

Rotation and Tillage

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Crop Rotation

- Biology of cropping systems
- Economics of cropping systems
- Crop mix
- Capital investment
- Only so much "good" land





Negative Impact of Soybean on Peanut				
Years in peanut	Peanut yield			
	lb/acre			
2 out of 10	5920			
3 out of 10	5030			
4 out of 10	4350			
All peanut	2600			
3 soybean and 3 peanut out of 10	3800			





Influence of Crop Rotation on Disease Development

Good (favorable rotation crop) and Poor (poor rotation crop) with respect to peanut yield when these crops are grown prior to peanut

Disease or Nematode	Cotton	Corn	Milo	Soybean	Tobacco	Wheat
Leaf spots	Good	Good	Good	Good	Good	Good
Sclerotinia	Good	Good	Good	Poor	No effect	Good
Southern stem rot	Good	Good	Good	Poor	Poor	Good
Pod rot	Poor	Good	Good	Poor	Poor	Good
CBR	Good	Good	Good	Poor	Poor	Good
Rhizoctonia	Good	Good	Good	No effect	Poor	Good
TSWV	No effect					
Northern root knot	Good	Good	Good	Poor	Poor	Good
Peanut root knot	Good	Poor	Poor	Poor	Good	Good
Sting	Poor	Poor	Poor	Poor	Good	Good

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FEEDIFUTURE The U.S. Government's Global Hunger & Food Security Initiative



Picture to the left shows water erosion

Picture to the right shows wind erosion





Tillage system

- Savings in time and labor during planting? Availability of herbicides? Seedling establishment? Minimize erosion from wind and water Improves long-term soil characteristics Impact of pest populations and injury?
- Consistency of yield and quality?





Rotation and Tillage in Malawi?

Maize, soybean, tobacco, cassava, cotton, tomato, vegetables

Conventional and Conservation (weed management) – regional decisions?

