Better Grazing Management

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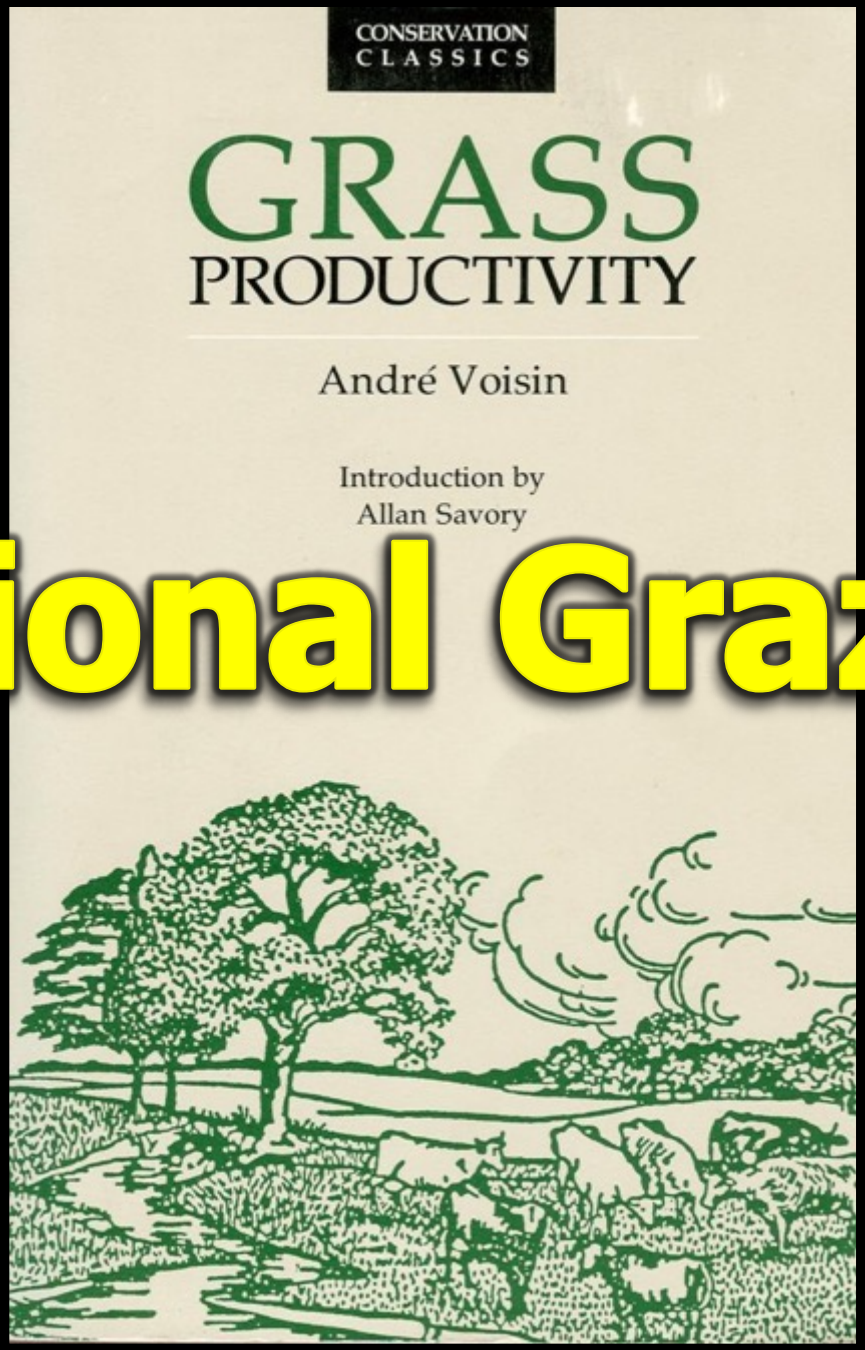

Rational Grazing

Adaptive Multi-paddock Grazing

AMP

Mob Grazing

Management-intensive Grazing

Rational grazing

Rotational stocking

Rotational grazing

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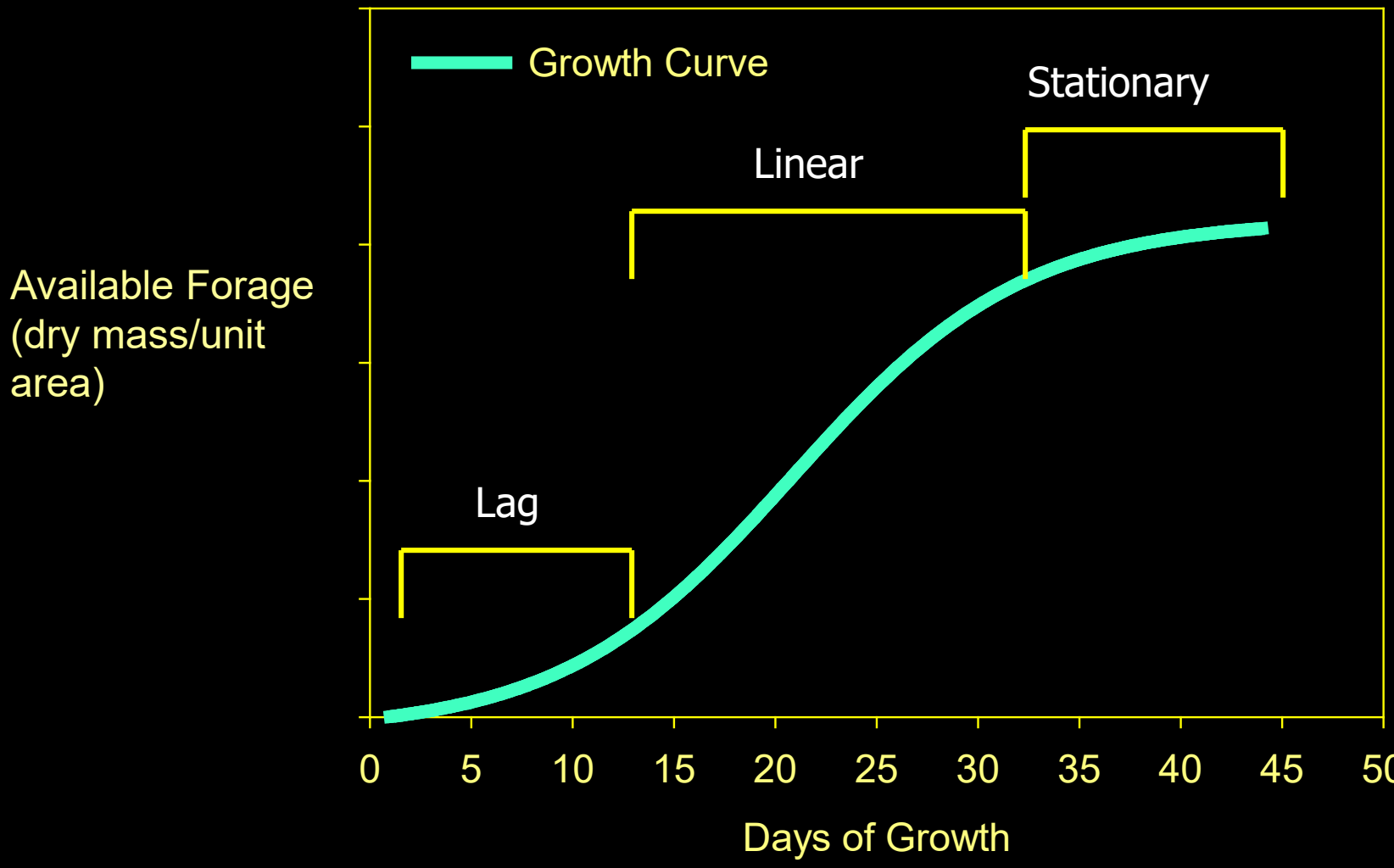
Benefits of Rational Grazing

