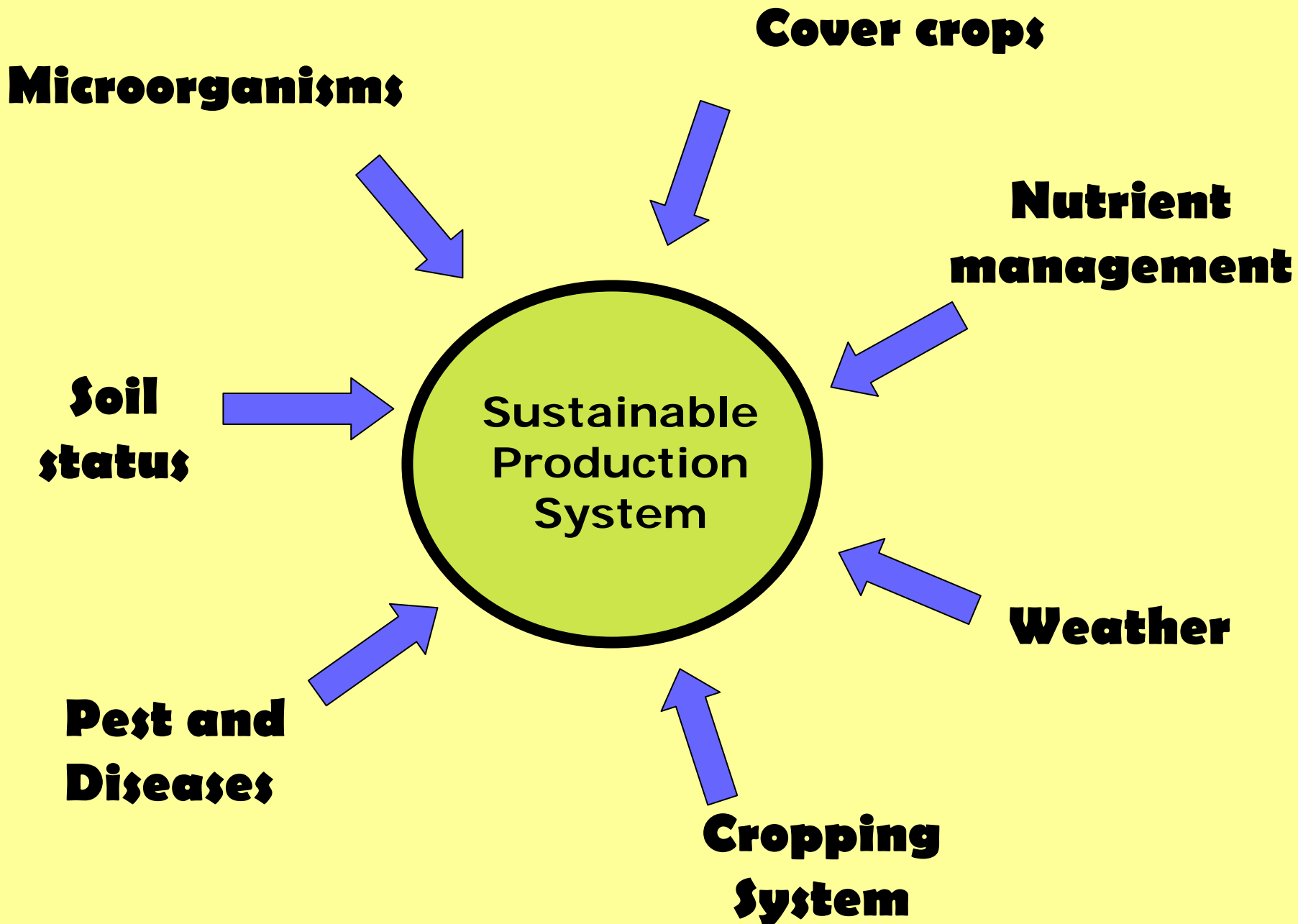


***Organic Fresh Market Tomato Yield
Response To Rye And Hairy Vetch Cover
Crops With Or Without Compost***

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Michigan State University, East Lansing, MI, 48824.*







Cover Crops

- Added organic matter
- Improved soil structure and tilth
- Nitrogen fixation by leguminous crops
- Recycling of nutrients
- Weed control and erosion control
- Cereal rye and hairy vetch



A photograph showing several clumps of cereal rye plants growing in a field. The soil is light brown and heavily cracked, indicating dry conditions. The plants have long, narrow, green leaves with some reddish-purple tinge at the base. A light blue rectangular box with a black border is overlaid on the upper right portion of the image, containing the text "Cereal Rye".

