

# Soil Management in Organic Pumpkin Production

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# Treatments

	<b>Zone</b>	<b>Planting</b>	<b>Weed control</b>	<b>Other</b>
1	Tilled	Transplant	Straw in row	
2	Clean	Seed	Tiller / hoe	
3	Clean	Transplant	Tiller / hoe	
4	Tilled	Transplant	None	
5	Tilled	transplant	Straw in row	Clover

# Pumpkins - Materials & Methods

- Sept. 28, 2008: Rye planted @ 3 bu/A, Wheeler Rye
- April 24: broadcast 12 lb/A red clover, trt 5
- Mid May: transplants started
- April 17: applied fertilizer
  - 155 lb/A  $K_2O$  (SOP)
  - 30 lb/A N (soybean meal)
- May 5: flail mowed treatments 2 & 3, disked
- May 8: rototilled zones

# Materials & Methods

- June 3: field cultivated treatments 2 & 3
- June 10: Zones rototilled
- June 14: Rolled rye, field cultivated treatments 2 & 3
- June 15: transplants and seeds planted
- June 23: Applied 120 lb/A N in row (blood meal)
- June 30: Straw applied, treatments 1 & 5
- Irrigation: July 29, 0.8" and Aug. 6, 1.0"

# Materials & Methods

- Sprayed Citrex @ 1oz/10 gal H<sub>2</sub>O, 80 gal/A
  - July 21 – Sept 15, once a week
- Weeds: treatment 2 & 3, 2X (tiller/hoe)
- September 30: Pumpkin harvest
- Pumpkin hybrid: Magic Lantern (115 day)
  - PM tolerance
- Plot size: 15' X 30'
  - Row spacing: 5 feet
  - Seed in row spacing: 3 feet

# Treatments

	<b>Tillage</b>	<b>Planting</b>	<b>Weed control</b>	<b>Other</b>
1	Zone	Transplant	Straw in row	
2	Clean	Seed	Tiller / hoe	
3	Clean	Transplant	Tiller / hoe	
4	Zone	Transplant	None	
5	Zone	transplant	Straw in row	Clover



Applying soybean meal to rye, 30 lb/A N, April 17



**May 8, rototilling zones rye height 8 inches,  
zone width 12 inches**



**June 10, rototilled zones just prior to second tillage**



Roller/Crimper preparing to crimp rye



**June 14: Planting transplants**



**Straw applied around transplants**



**Spraying Citrex**



**ORGANIC PUMPKIN SITE**



**Tilled zone, transplant, Straw in row, Clover**



**Tilled zone, transplant, Straw in row, Clover**



**Tilled zone, transplant, no straw in row**



**Tilled zone, transplant, no straw in row**



**Tilled zone, transplant, Straw in row**

A large number of orange pumpkins are arranged in a long, winding line on a grassy field. The pumpkins are of various sizes and are scattered across the grass, which is a mix of green and brown. The pumpkins are arranged in a line that starts on the left side of the image and curves towards the right side. The pumpkins are mostly round and have a bright orange color. Some pumpkins have green stems still attached. The background is a dense field of grass and weeds. The lighting is bright, suggesting a sunny day.

