



Economic Benefits of Compost

An Ecosystem Services Evaluation

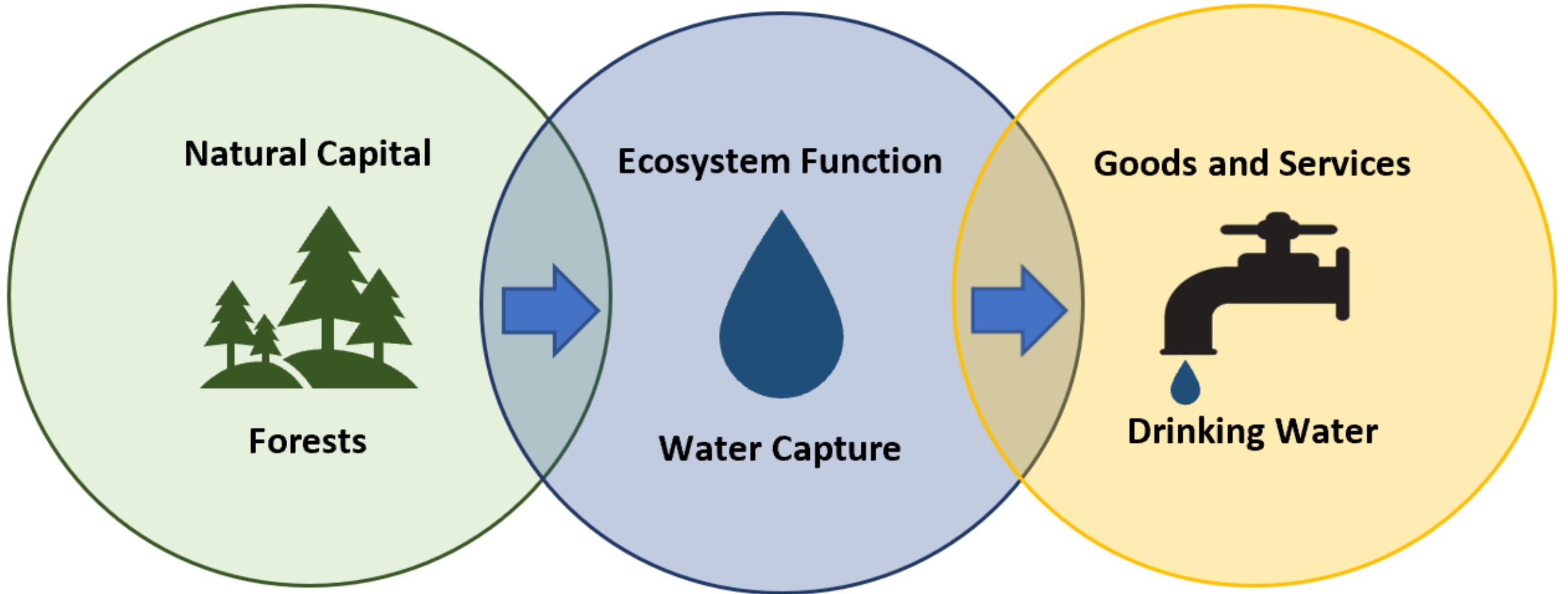
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Dave Keeney, King County Wastewater Treatment Division
Kelsey Bailey, King County Solid Waste Division

Avoid Disposal



Market Value per CY





<https://www.vecteezy.com/free-vector/faucet>

Figure 1. Forests, Ecosystem Functions and Drinking Water Production.

