INITIAL COSTS

1
2
3
4
5

CONSIDERATIONS

- Harvest in third year
- Mulching
- Weeding

LABOR
CAPITAL

CREAM OF THE CROP RESOURCES

Farm Answers

South Dakota State University:
Open Prairie — Growing Asparagus



BROCCOLI



Broccoli is a cool season crop best grown in Spring from transplants, but can also be a fall crop, especially under hoop house protection. It's high in nutritional value and a staple of many American diets. Certain varieties will continue to sprout smaller stems and heads throughout the season once the main stem is cut. When the Iowa summer heat kicks in, most plants will bolt and go to seed although there are heat tolerant varieties.

INITIAL COSTS

1
2
3
4
5

CONSIDERATIONS

- Pest control
- Space

LABOR
CAPITAL

CREAM OF THE CROP RESOURCE

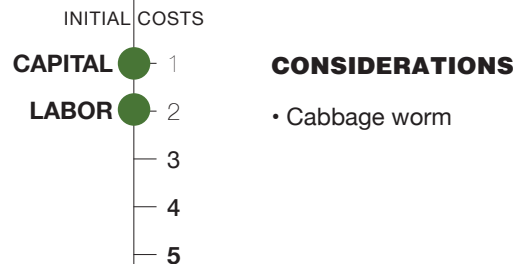
Penn State University: Broccoli Production



KALE



Kale is a highly-nutritious and popular vegetable in the local, healthful food market. It can be harvested many times before the plant is done. It prefers cooler temperatures, which allows season extension to nearly year-round with a hoop house. Different varieties and colors can contribute to your market value. Kale can be eaten fresh in salads, cooked in soups, made into chips and blended into drinks.



CREAM OF THE CROP RESOURCE

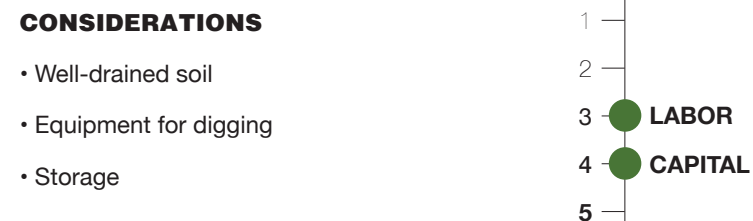
University of Minnesota:
Growing Collards and Kale in Home Gardens



POTATOES

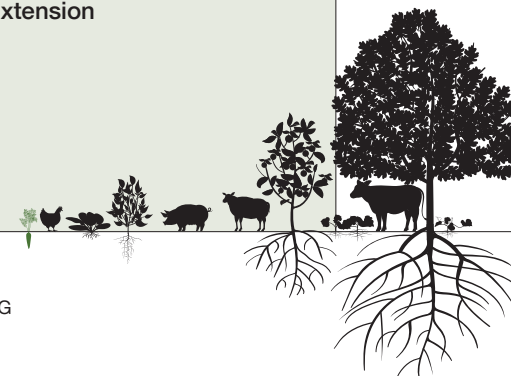


Potatoes are a popular food crop in Iowa. Fresh, new potatoes have a noticeable flavor punch that provides an edge over potatoes grown out of state. There are many varieties that offer different textures, growing times, colors and best uses. Potatoes can be “stored” in the ground so long as the soils are well-drained. If stored too long this way, they will suffer from mold and mice. Potatoes have a long shelf-life when stored in a cool, dry location after harvest.



CREAM OF THE CROP RESOURCE

University of Maryland Extension



SWEET CORN



While Iowa is known for its corn, there is a large population of urban dwellers who may not know that most of the corn we grow is not for human consumption. To mitigate or prevent cross-contamination, sweet corn should be isolated from surrounding fields of commodity corn. Sweet corn is not only well-adapted to Iowa soils, but provides a nostalgic connection to place that many Iowa customers hunger for. It comes with its challenges. Sweet corn needs full sun, can blow over easily in summer's strong wind storms, and loses its sweetness quickly after picking. (Some new varieties hold their sweetness longer. Check for genetic modification.) Roadside stands and adaptable chefs may be the best markets for this corn.