1. Better utilization of forage

Efficiencies of Grazing and Mechanized Harvest

Method	Efficiency
Grazing	
Continuous Stocking	30-40%
Slow Rotation (3-4 paddocks)	50-60%
Moderate Rotation (6-8 paddocks)	60-70%
Strip Grazing, Daily Rotation	70-80%

“How does your forage grow?”



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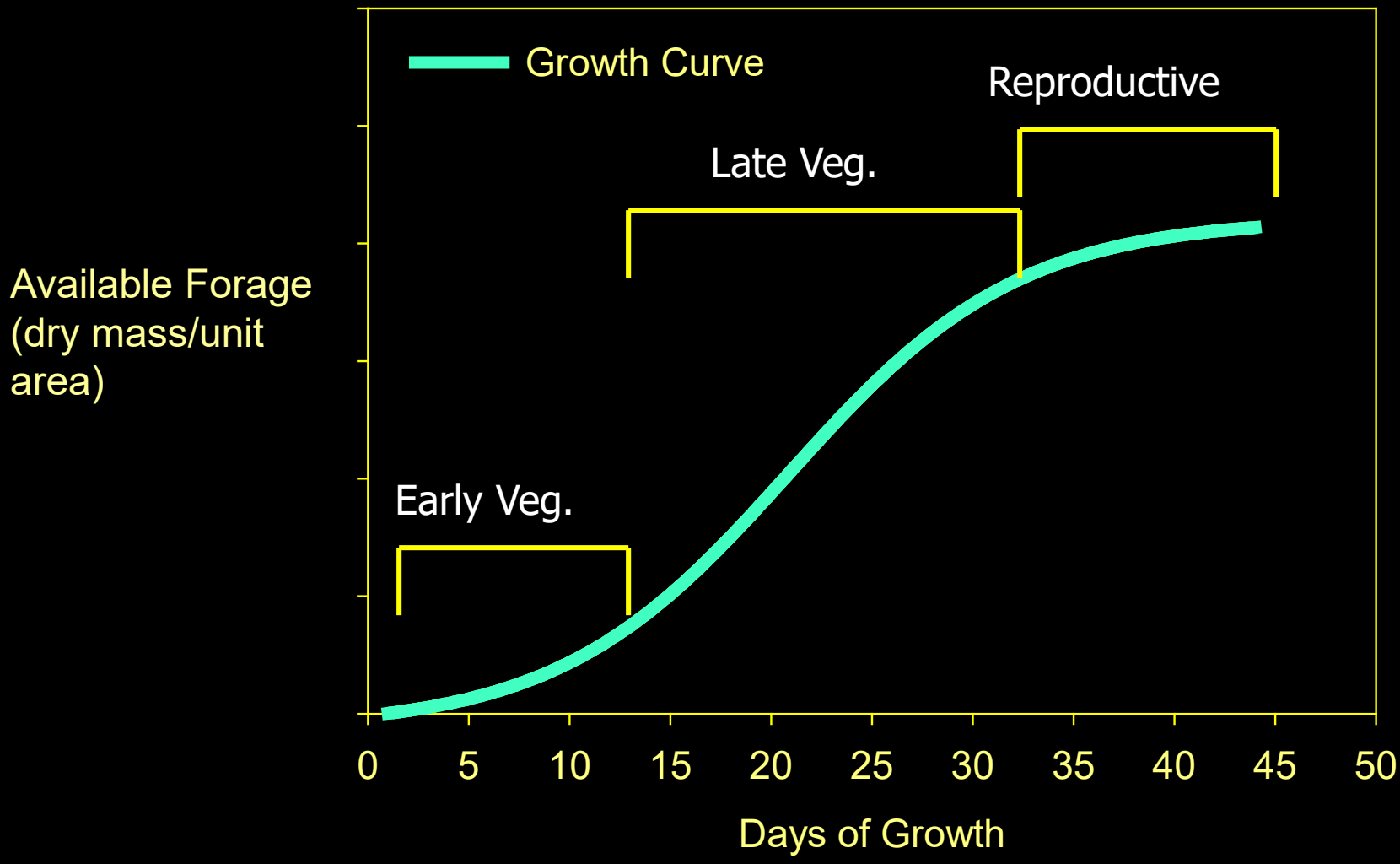

Write this down in BIG **BOLD** letters!

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2. Growth rate of forage is optimized
   - Kept in linear/exponential growth phase
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Effects of rotational stocking on performance of beef cattle grazing bermudagrass and endophyte-free tall fescue in central Georgia.

Item	Continuous	Rotational	Difference*
Cow weight at calving, lbs	1037	1017	NS
Cow weight at weaning, lbs	1090	1071	NS
Stocking rate, cows/acre	0.50	0.69	+38%
Pregnancy rate, %	93	95	NS
Weaning weight, lb	490	486	NS
Calf production, lb/ac	243	334	+37%

* NS = not statistically significant

Increase in gain per acre in rotational compared to continuous stocked pastures in studies from various southern states.