**Tilled zone, transplant, Straw in row**



**Tilled, seed, tiller/ho**



**Tilled, seed, tiller/hoe**



**Tilled, transplant, tiller/hoe**

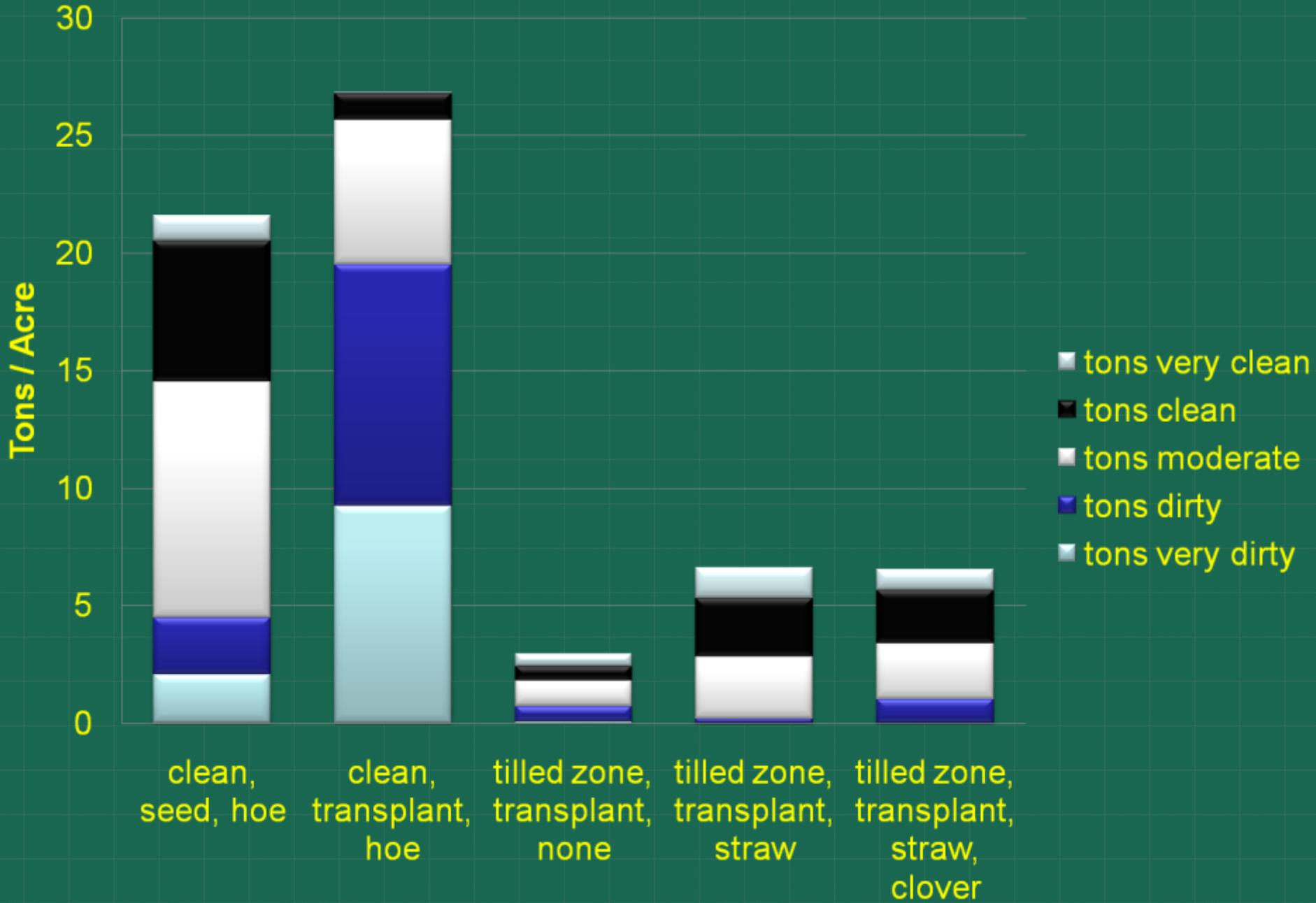


**Tilled, transplant, tiller/hoe**

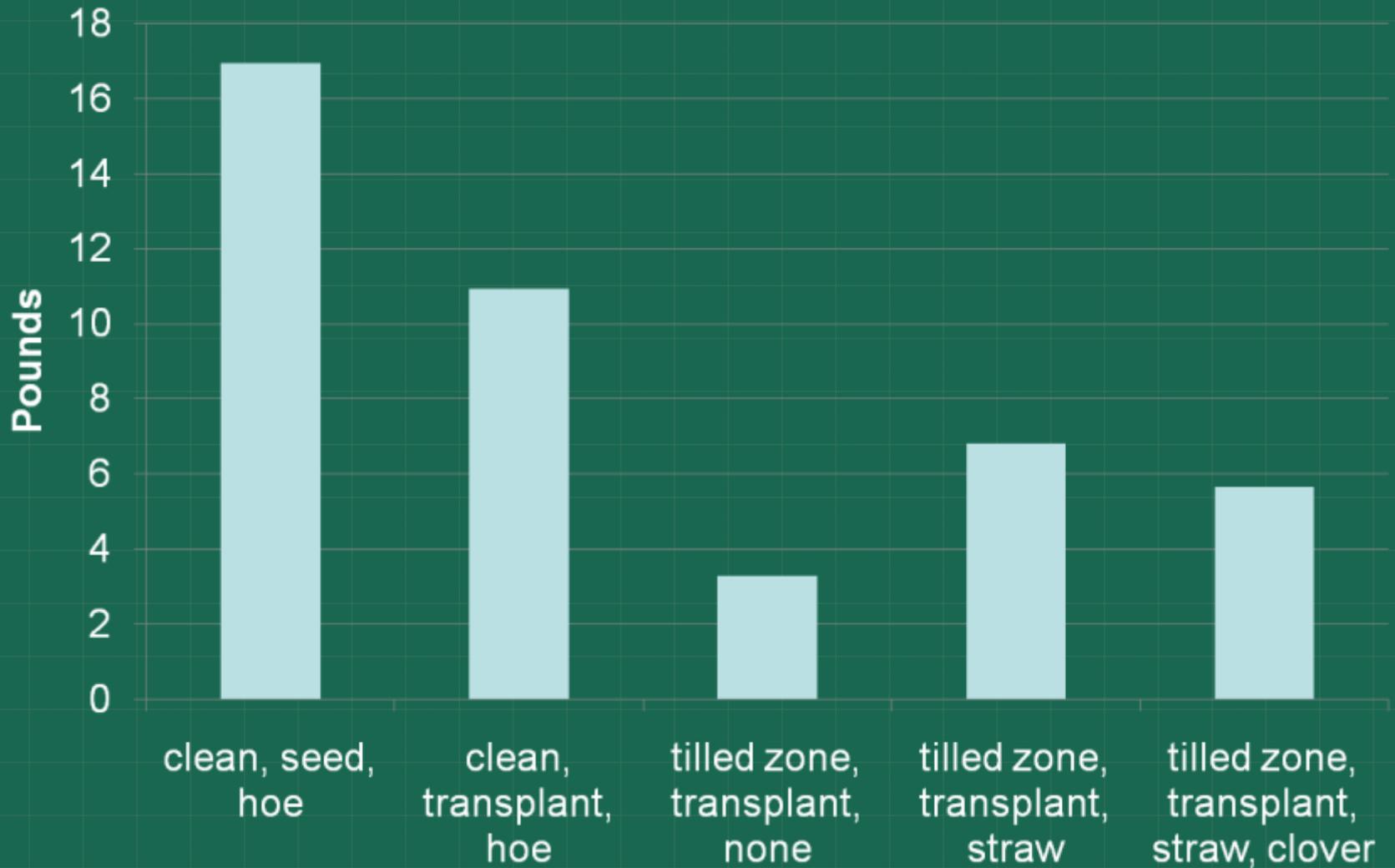