INITIAL COSTS

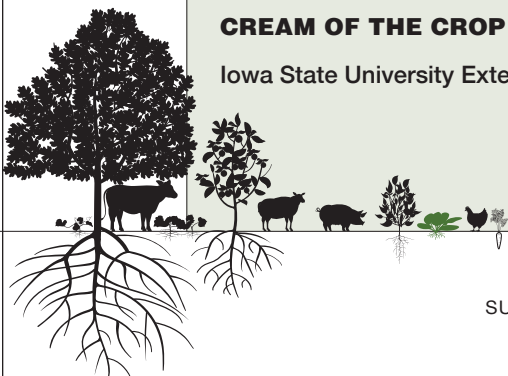
CONSIDERATIONS

LABOR
CAPITAL

- 1
 - 2
 - 3
 - 4
 - 5
- Wildlife protection
 - Wind protection
 - Cross pollination from neighboring field corn

CREAM OF THE CROP RESOURCE

Iowa State University Extension



TOMATOES



Tomatoes are a popular crop for many direct-to-consumer growers. The hundreds of varieties available offer shapes, colors and sizes that can make a market stand or chef's plate stand out to customers. Heirloom varieties from Seed Savers Exchange in Decorah may add a special element of value to Iowa customers. Tomatoes can be started from seed in temperature-controlled environments or from transplants. Tomatoes are differentiated from each other in their growth and fruiting habits. Determinant plant growth ends during the season and fruits for 2-3 weeks and indeterminate growth continues until frost and fruiting continues.

INITIAL COSTS

CONSIDERATIONS

- 1
 - 2
 - 3
 - 4
 - 5
- Trellising
 - Pruning
 - Pest and blossom rot management

CAPITAL

LABOR

CREAM OF THE CROP RESOURCE

University of Illinois Extension



WINTER SQUASH



Winter squash tends to be a heavy producer. It can be steamed, baked, fried, boiled or eaten raw. For growers, its ability to be stored up to 6 months in a cool, dry place offers sales into the winter months. This crop is best started in peat pots or direct seeded to mitigate root disturbance. Insects love this plant, so kaolin clay or row covering may be necessary for best results.

INITIAL COSTS

CAPITAL 1

2

3

LABOR 4

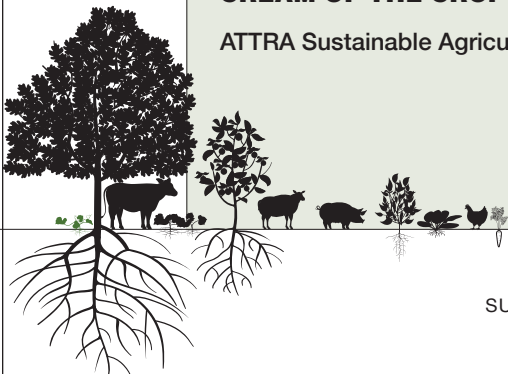
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CONSIDERATIONS

- Mulching
- Pest control
- Storage

CREAM OF THE CROP RESOURCE

ATTRA Sustainable Agriculture Program



SPINACH



Spinach is a cool season crop that can be planted very early in the Spring, or in the Fall in a hoop house for the next Spring. It's a versatile vegetable, good raw in salads, sautéed or put soups and sauces. It's a money-maker for most farms. The entire plant can be harvested at once or it can be cut repeatedly.

INITIAL COSTS

1 CAPITAL

2 LABOR

3

4

5

CONSIDERATIONS

- Harvest
- Pest control with sweet allysum

CREAM OF THE CROP RESOURCE

University of Illinois Extension



WORDS TO THE WISE

“Know your value and do not undersell your products.”



