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COMPANION PLANTING

Strategies for Arid Climates: Blending Science and Tradition



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BENIFITS OF COMPANION PLANTING

- Pest Control
- Water conservation
- Growth Support
- Improve soil health
- Pollinator Attraction

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SOIL HEALTH

Diverse plantings can improve soil structure and microbial activity, enhancing nutrient availability and uptake.

Companion planting is a sustainable agricultural practice that involves growing different plant species in close proximity to benefit each other and enhance soil health. This method leverages the natural relationships between plants to promote a balanced ecosystem, reduce pests, and improve nutrient availability.

For example, legumes like peas and beans can fix nitrogen in the soil, enriching it for neighboring plants such as corn or tomatoes that require higher nitrogen levels. Additionally, plants like marigolds can deter harmful insects, thereby reducing the need for chemical pesticides.

Companion planting also encourages biodiversity, which can lead to healthier soil microbiomes and improved soil structure. By carefully selecting plant combinations, gardeners and farmers can create a more resilient and productive growing environment that supports long-term soil health and sustainability.

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WATER MANAGEMENT

Growing plants that support soil structure helps to create a soil “sponge” which allows for better water retention and can create bio-matter, this supports healthy plant growth.



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PLANTS FOR WATER RETENTION

- Lupines: Lupines have deep taproots that help break up compacted soil, allowing for better water infiltration and nutrient absorption. They also add organic matter to the soil as they decompose.
- Buckwheat: Buckwheat has a fibrous root system that helps to loosen soil and improve its structure. It also attracts beneficial insects and adds organic matter when it is turned into the soil.
- Daikon Radishes: Daikon radishes have long taproots that penetrate deep into the soil, helping to break up compacted layers and improve water infiltration. They also add organic matter when the plant decomposes.
- Comfrey: Comfrey has deep roots that mine nutrients from deep within the soil and bring them up to the surface. This nutrient-rich plant can be used as a mulch or compost to enhance soil fertility.
- And MANY more!

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CROP DIVERSITY

Monoculture VS Polyculture

What are your ideas of benefits of crop diversity?
Why do you think its hard for modern farmers to practice it?
How do we start to change that narrative?



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PEST CONTROL

Natural Predators

Beneficial insects like ladybugs, lacewings, and parasitic wasps prey on harmful pests, reducing the need for chemical pesticides.

Trap Cropping

This involves planting specific plants to lure pests. These plants divert pests away from your main crops. For example, sunflowers can attract aphids and other pests, thereby safeguarding your vegetables.

Host - finding disruption:

Certain plant pairings can confuse pests and make it harder for them to locate the desired plants

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CLIMATE

There cannot be a talk about sustainable planting and offsetting monocropping, without discussion about climate change, regardless as to where we stand on this subject, farmers are seeing the impact of climate change on crops, water and our seasons.

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MAXIMIZING SPACE & YIELD



Inter - cropping

Planting short season plants (like Radishes) with long season plants (Tomatoes) offers more use per square foot, as well as helps control weeds and creates green mulch for the soil and plant cover.

Other examples are: Carrots with lettuce or peas, Cabbage with beets, or even Basil with apricot trees.

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ACTIVITY

This was a long slide deck to build, and talk about.

So lets do something fun!

Building an intercropped or companion planted row and rotation







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THANK YOU!

We appreciate your time! sustainable farming is an important way to nourish the planet.