EVALUATED SERVICES



Flood Risk
Reduction



Water
Supply



Carbon
Sequestration



Soil
Quality



Soil Erosion
Protection

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84 references

METHODOLOGY

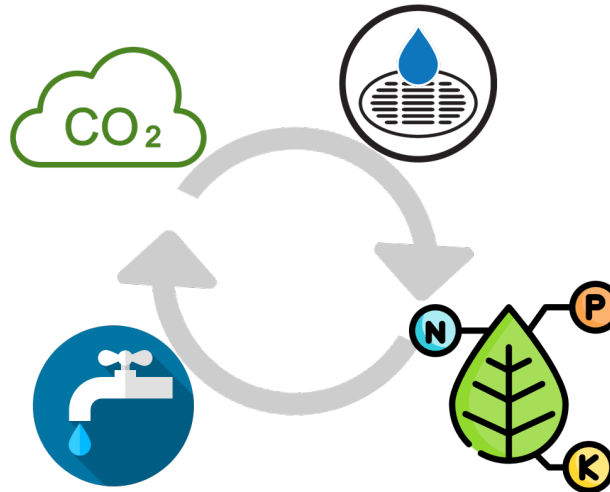
Relative Benefit
Organic Amendment



*%Δ benefit
per ton per year*

X

Avoided Costs (or Savings)



\$ per unit of benefit

=

Monetary Benefits
*Annual Value of applied ton
\$/ton/yr*

Flood Risk Reduction

Bare Soil:

- \$30.00 - \$59.00
per ton-year

Agriculture:

- \$14.00 - \$56.00
per ton-year



Soil Quality

Bare Soil:

- \$2.00 per ton-year

Agriculture:

- \$2.00 - \$102.00
per ton-year



Soil Erosion

Bare Soil:

- \$0.50 - \$6.20
per ton-year

Agriculture:

- \$0.20 - \$0.90
per ton-year



Carbon Sequestration

Bare Soil:

- \$154.00–\$229.00
per ton-year

Agriculture:

- \$185.00–\$195.00
per ton-year



Water Supply

Bare Soil:

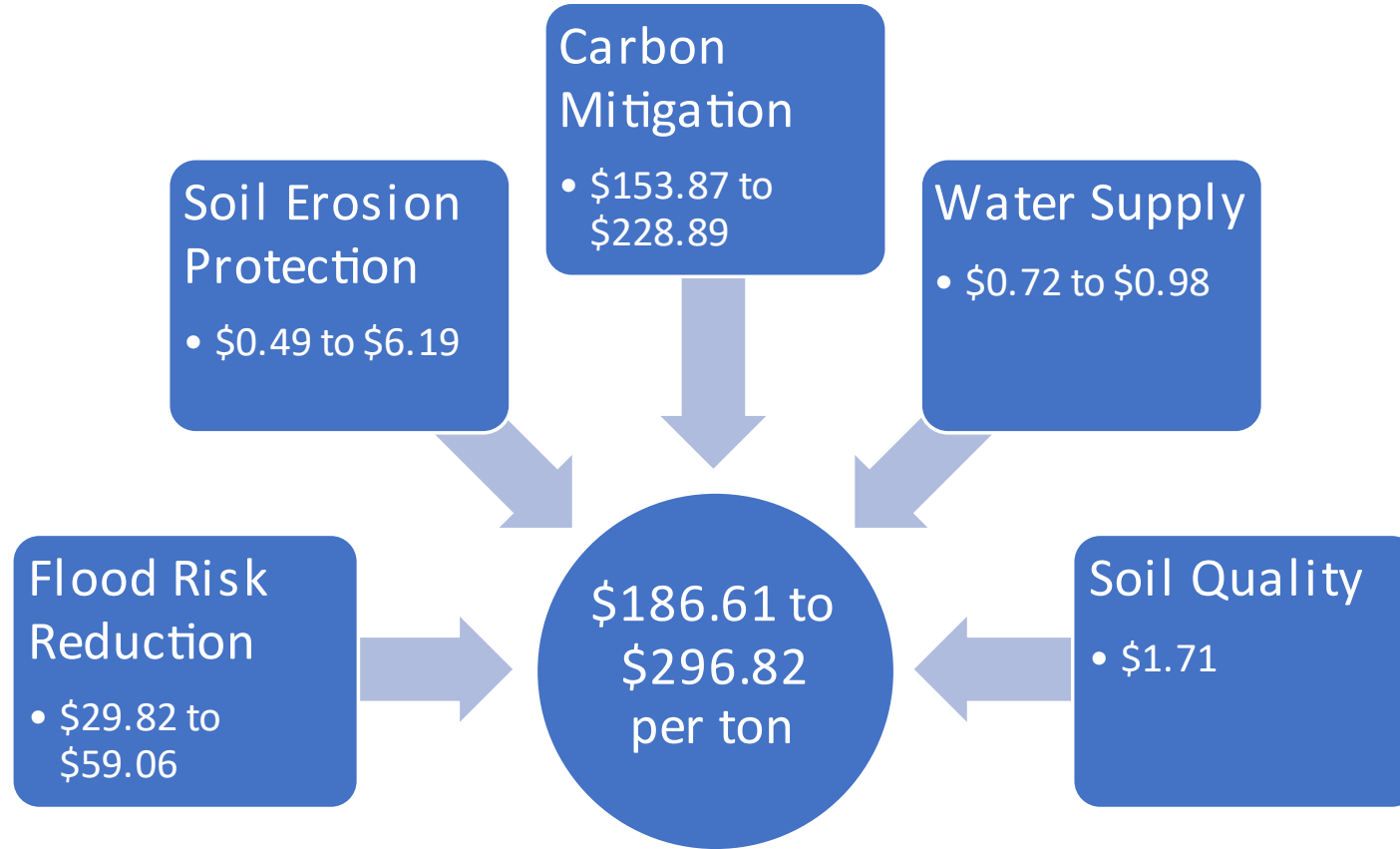
- \$0.70 - \$1.00
per ton-year

Agriculture:

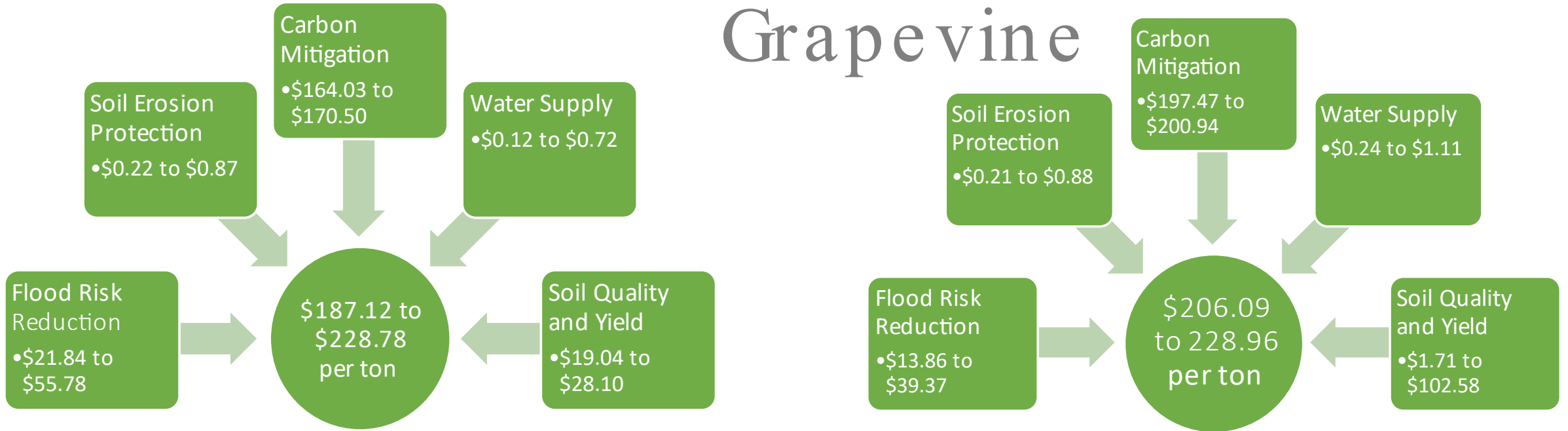
- \$0.30 - \$1.20
per ton-year



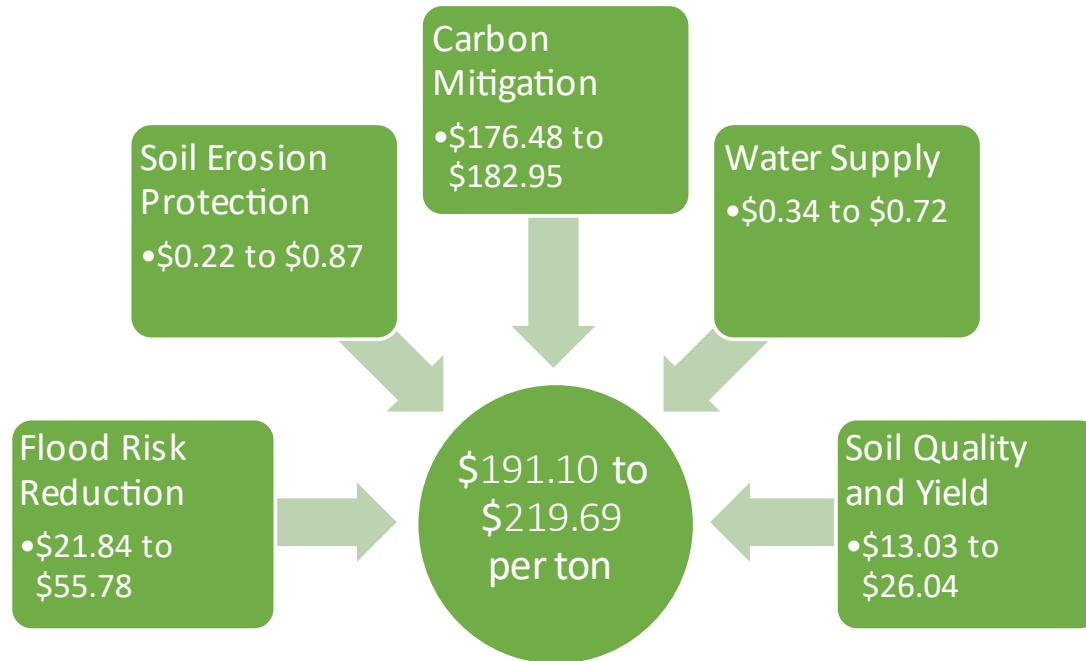
Bare Soil