DENISE O'BRIEN

When Larry and I started farming 44 years ago, the farm looked much the same as when Larry's parents farmed it. Larry's mother and father used crop rotation and had a cow-calf herd, so hay was an integral part of the farm.

Given that I was a town girl, I really didn't have an image of what it would look like. I was in love with Larry and his image became my image. When I met him, he said he wanted to be an organic farmer. That sounded pretty darn good to me.

We firmly believed early on, with the influence of the Rodale Cornucopia Project, in local food production. We decided to plant strawberries, raspberries, asparagus and an orchard. We mostly got these ideas from Rodale — there was nothing local or statewide to encourage these types of ideas. We were not encouraged by ISU to grow and manage a small orchard in the early 1980s.

Most people didn't believe in us. We asked the bank for money for irrigating our strawberries and were refused, even with a state-guaranteed loan program. Of course, neighbors had the concept of organic farming as weedy fields, so we worked hard to keep our fields looking good. We were very fortunate that Larry's parents supported us. They may have been skeptical, but they believed in us.

It wasn't easy finding our way. Larry and I were able to be two full-time parents to our three children until our youngest was in high school. Operating a dairy made this possible. We were committed to leaving this Earth in better shape than when we received it. That has always been our philosophy. By the way, in the late '70s and early '80s we called ourselves "regenerative farmers" because Rodale used that term. It died out for a while but now it's back and overused!

Today, there's support for this kind of farming. The best places are Practical Farmers of Iowa, Growing for Market publications and other farmers. Rodale recently established a research location in Iowa, too.

Now we grow between 20 and 30 different varieties of vegetables. At the height of my CSA, I grew for about 120 customers. My best market is Omaha, about an hour away. I have a high tunnel and a low tunnel plus a greenhouse for starting seeds. The orchard hasn't had much attention in recent years but it's still there. Our latest project is building a straw bale home for us so one of our kids' families can move into the farmhouse.

LIVESTOCK

Livestock presents its own unique challenges. All animals require your care and attention, knowledge of the diseases and how to treat them, breeding and weaning, hoof maintenance if applicable and the best feed and forage for each. Before you buy your first animal, determine if your land is suitable for livestock. Poorly drained soil and swampy ground is not. Prepare your land by planting perennial pasture on slopes to provide a good use for steep land rather than using it for annual crops, since annual crops often require tilling that will cause soil erosion. Be sure to find a recommended veterinarian ahead of time. Always have the infrastructure and knowledge before getting livestock — facilities, fences, water, an understanding of their habits and needs. Start small with livestock and make small mistakes. These animals are in your care.

We strongly recommend working alongside a livestock farmer or rancher before deciding if livestock is right for you and your land. And remember the standard wisdom on the height of forage when determining when to move your animals: take half, leave half.



COMMON THREATS

Disease, escaping livestock, predators (raptors, coyotes).



BEST MANAGEMENT

Rotational grazing, watering, seeding forage.



COMMON CAPITAL EXPENSES

Fencing, feed (hay and grains), seeding pasture, infrastructure (depending on animal), watering systems, processing.



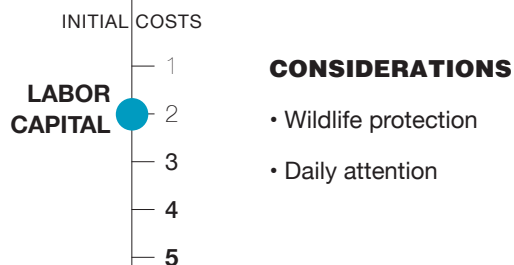
COMMON LABOR EXPENSES

Building and moving fences, processing or bringing animal to processing facility, feeding.