State	% Increase
Arkansas	44
Georgia	37
Oklahoma	35
Virginia	61

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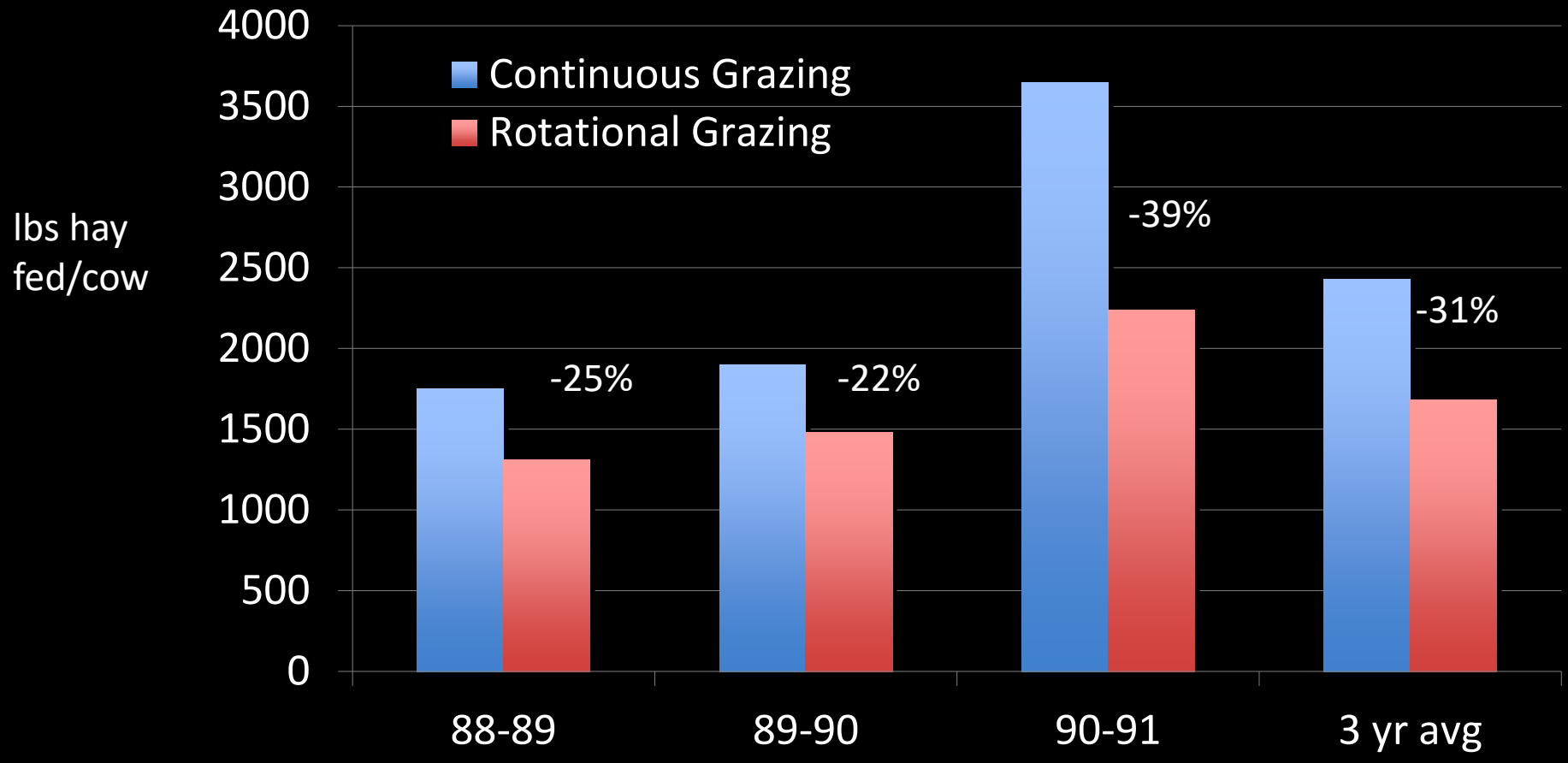
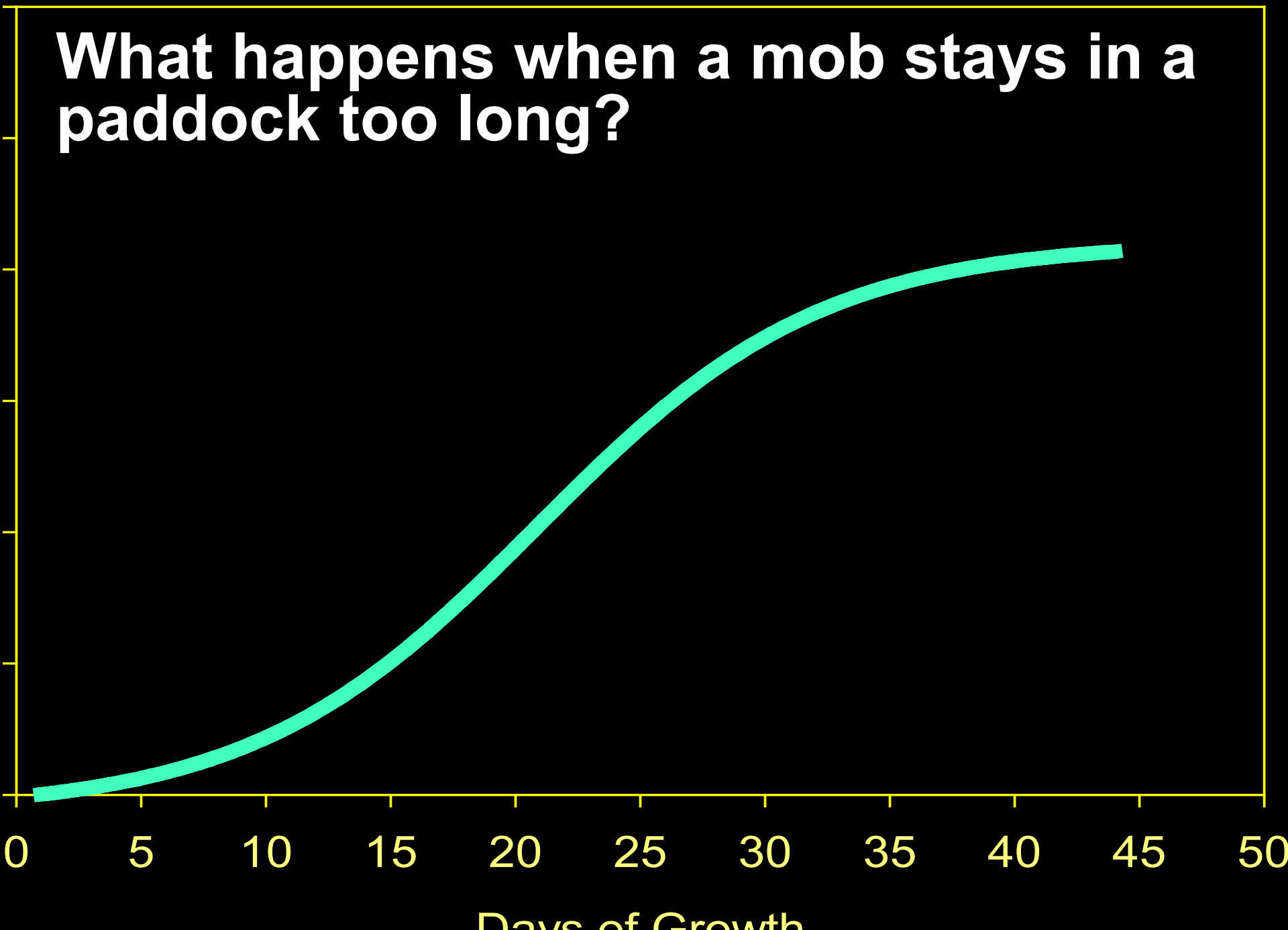
Effect of Grazing System on Hay Needs