Cereal Rye

Hairy Vetch + Cereal Rye





Other components

- Nutrient management through compost @ 10 tons/acre
- Main crops: cucumber and tomato.
- Varieties:
Cucumber: 'Cobra' and 'Dasher'
Tomato: 'Mountain Fresh' & 'Big Beef'
- Monoculture and polyculture





Treatment structure

Level of Biodiversity	Compost
Low Biodiversity • Monoculture • Cereal rye	+
	-
Medium Biodiversity • Monoculture • Cover crop mixture	+
	-
High Biodiversity • Polyculture • Cover crop mixture	+
	-

Dairy Compost @ 10 tons/acre

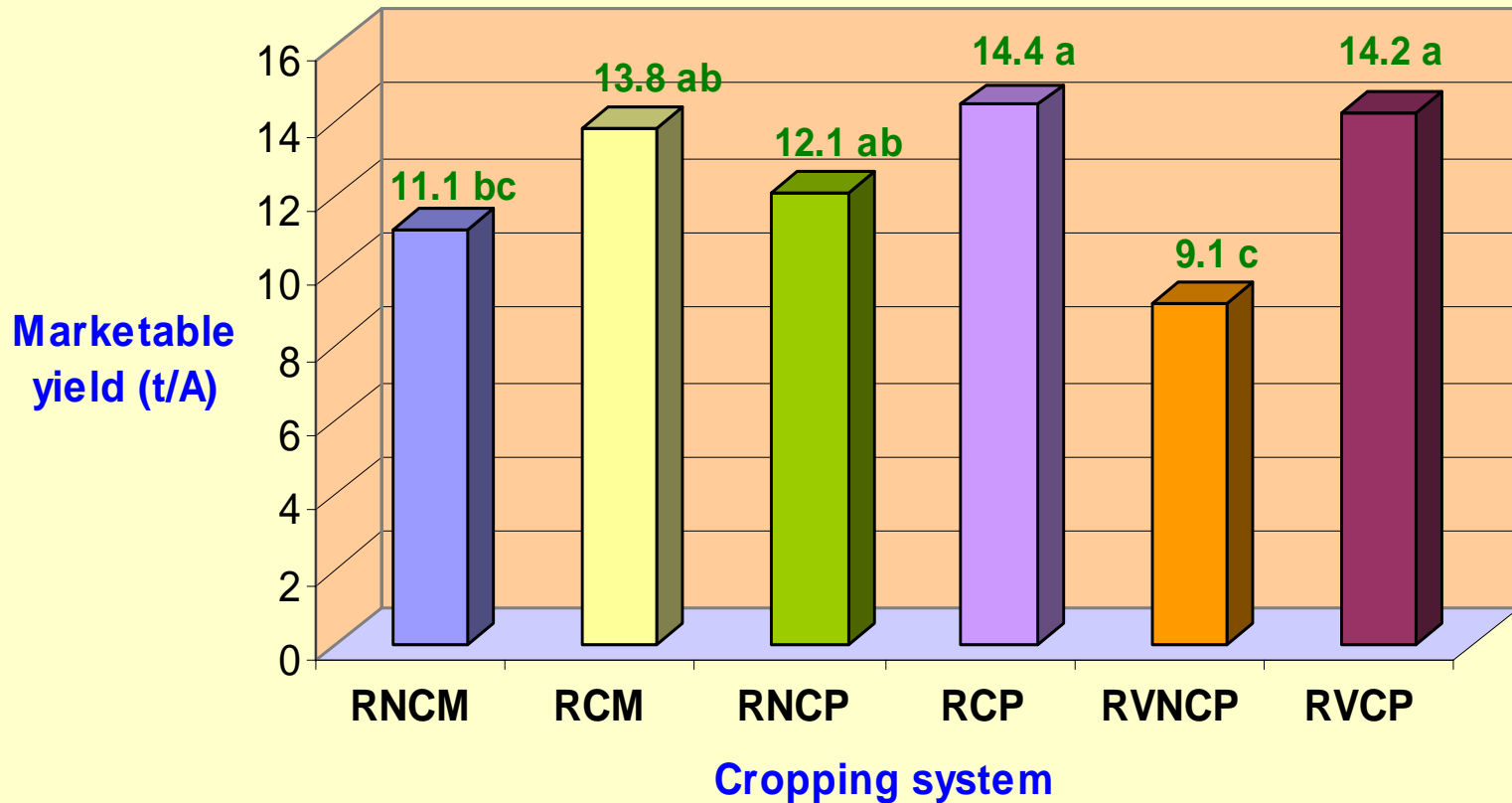




Over all view of the plot



Effect of cropping system on tomato yield



- Vetch without compost does not provide acceptable yield
- No significant difference between mono and polyculture
- Polyculture does not help in tomato. Monoculture with rye + compost performed equally good as polyculture with rye + vetch + compost