CHICKENS



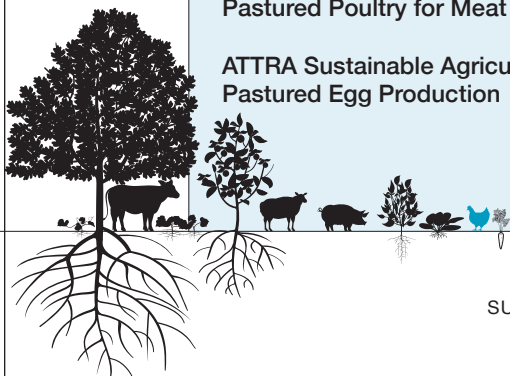
Chickens are a good “starter” livestock. They can be raised for meat (“broilers”) or for eggs (“layers”). Study the many breeds for the best one for you. Consider where they’ll live and what feed they’ll need. A chicken coop can be mobile (sometimes called a “chicken tractor”) or stationary, but if it’s stationary, plan to set up portable electric net fence so it can be rotated 360 degrees around the coop. Chickens also need grit and calcium in their diet. Learn what processing is legal and available before purchasing chicks. Farmers can make a return on broilers in as few as 8 weeks. Laying hens take roughly 4 months to start getting returns. Be ready to protect your chickens from predators high and low.



CREAM OF THE CROP RESOURCES

ATTRA Sustainable Agriculture Program:
Pastured Poultry for Meat Chickens

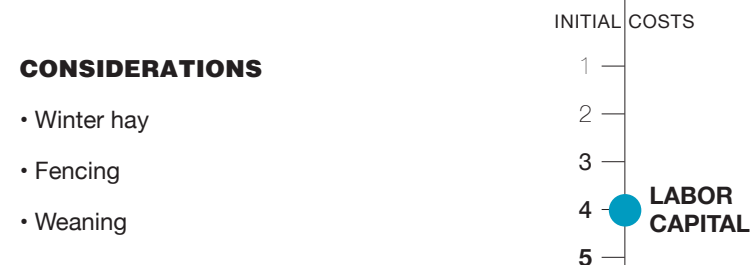
ATTRA Sustainable Agriculture Program:
Pastured Egg Production



CATTLE



Cattle operations include cow-calf, finishing and dairy. Know which is which before starting. Approximately four to five acres per cattle unit is ideal for regenerative practices. Not all grass is the same. Before purchasing animals, be sure to check what the best forage is for them. Cow-calf operations take an estimated 2 years for returns as the animals take longer than other livestock to finish. Small-scale dairy operations are high labor, high capital and low return. The ability for the local market to support such an operation should be considered carefully. Processed dairy products are legal in Iowa but raw milk is not.