$37.54/cow savings using $100/ton hay

What happens when a mob stays in a paddock too long?



Recreational Grazing
(Selective)

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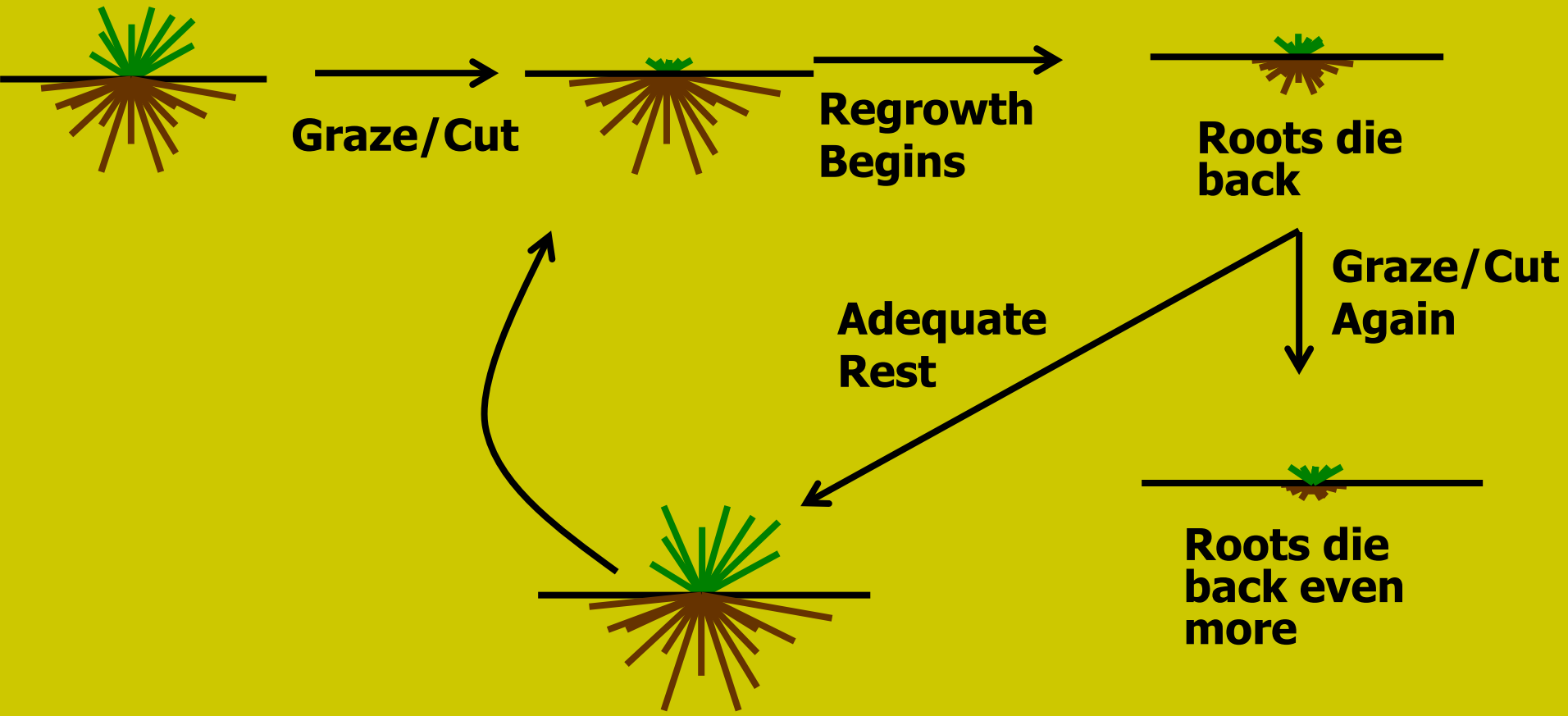
6. Better persistence of desirable forages
   - Especially clover and legume species

What you don’t see….



Proper Rest Following Grazing is Key!

- In continuously grazed pastures, most plants are grazed every 2 – 7 days.
- With recommended rest periods, roots will redevelop to approximately the same depth as uncut plants.

Picture staged by: C. Mackoviak, Univ. of Florida

Grazing Rules of Thumb

Crop	Target Height (inches)		Recommended Rest Period (days)
	Begin Grazing	End Grazing*	
Alfalfa (grazing types)	10-16	2-4	15-30
Annual Ryegrass	6-12	3-4	7-25
Bahiagrass	6-10	1-2	10-20
Bermudagrass	6-12	2-6	10-20
Clover, White	6-8	1-3	7-15
Clovers, Other	8-10	3-5	10-20
Orchardgrass	8-12	3-6	15-30
Pearl millet	20-24	8-12	10-20
Small grains	8-12	4	7-30
Sorghum/sudan	20-24	8-12	10-20
Switchgrass	18-22	8-12	30-45
Tall Fescue	4-8	2-3	15-30

* Height at end of grazing may need to be higher to optimize intake of quality forage or vigorous re-growth.