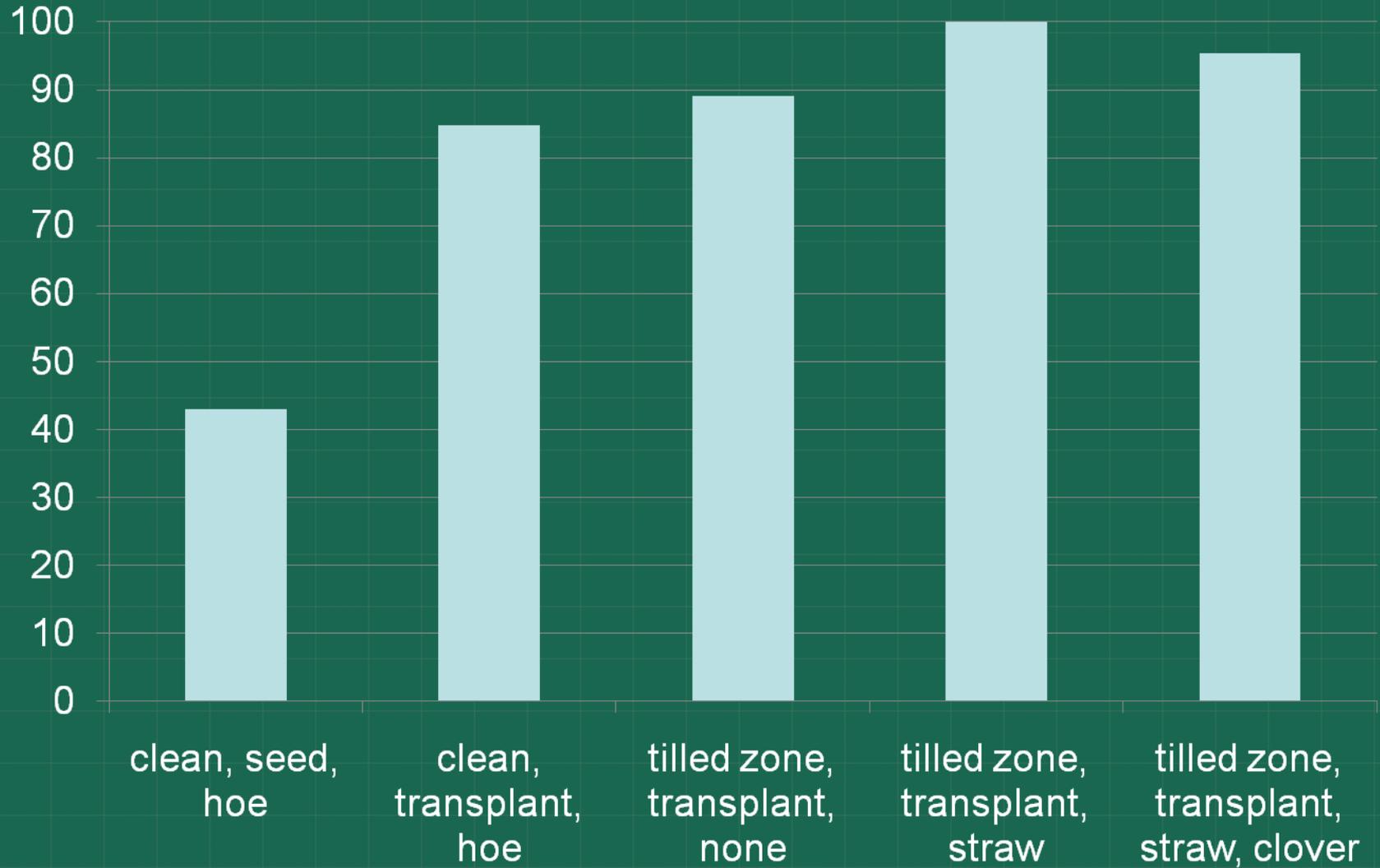
# Pumpkin Yields



## Weight per pumpkin



## Percent Orange



# Conclusions

- Rye mat reduces splash dirt on pumpkins
- We did not obtain season long weed control in zones or zones plus straw
- Broadleaf weeds grew in straw, grass grew where there was no straw in zones
- Good yield in clean tilled treatments
- Transplants matured earlier and had higher percentage of orange pumpkins than seed in clean tilled treatments

# Conclusions

- Transplants yielded higher than seeds
- Pumpkins were of high quality