CREAM OF THE CROP RESOURCES

GrassWorks

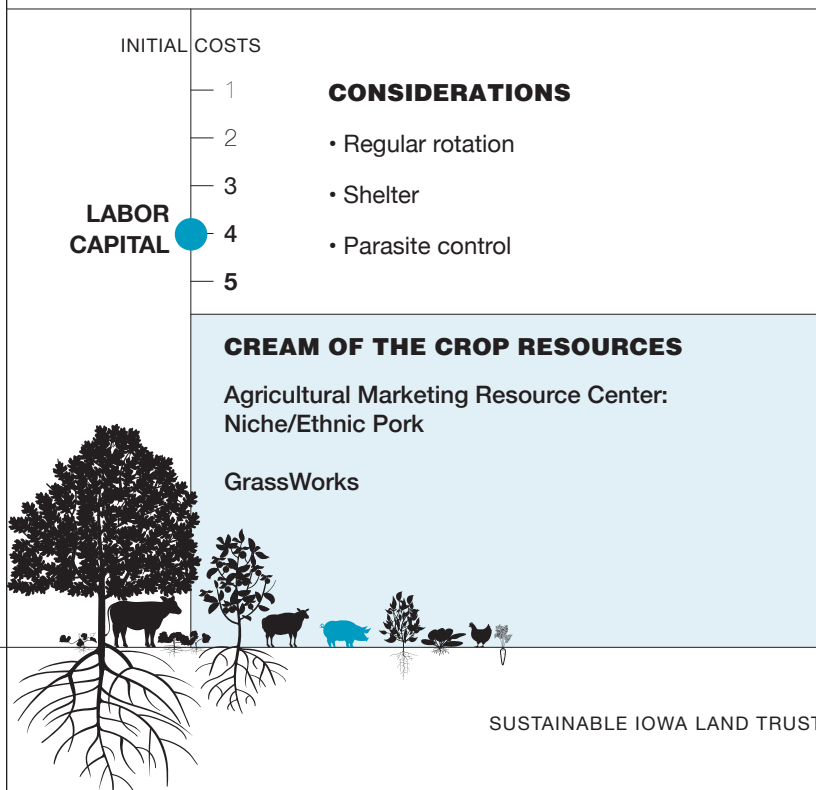
Stockman Grass Farmer



PIGS



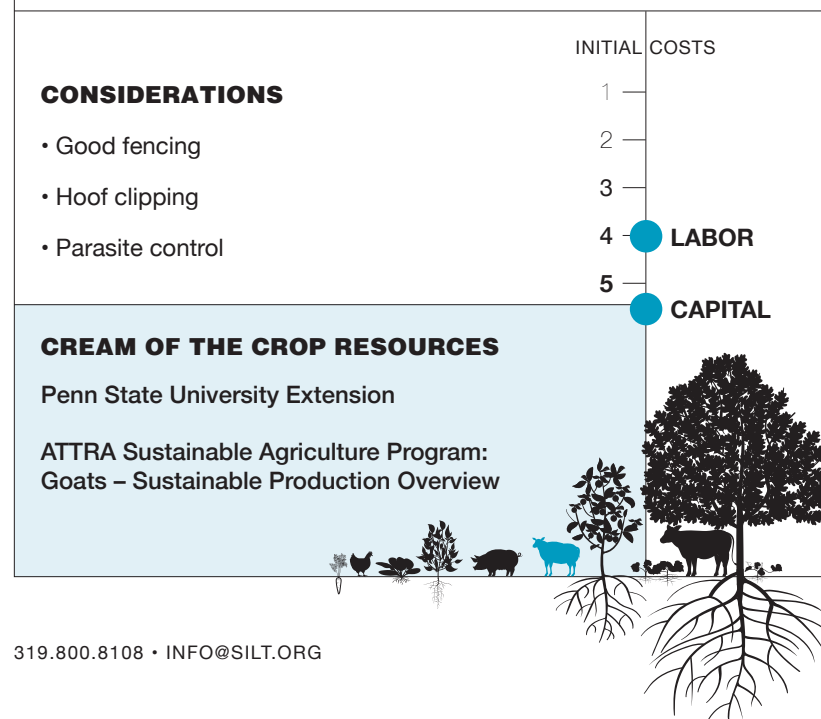
Pigs are cute, smart and smelly. Study different breeds to determine what you want to grow and why. Pigs must be moved at least weekly to prevent permanent damage to your land. They don't do well in heat, so need shelter, shade and a place to wallow in the cool mud. They can be raised on marginal land and will eat just about anything, so can be good for clearing some brush. Beginners can purchase feeder pigs from 40 to 80 pounds from local farmers and raise them to 300 pounds or so. They will likely require vaccinations.



GOATS



Goats are notorious for never having met a fence they couldn't jump, but some farmers will say that happy goats stay put. It's best to be safe than sorry, so good, high fence and plentiful forage are two requirements. The most eaten meat in the world, goat meat is highly valued in Latin and Middle Eastern communities. Halal goat (butchered following Muslim principles) can fetch a higher price and provide a local option to Muslim communities. Some customers are willing to pick up live goats from the farm and do the butchering themselves. Goat milk is also popular, especially for cheese, but cheese making is a high-capital-intensive operation. Find a local cheesemaker if this will be your market or expect to make a significant investment in equipment and licensing.