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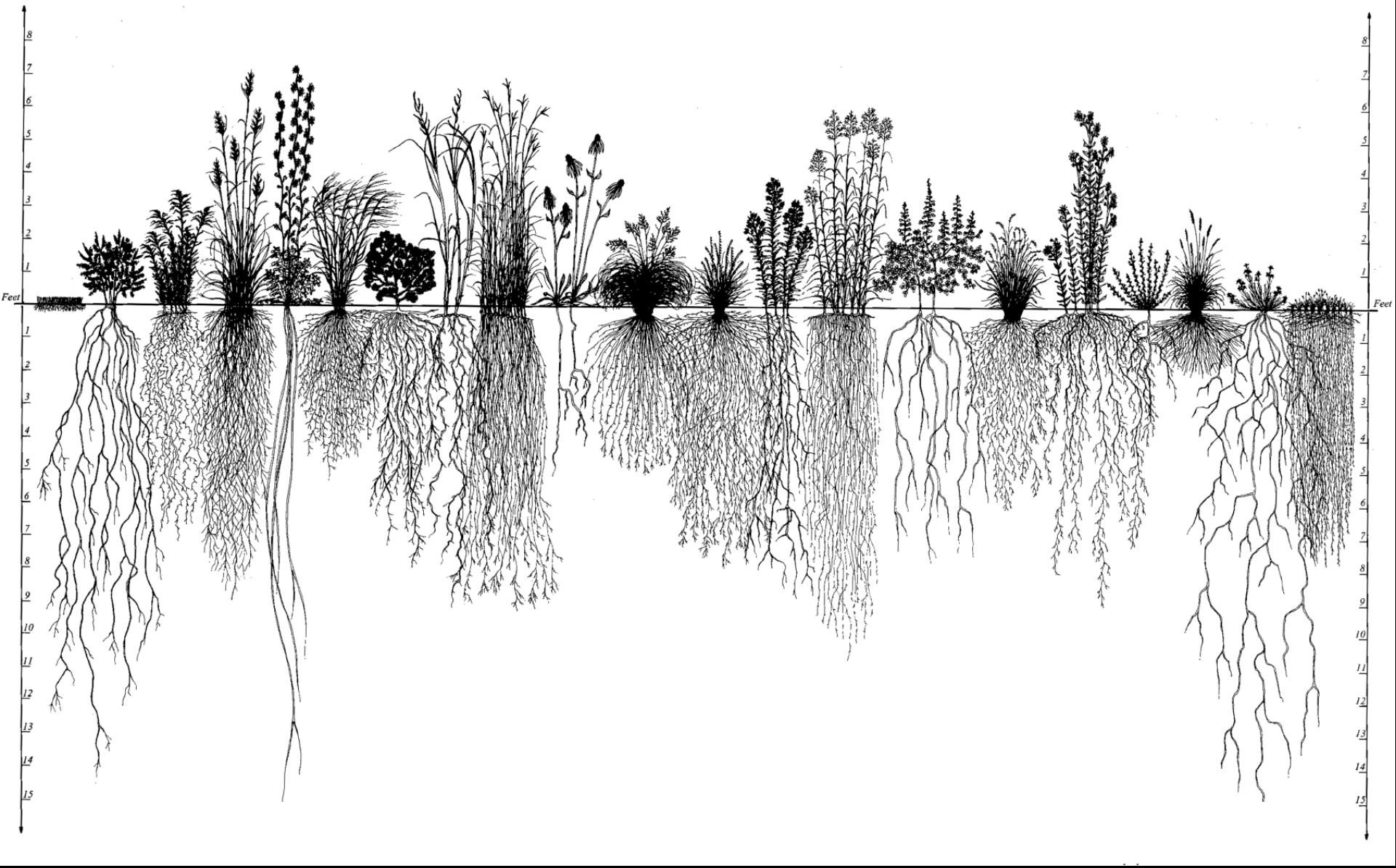
“More than meets the eye…”



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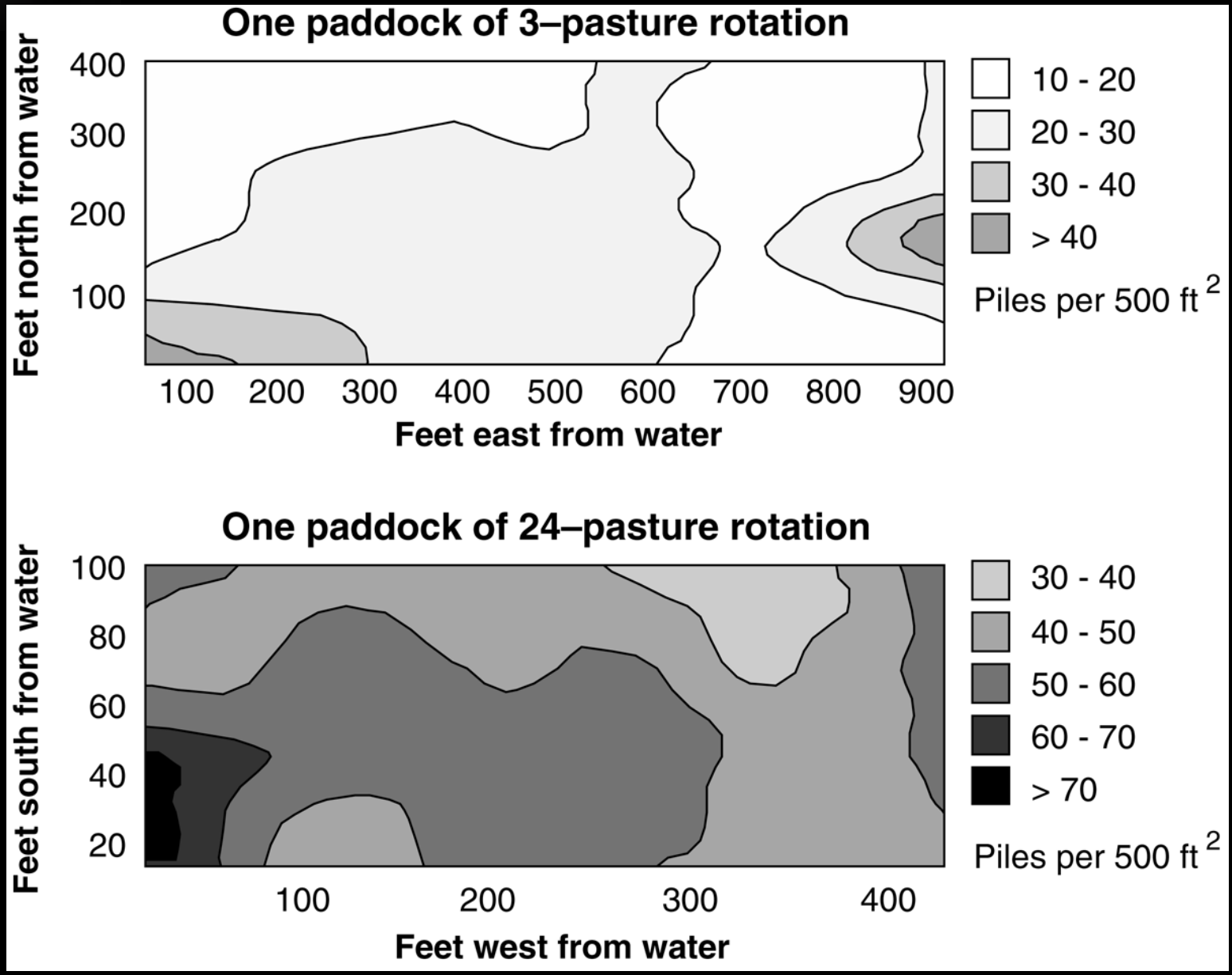
Manure Distribution



