

WHAT TO KNOW ABOUT ALLEY CROPPING

**Exploring methods for increasing extreme weather viability
and broadening paths for profitability**

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What is alley cropping for extreme weather variability?

An alley cropping system is an agroforestry practice in which trees or shrubs, often bearing fruit or berries, are planted in rows with vegetables or medicinal herbs planted in the alleys in between. This system can provide long-term benefits like farm income through companion crop production, and soil and ecosystem improvements.

What technology and agricultural practices can help?

Practices and technologies used in alley cropping include:

- Crop variety and placement
- Organic farming
- Cover cropping
- No-till/minimum tillage
- Soil and water management
- Mulching
- Integrated pest management
- Weather-based crop advisory services

Economic benefits

Some potential economic benefits of alley cropping include::

- Land efficiency and value
- Varied income streams
- Reduced economic risks
- Lower production costs
- Enhanced crop pollination and yield

Ecosystem benefits

Potential ecosystem benefits are wide ranging, such as reduced erosion, soil disturbances and wind damage to crops. Improved soil fertility through natural decomposition of organic matter, beneficial insects and pollinator attraction. Soil moisture increase and reduced heat stress are also helpful. Unproductive land can be restored. Alley cropping systems have the potential to help withstand natural disasters from heatwaves, droughts, floods and severe storms.

What are the challenges of implementing an alley cropping system?

It is a complex system requiring a broad agricultural knowledge base, along with physical management and skills. The balance of tree versus crop shifts over time as light, water and nutrients change, requiring adaptations. Initial capital investments can be substantial to establish fruit trees and shrubs. Alley cropping is a commitment that is best for long-term land tenure.

How UMES Extension can help

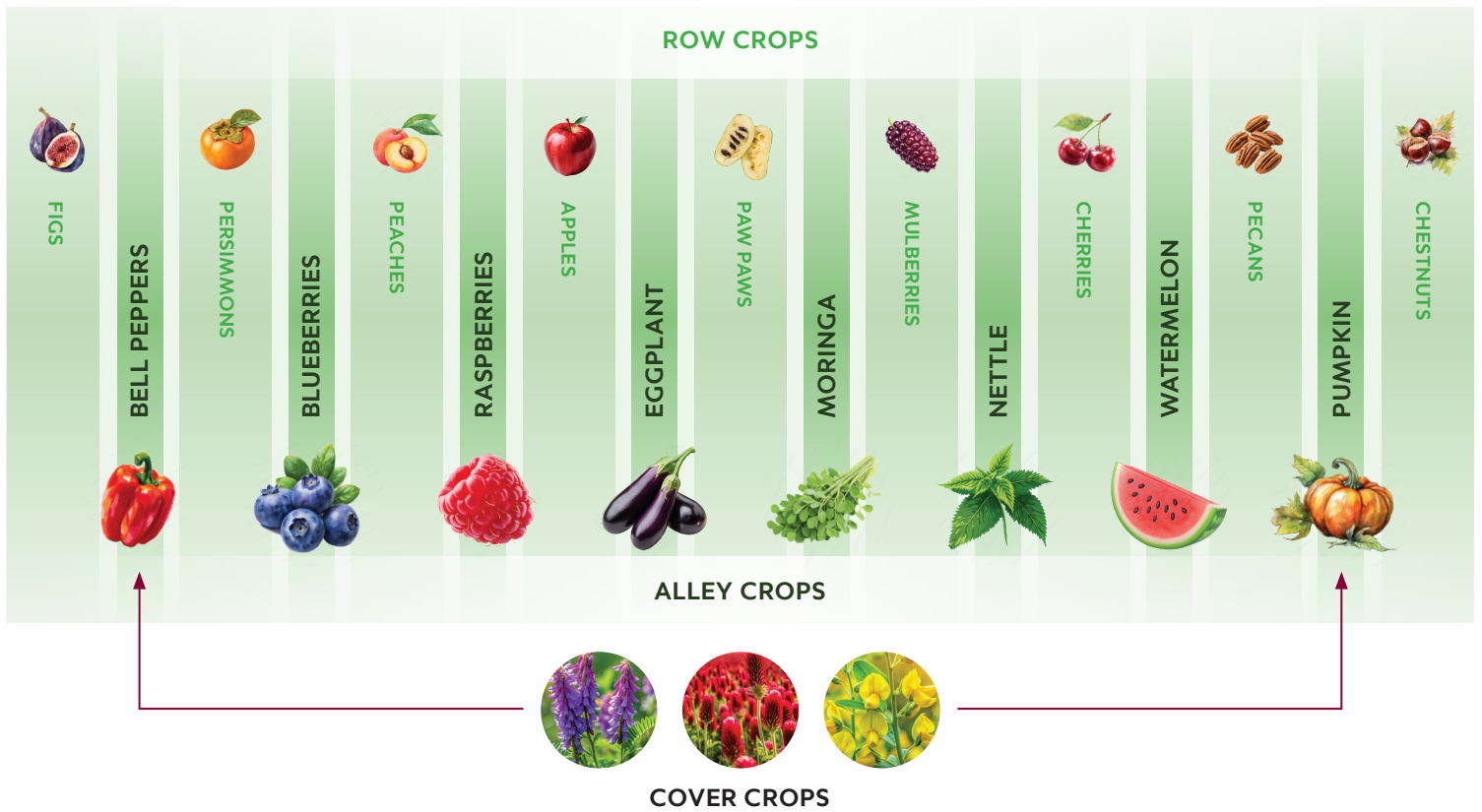
UMES Extension’s Community and Economic Development Program hosts training workshops and meets with individual farmers to teach about alley cropping systems.

For more information

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Figure 1

Recommended plant variations ideal for alley cropping



Hairy Vetch, Crimson Clover and Sunn Hemp – Planted in early autumn or after seasonal row crops are harvested.

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