SHEEP



Organic or grassfed lamb has been called “land salmon” for the price it gets in some markets. Sheep are relatively easy to keep fenced in, they eat grass and the bark of woody vegetation. Sheep can be raised for wool, meat and/or milk. Like all livestock, they should be moved frequently. Their hooves need to be clipped and, unless they are a certain breed, they need to be sheared annually. Consider hair sheep vs. wool sheep when deciding what to purchase. Katahdin sheep are particularly versatile. Sheep need shelter and protection from predators and can be prone to parasites.

INITIAL COSTS

CONSIDERATIONS

- Hoof clipping
- Wildlife protection
- Parasite control

CREAM OF THE CROP RESOURCES

Penn State University Extension:
Spring Lamb Production

Oregon State University Extension:
Sheep Resources



HONEY BEES



In recent years, the general public has become aware of the crucial role bees play in our environment and our agriculture. Bees also provide other exceptional benefits, most notably honey, wax, and the pollination of crops. Value-added products include mead, honey sticks and various baked goods made with honey. Honey is a natural antiseptic and can also be used for medicinal purposes. Experienced beekeepers can also make income from breeding and selling queen bees and packages of bees. Beekeeping consists of building hive materials, winter preparations, swarm control, disease prevention, and honey extraction. There are many groups and clubs across the state where beginners can gain useful information as well as talk to other beekeepers.

INITIAL COSTS

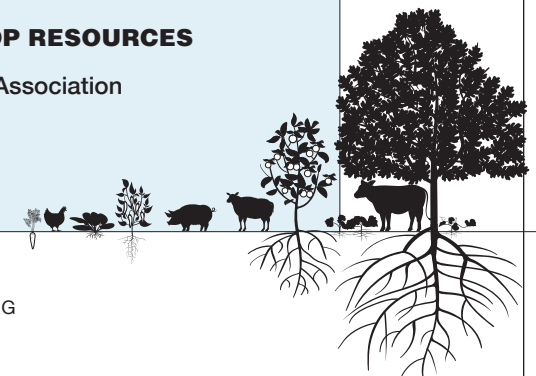
CONSIDERATIONS

- Mites
- Pesticide drift
- Overwintering

CREAM OF THE CROP RESOURCES

Iowa Honey Producers Association

Horizontal Hive



KIM ALEXANDER

My parents bought this farm in the Loess Hills of western Iowa back in 1961, a few years after they bought their first farm a mile away. Dad believed and did everything the USDA, ISU and county extension told him about farming, probably because his father died in a farm accident when Dad was young and he didn't know any better. This meant, "Goodbye self-sufficient farming" and "Hello, 'Get big or get out,'" leveraging owned land to buy more land, planting fencerow to fencerow and getting rid of the livestock. When the 1980s Farm Crisis hit, my folks had to sell their machinery to repay the bank, but managed to hang onto some land through Chapter 13 bankruptcy, the Conservation Reserve Program (CRP) and working off-farm jobs. When Dad went broke, he grew only corn and beans. These hills weren't made for corn and beans. They were made for grazing livestock on perennial grasses.

With the farm taken out of production there was no place to farm, so in the mid-80s my immediate family moved to Texas and I learned Farming 2.0. We followed Joel Salatin's models and did pastured eggs, broilers, turkeys — all with on-farm processing and direct marketing — as well as grass-finished beef. When Dad passed away, Mom sold us this 160-acre farm on contract. I was 54 when I migrated back. The buildings were run down, fields had grown up to brush and trees. The farm was sadly neglected. Working an off-farm job helped pay for this place until I got the production up and running.

Now it's highly productive, organically farmed, diversified, self-sufficient, and able to weather any economic upheaval. It is very stable ecologically, financially, socially and spiritually; an oasis of life in the midst of a corn and soybean desert. If you farm with nature instead of against it, you find the production systems put in place are forgiving and resilient, instead of always feeling like you're right on the edge of an ecological or financial cliff.