Manure Distribution

Rotation Frequency	Years to Get 1 Pile/sq. yard
Continuous	27
14 day	8
4 day	4 – 5
2 day	2

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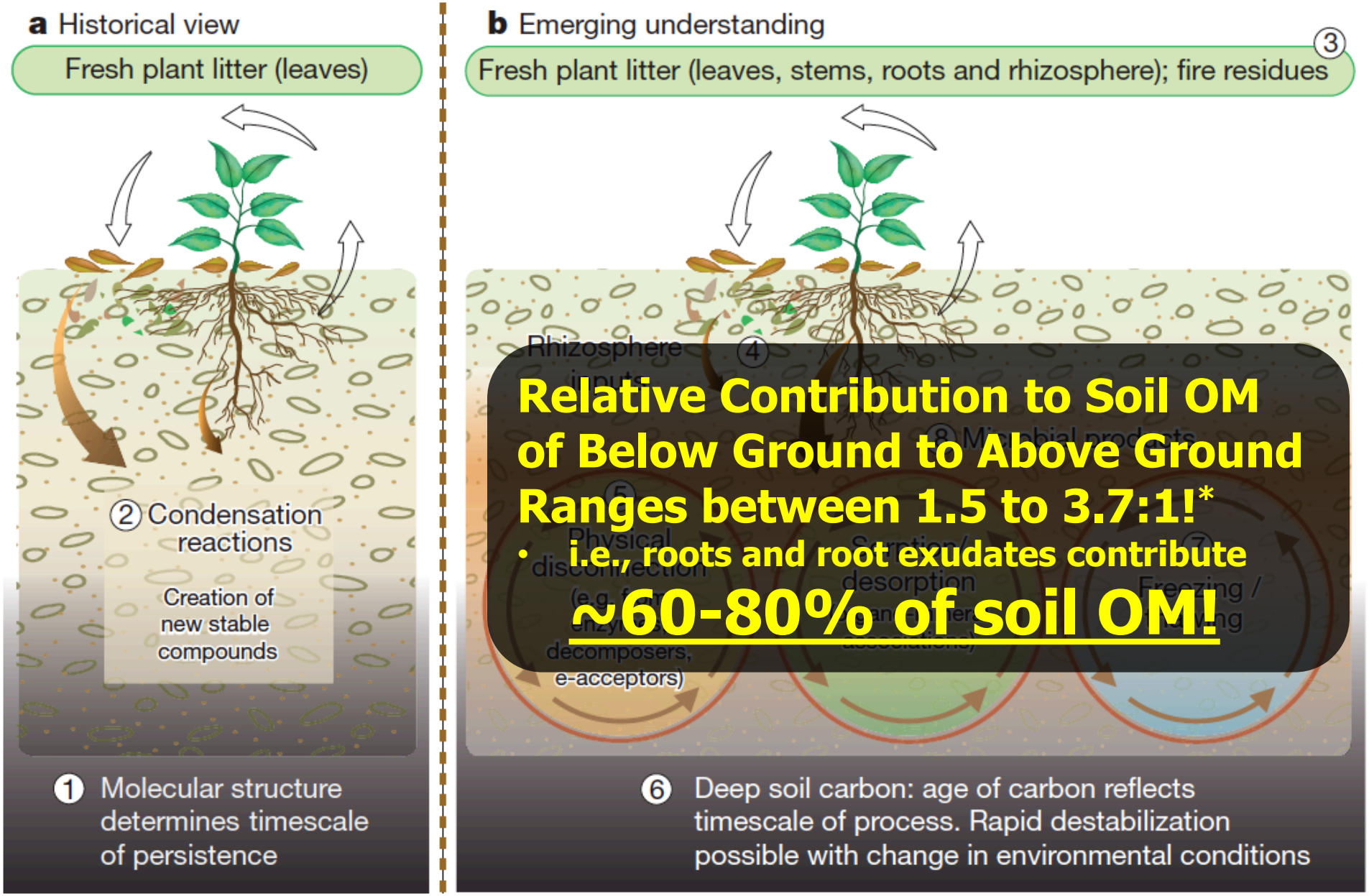
9. Builds soil organic matter/health



