



How to garden like a biologist

With respect to	Many gardeners think...	But biologists think....
Value of plants	I plant what's pretty, satisfies my HOA and impresses my neighbors.	Plants are at the base of every terrestrial ecosystem, and evolved to be adapted to local conditions and wildlife.
Plant sources	Plants have to come from horticulturists and breeders	Nature gives away natives. Growers are starting to bring some popular natives to market.
Plant choices	I buy what's for sale in the nursery.	I plant what grows naturally near where I live.
Weeds	No weed is a good weed. I have to spray with concentrated roundup to kill seeds and roots. I have to dig soil to completely remove weeds.	Hand weed to reduce disturbance, which weeds love. Control with free mulch and native ground covers. Don't fertilize, which gives advantage to weeds. Many self-limit; some fix nitrogen. Roundup works on leaves.
Sustainability/ Permaculture	I have to buy annuals every year.	Natives produce fertile seed and persist by roots. They have to. Cultivated annuals are usually hybrids with great qualities this year but don't produce fertile seed.
Pests and infestations	First I panic. Then I Google or ask Facebook. Then I go buy chemicals and kill them.	Why not just monitor it? It's probably temporary. Plants do have "immune" systems. Animals, especially spiders and birds, will probably eat my pest.
Flowers	I like my plants to bloom predictably.	Native plants bloom based on environmental cues to maximize reproduction. If they are bred to ignore those cues, they will not seed.
Soil	Each plant species need a perfect mix of minerals in potting soil that is sterile and doesn't compact.	A perfect mix may be needed for maximum wholesale production and profit. But what is in my yard is probably good enough with natural amendments. Plus, my soil has built in microbiome of beneficial microbes.
Fertilizer	I fertilize when the label says to, whether they need it or not.	Fertilizing gives weeds and advantage over other plants. Most runs off anyway. What a waste.
Watering	I water if it hasn't rained in a couple of days.	I water only if plants are at risk; overwatering gives false message to plants to not grow deeper roots.
Animal life	I panic if I see a bug on my plants. I kill spiders and snakes.	I like my garden abuzz with activity. Spiders are built-in pest control. Many non-venomous snakes eat venomous snakes. Watching animals can help you with that anxiety.
Bees	I saw a honeybee visit my plants once. It was awesome. Yay me.	Native plants support the most important pollinators, which are native bees (most are solitary, live in soil and don't sting), not honeybees (which are a crop)
Diversity	I like lots of the same thing.	Diversity reduces susceptibility to pathogens, invasives, ecosystem fragility.
Exotics and hybrids	I want all these cool new varieties in my garden.	Our worst invasive plants were introduced as exotics. But even the most benign exotics are "lazy" and provide no ecosystem services. Hybrids are sterile.
Habitat corridor	I didn't think of my garden as habitat. It's not wild enough.	With development and habitat loss, gardens should contribute to the patchwork of migratory flyways, with food for stopovers and ability for populations to intermingle. Without natives, gardens are just a big ecological hole in nature's fabric.
Neatness	I like my garden neat and well maintained. Native gardens look messy and wild.	I like my garden neat and well maintained. Good maintenance still applies to native gardens. Clean edges, trimming dead material and weeding are needed for any garden. But everyone has different taste.

Design	I plant odd numbers and consider height, color, texture, flowering times in my landscape plan.	Same principles apply.
Control	I have to do (and buy) everything or my garden will die.	I'll keep an eye on things and not intervene unless necessary.
Mowing the lawn	I love to cut my grass. It looks so neat when I'm done and it feels like a duty I have fulfilled.	I like a bit of lawn, but I don't want to spend too much of my weekend on a loud, polluting machine.
Choice of turf	I like a neat lawn of one species (monoculture) that stays that way with Weed and Feed.	Whatever grows. Weed and Feed runs off. What a waste. And it reduces diversity.
Genetics	What does genetics have to do with gardening?	Many non-native plants are sterile clones that are vulnerable to same threats. Cross-pollination among diverse individuals increases genetic diversity, nature's insurance policy.
Animal life	I don't like having rats, ants and wasps in my garden.	I don't have many problems with "weedy" animals. Diversity of spiders and birds controls them. But I do use rat traps and wasp spray if needed until garden matures.
All or none	But I don't want to replace all my plants.	You don't have to. Just add something native to your existing landscape. None of us are purists. We all have some non-native plants in our gardens.
Naturalized	My non-native plants do attract some wildlife.	Some introduced plants have become naturalized over time. Not a bad thing, but more diverse plants bring more diverse wildlife.
Timing	Insta-gardens can be installed on a weekend or by a landscaping crew in a few hours.	I have to be patient. Native gardens "Sleep, Creep then Leap". It takes about three years for natives to really fill in. Natives are busy growing roots and making friends the first year. They are in for the long haul.
Microbes	Fungi, bacteria and worms are pathogens that will kill my plants.	The vast majority of fungi, bacteria and worms are beneficial or harmless. Natives have had ways to deal with microbes for millennia.
Why	My garden is pretty and makes me happy to see it grow.	My garden is pretty and makes me happy to see it grow. But I want my property to be a part of something bigger.

Good

Add one or two natives to your existing landscape

Fertilize less

Don't react too quickly with pesticide. Swat instead of spray.

Don't add more impervious surfaces like pavement

Ask your nursery for natives

Stop buying bagged cypress mulch

Add nectar plants for honeybees

Plant milkweed for monarchs

Better

Add a lot of natives and replace some of your snowflakes

Fertilize with compost

Spot manage infestations, maybe with soap first

Consider pervious paths like stone, crushed concrete or granite

Welcome cuttings and seeds

Get free municipal mulch. No truck? Bring bins

Add native plants for bees and birds

Plant native, disease-free milkweed for monarchs

Best

Plan your design around hardy natives

Compost your own waste

Use pesticide only to control problems like wasps, poison ivy

Use stepping stones/areas with ground covers to stabilize soil

Offer cuttings and seeds

Mulch with your own green waste

Add nectar and larval food plants for native bees and birds

Plant diverse native plants for many butterfly species