This is agriculture, not agribusiness. It is what farming was throughout time immemorial — growing food for people to eat. So, "I eat all I can, can all I can't and sell all I can't can."

WORDS TO THE WISE

“Any good farmer barterers. That's the question I always ask — if I need a good or service, can we trade?”



NICHE CROPS

A diversity of crops and enterprises can build healthy resilience in any farm. The crops in this section are considered “niche” and yet have markets that can be explored and expanded in just about any community. Some, like mushrooms, are especially suited for timber stands often located on the edges of crop fields.

This list will get you started, but there are many more possibilities than those included here. We encourage you to look into ginseng and other medicinal roots and herbs, consider a nursery business in sustainably harvested woodland plants and flowers, a business selling fresh or dried flower arrangements from prairie flowers and grasses, building furniture made from willow or woodcrafts from basswood. There are organizations like the Livestock Conservancy that will help you bring back heirloom breeds of different animals to increase the planet’s diversity, and organizations like Seed Savers Exchange that are always looking for people to grow out their heirloom seed for the same reason. There are vibrant, passionate communities around any of these that will help you get started and share your adventure with you, if you like.

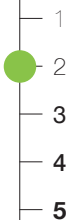
GROUND CHERRIES



A relative to tomatoes, ground cherries are a native, low-growing annual that produces edible fruits surrounded by a papery husk. The fruit can be eaten fresh, processed into jams or used in baked goods. Their flavor is a nice balance of sweet and tart. Ripe fruit can be stored for several weeks before going bad. The fruit can contain over 100 seeds making it easy to save seeds for next year's growth. Ground cherries can grow on many soil types and are capable of spreading throughout the garden if not managed.

INITIAL COSTS

LABOR
CAPITAL



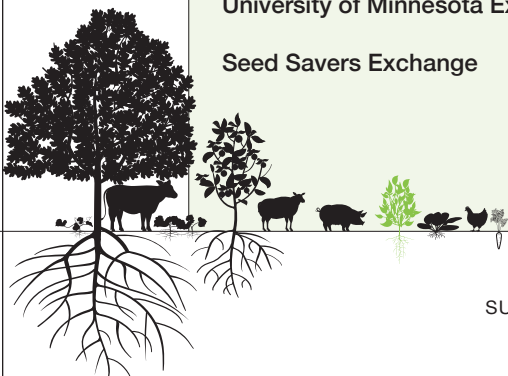
CONSIDERATIONS

- Easily spreads
- Requires a lot of nutrients
- Trellising

CREAM OF THE CROP RESOURCES

University of Minnesota Extension

Seed Savers Exchange



MAPLE TREES



Maple syrup production is largely educational or recreational in Iowa given the few trees per acre compared to a state like Vermont. Still, it provides an additional income to those who labor to do it. Growing sugar maple trees is just the beginning. Tapping the trees in late winter and then cooking the sap down to syrup is a skill that takes time and careful attention to master. Going through the process will make clear why real maple syrup enjoys such a high price point.

INITIAL COSTS

CONSIDERATIONS

- Boiler system
- February to March only

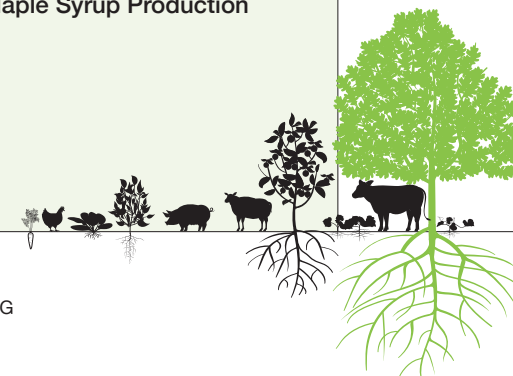


CAPITAL

LABOR

CREAM OF THE CROP RESOURCE

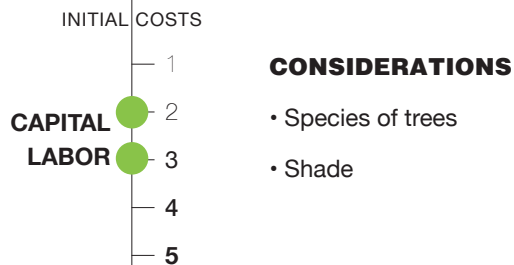
Iowa State University: Maple Syrup Production