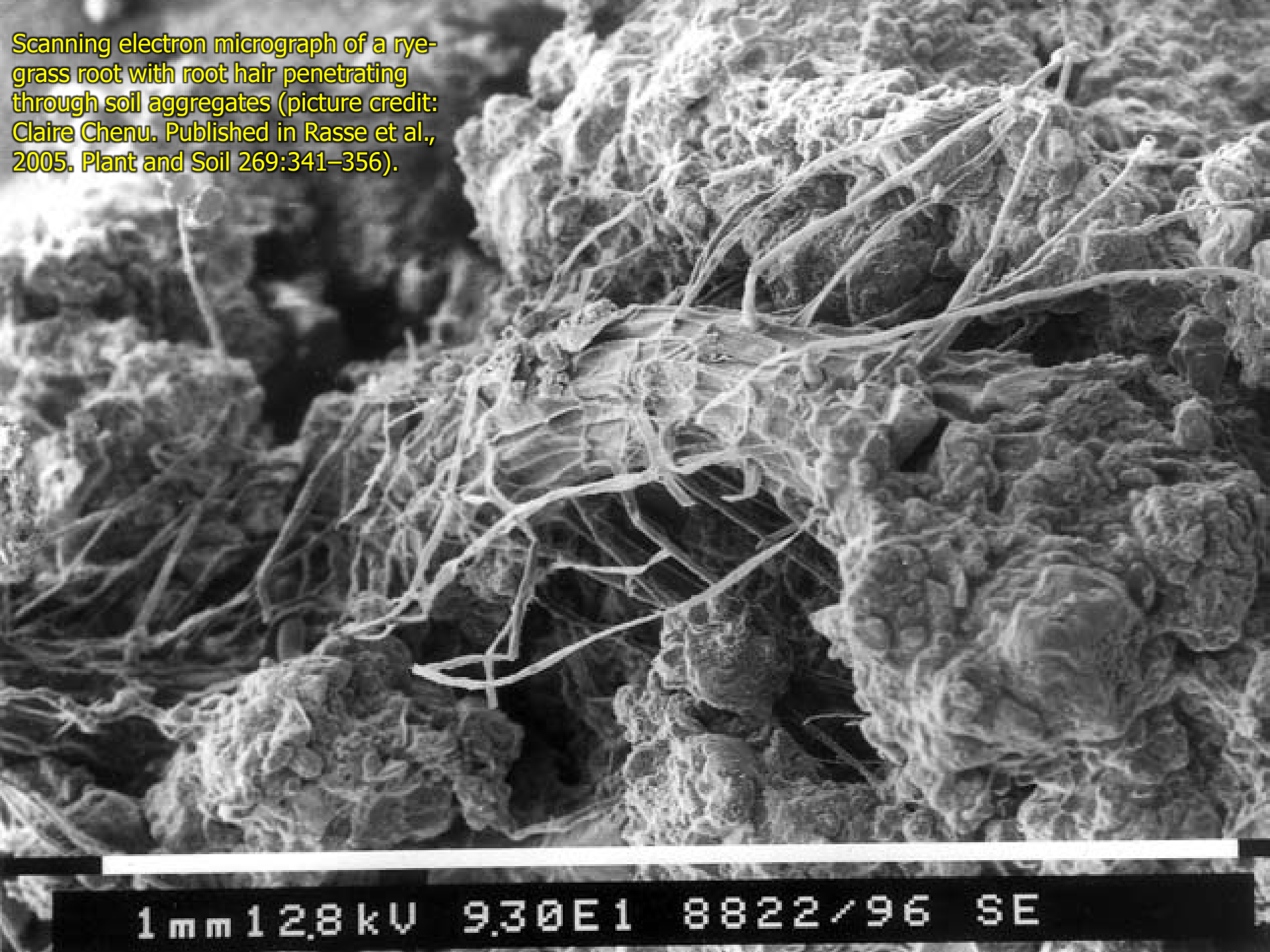
Relative Contribution to Soil OM of Below Ground to Above Ground Ranges between 1.5 to 3.7:1!*

- **i.e., roots and root exudates contribute**

~60-80% of soil OM!

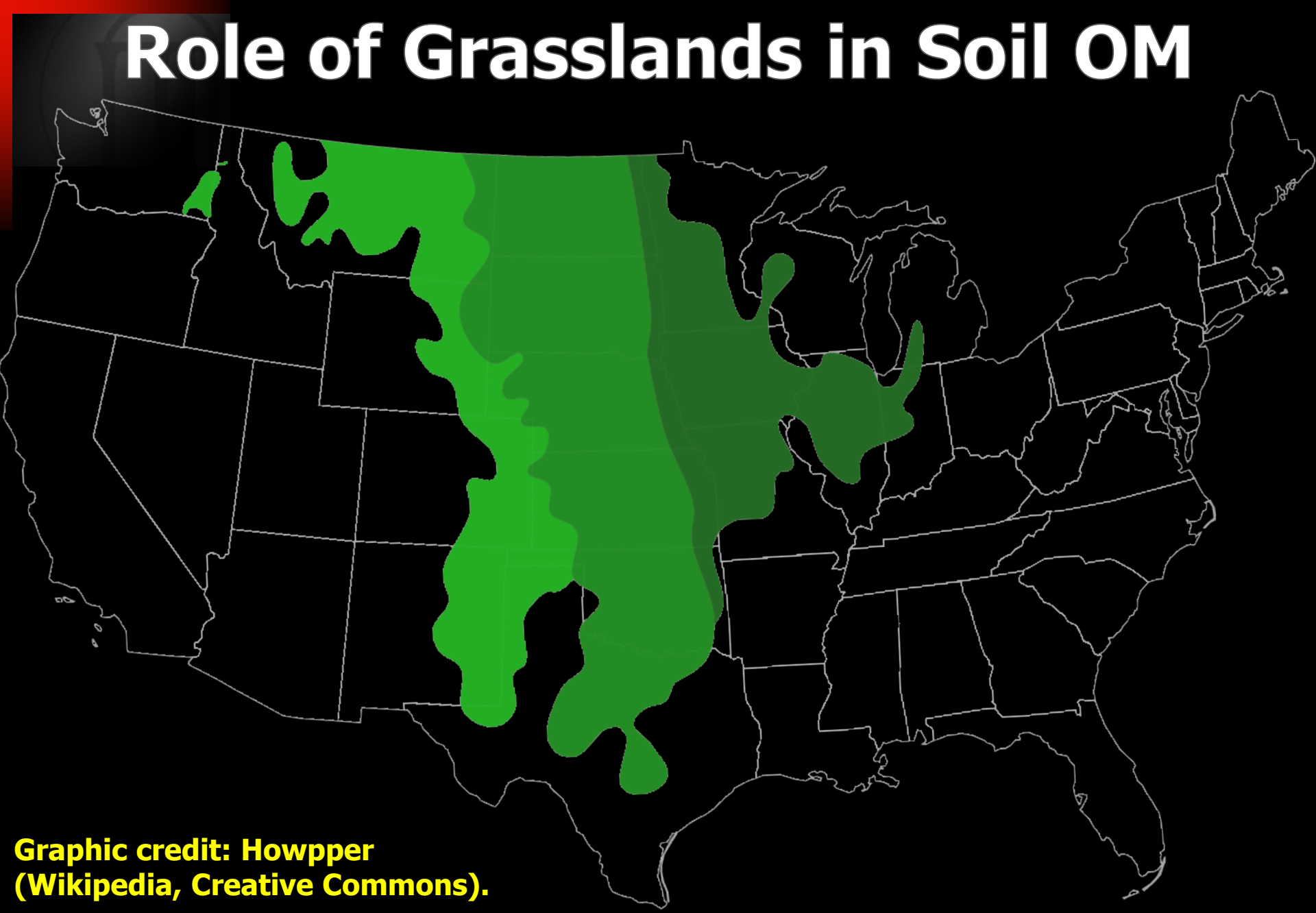
Schmidt et al. 2011. Persistence of soil organic matter as an ecosystem property. Nature. 478:49-56