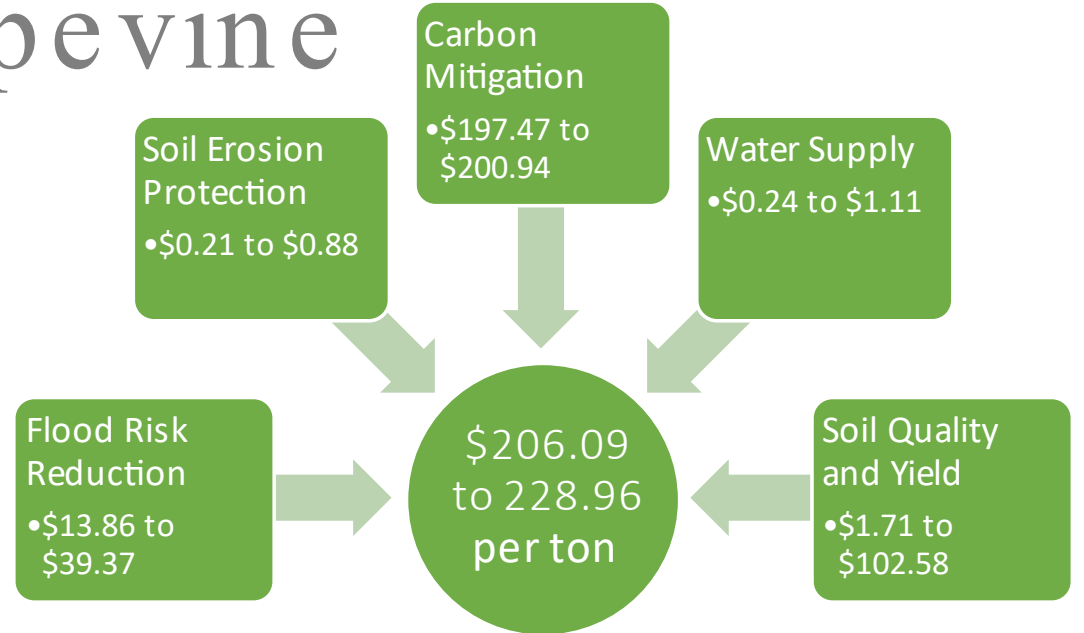
Grapevine

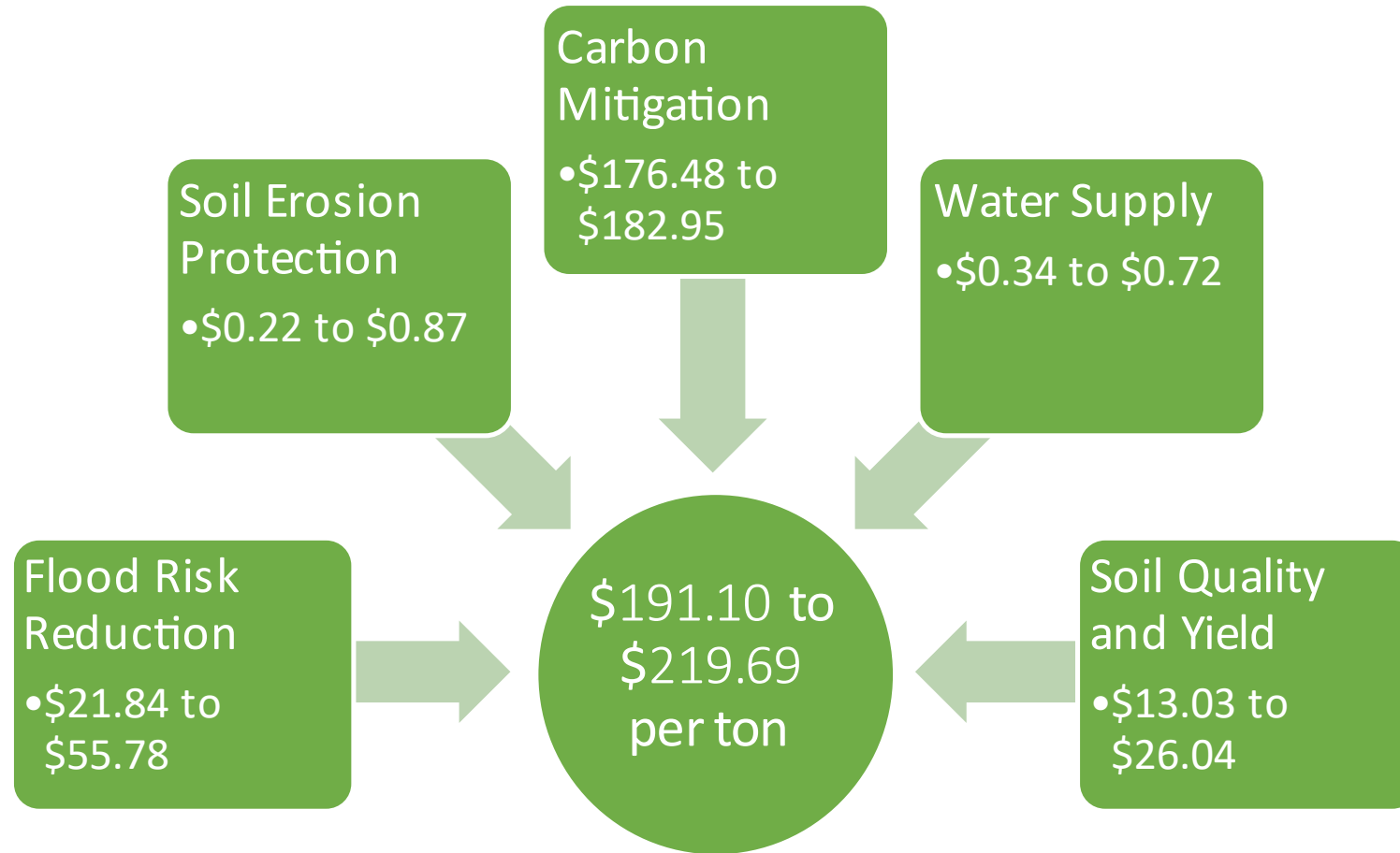


Wheat



Vegetable Rotation