MUSHROOMS



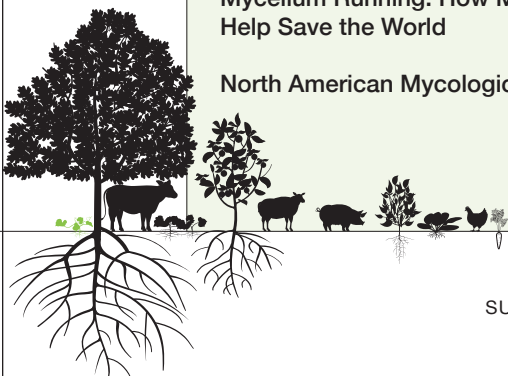
The most famous mushroom in Iowa is the morel, but any timber stand can be used to grow shiitake, oyster, wine cap and many other mushroom varieties in many shapes and colors. Depending on the variety, mushrooms may emerge between 6 and 12 months after logs are inoculated with mushroom spawn, and will continue to produce for a number of years. Mushrooms can be sold fresh or dried.



CREAM OF THE CROP RESOURCES

Mycelium Running: How Mushrooms Can Help Save the World

North American Mycological Association



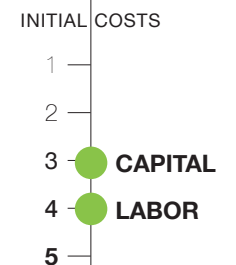
SUNFLOWERS



Sunflowers are best grown in the southern half of Iowa. They provide multiple benefits including the flowers or seeds for retail or wholesale, oil pressed from seeds, mash fed to livestock and as a “trap crop” for birds that might otherwise focus their energies on a higher-value intentional crop nearby. Newer sunflower varieties are striking in size and variations in color. They are a good rotation crop because they grow fast, outcompete most weeds and serve well as a green mulch.

CONSIDERATIONS

- Equipment
- Birds



CREAM OF THE CROP RESOURCE

Iowa State University Extension



ADDITIONAL RESOURCES

GENERAL

Agricultural Marketing Service
ATTRA Sustainable Agriculture Program
Iowa Department of Agriculture and Land Stewardship – Iowa Products and Producers
Iowa Organic Association
Iowa State University Extension Service
Midwest Organic and Sustainable Education Service (MOSES)
Practical Farmers of Iowa
University of Illinois Extension Service

FRUITS

Fruit and Nut Compass
Honeyberry USA
Red Fern Farm
Savanna Institute
Iowa Fruit and Vegetable Growers Association

**Links to all of these resources are available
on our Landowners Guide at silt.org**

NUTS

Center for Agroforestry at the University of Missouri
Iowa Nut Growers Association
North American Nutgrowers Association
Red Fern Farm
Savanna Institute
Walnut Council

VEGETABLES

Fedco Seeds
Iowa Fruit and Vegetable Growers Association
Iowa State University Horticulture Farm
Johnny's Seeds
Seed Savers Exchange

LIVESTOCK

Brown's Ranch (Gabe Brown)
GrassWorks
Green Pastures Farm (Greg Judy)
Pasture Project
Polyface Farm (Joel Salatin)
Stockman Grass Farmer

Feel Inspired?

Contact the Sustainable Iowa Land Trust for more information about how to protect your sustainable food farm for generations to come.

319.800.8108 • Info@silt.org