* Rasse et al., 2005. Plant and Soil 269:341–356.



Scanning electron micrograph of a rye-grass root with root hair penetrating through soil aggregates (picture credit: Claire Chenu. Published in Rasse et al., 2005. Plant and Soil 269:341–356).

Role of Grasslands in Soil OM



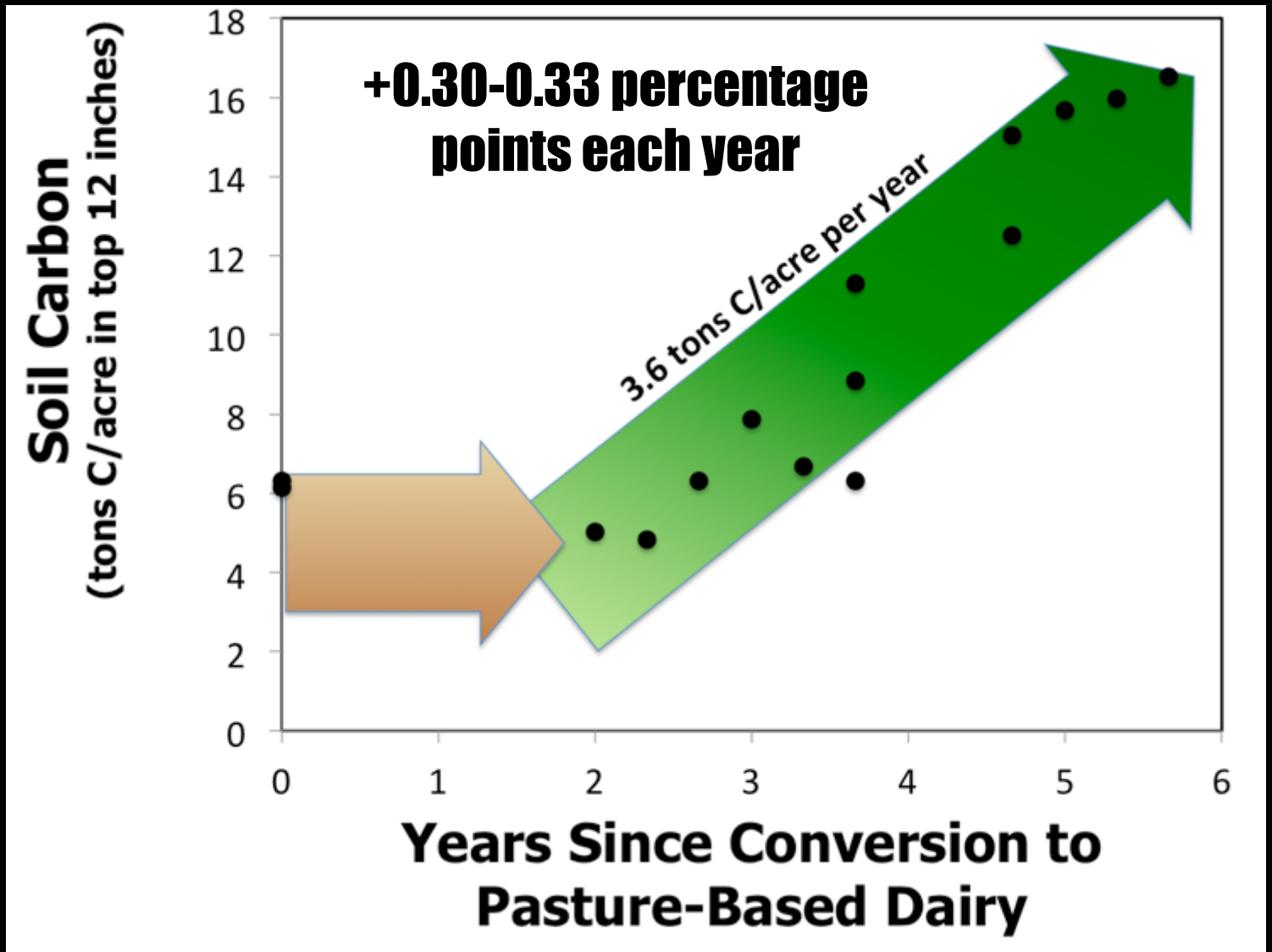
Graphic credit: Howpper (Wikipedia, Creative Commons).

Improvement in soil OM in 3 paddocks located in a pasture-based dairy in Wrens, GA. (2007-2009)

Paddock	Initial	1 year	2 years	3 years
	------ *Soil Organic Matter, %* ------			
P4	1.08	1.15	1.25	2.20
P8	1.01	1.17	1.59	2.18
P14	1.14	1.63	1.86	2.00
Avg.	**1.07**	**1.32**	**1.57**	**2.13**

3 years after grazing system started, averaging an inc. in soil OM of 0.35 percentage points per year!!!

Impact of Pasture-Based Livestock on Soil Carbon (Soil OM)



“Take care of the land, and the land will take care of you.”

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FORAGE NEWS

Beef Cattle Short Course

Annual short course is a daylong educational program that will cover economics for cow and calf producers.

PUBLISHED 02/28/2018

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