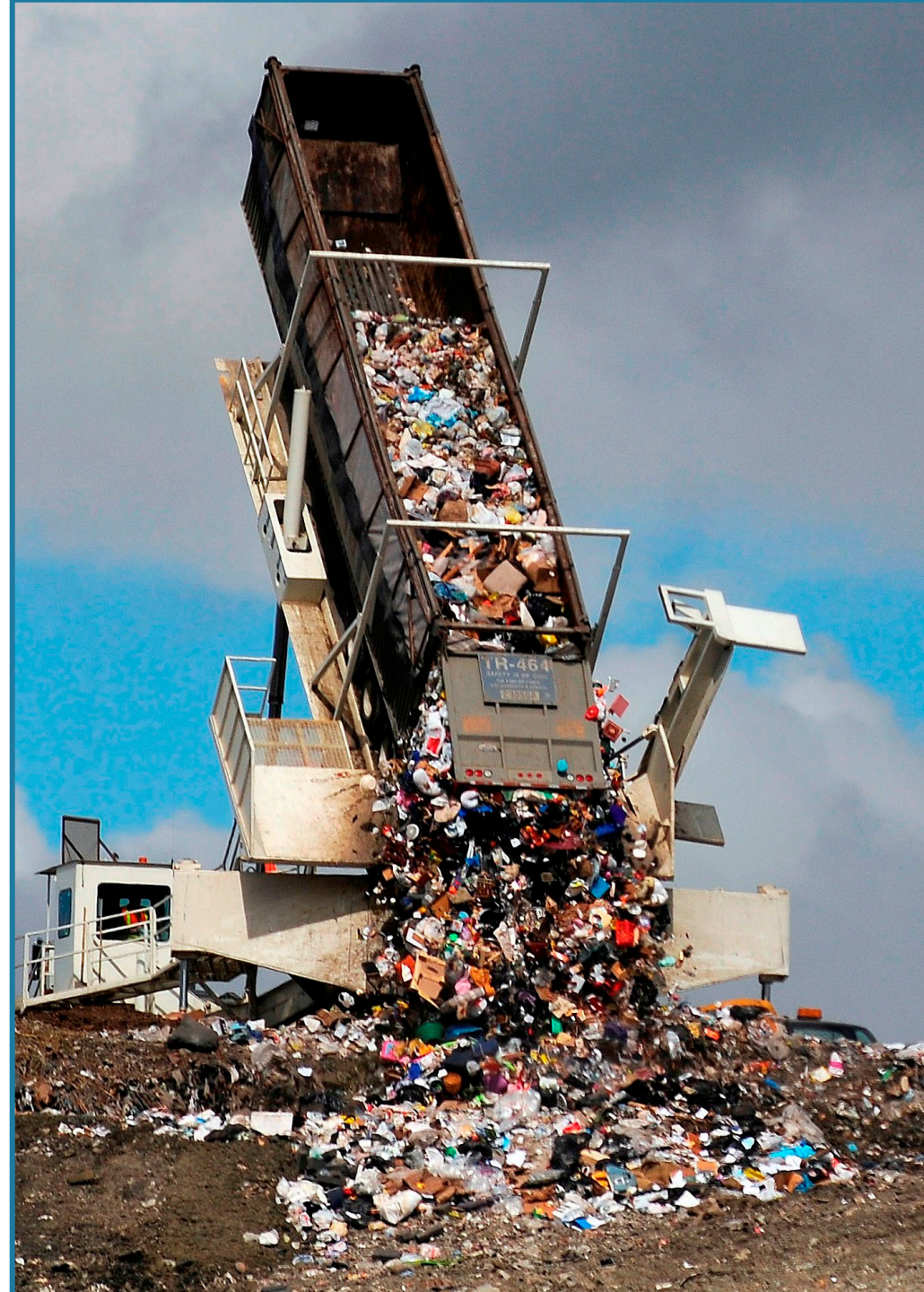




Agriculture: Vegetable Rotation



VS.



Questions?

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