**'Mountain
Fresh'
rye vetch
compost**



**'Mountain
Fresh'
rye vetch
no compost**

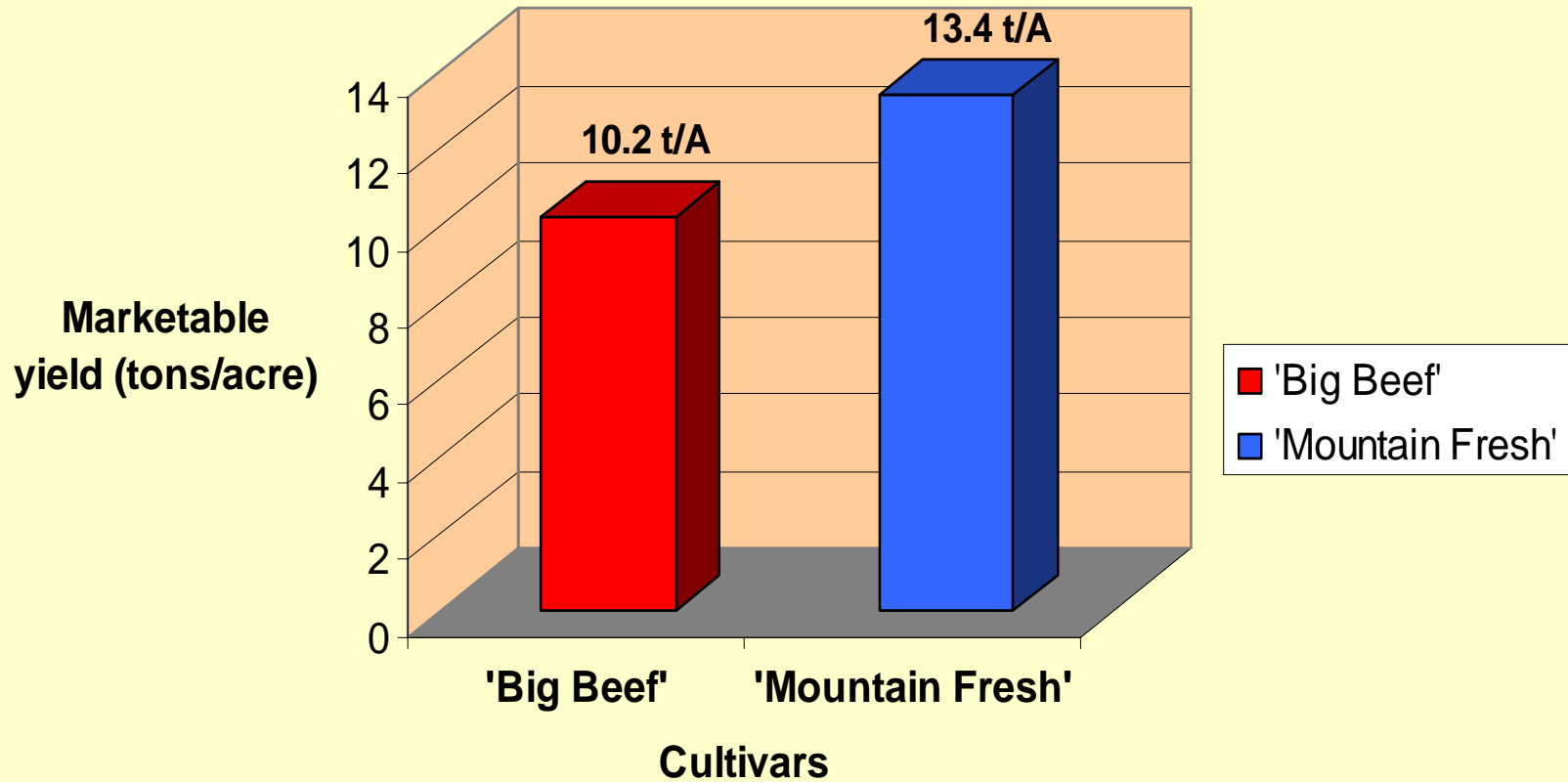


**'Big Beef'
rye vetch
no
compost**



**'Big Beef'
rye vetch
compost**

Tomato yield potential under organic production system



'Big Beef' from NC State;
indeterminate; tastes good

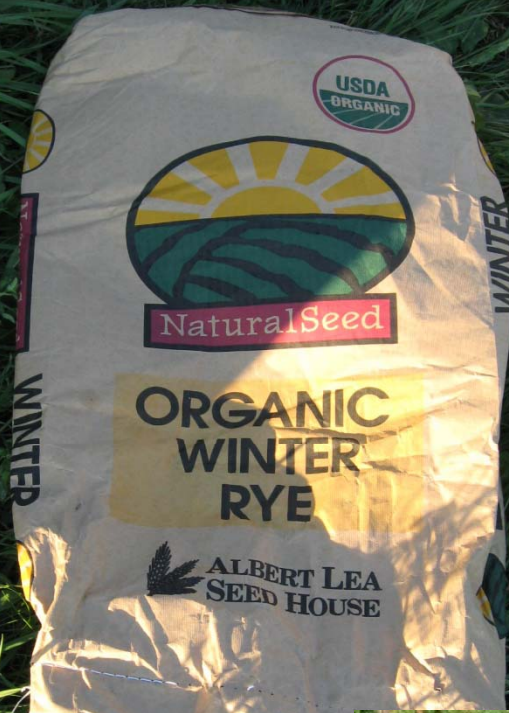
'Mountain Fresh' from NC
State; determinate; Blight and
wilt resistant

Tomato cultivar	Unmarketable fruits (number)	Unmarketable fruits (weight)
'Big Beef'	21,451	3.9 t/A
'Mountain fresh'	12,648	2.5 t/A



Tobacco Horn Worm Control

Applied Dipel (Bt formulation) @ 1 lb/A (2 teaspoons per gallon).



www.dirtworks.net

Septoria



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Questions and suggestions !

