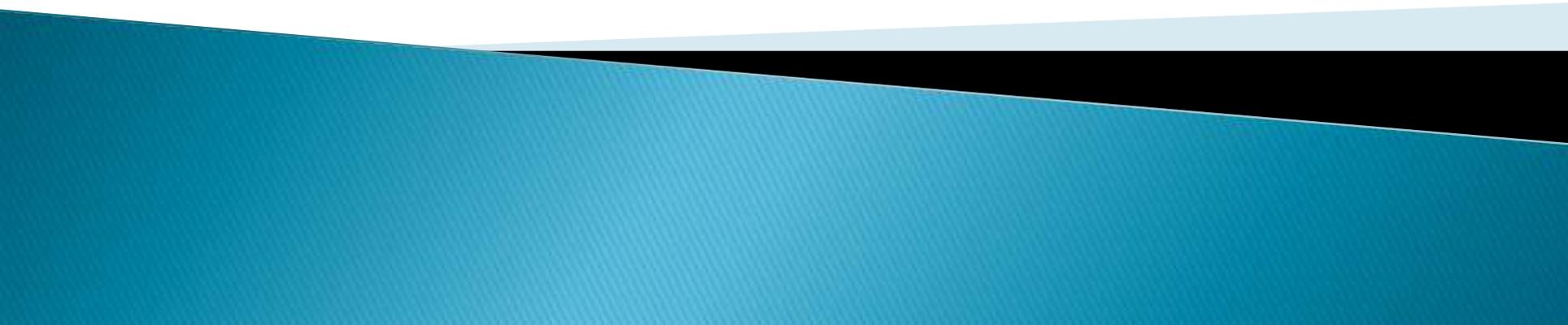


# Ag 101 Related to FFF

- Working With Local Agriculture
  - Why bother? Value of Ag in the Snoqualmie
  - Floodplain Agriculture: Land and Water
  - A Changing Landscape
  - Constraints and Opportunities
- 

# Working With Local Agriculture

- Every farm/farmer is different.
  - The look of a farm changes.
  - Agriculture includes aquaculture, equestrian, turf farms, poplar farms.
  - Talking about private land/landowners.
  - “Corporate Agriculture” and stewardship.
  - Each farm is “built out”; farms need maintenance.
  - Many farms have secondary incomes.
  - Agriculture exists as a network and community.
- 

# The Value of Puget Sound Agriculture

From our Salish menu and  
served with Salmon  
Cheeks...

- Salmon berry
- Blackcap raspberry
- Twinberry
- Nettle (a superfood)



Pacific Crab Apple

# Temperate Marine Modified Climate

- Moderate heat, moderate cold
  - Livestock and plants have less stress
- Precipitation
  - Reduces irrigation budgets if any needed
    - ✓ Potatoes grown in Skagit need 0 to 6 inches of water above annual rainfall; eastern Washington potatoes need 18 to 28 inches.
- Long growing season

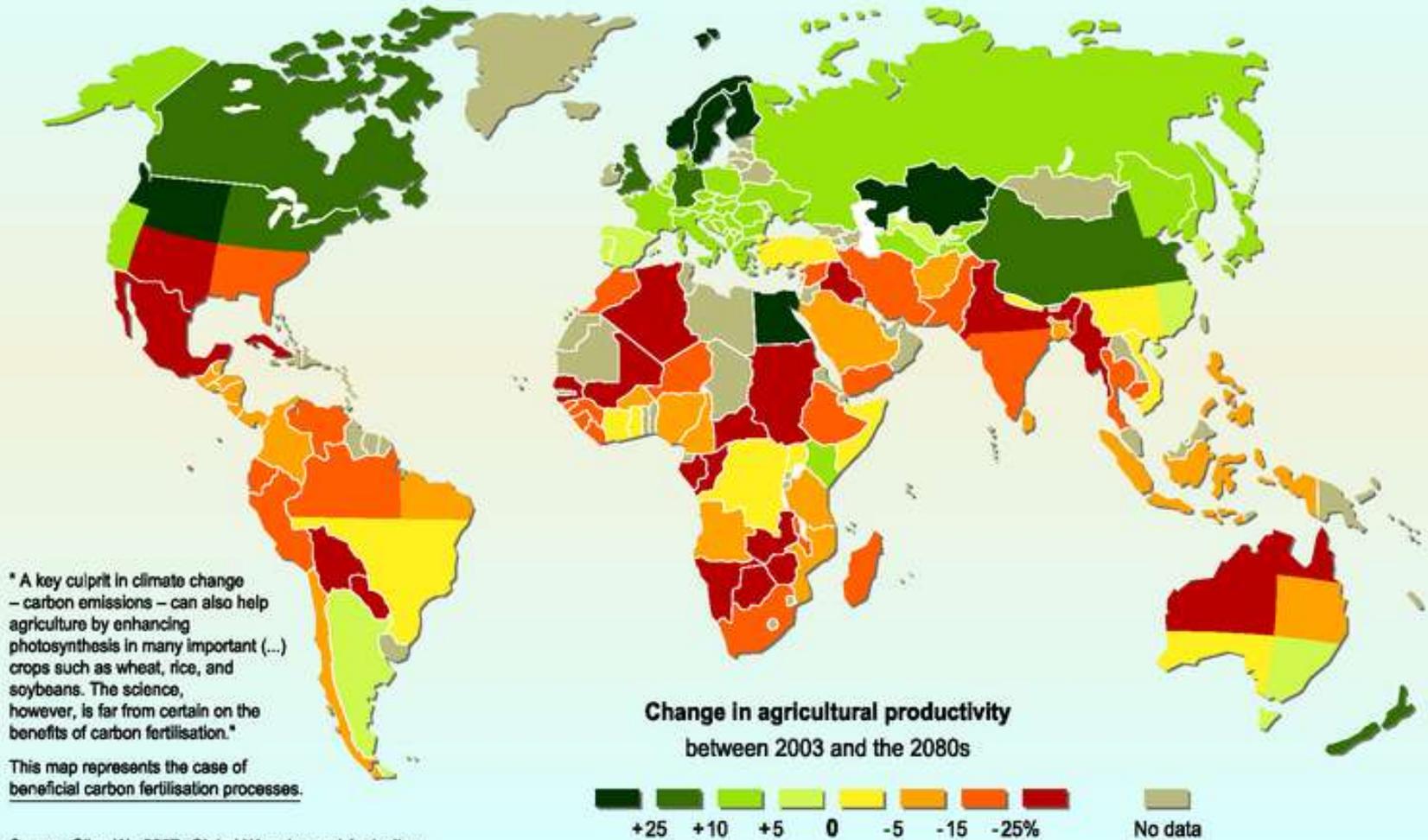
# Soils

- No class 2 Soils
  - Farms and Soil Class
    - Farms with > 50% in soil class 3 or 4 = 79% (142 farms)
    - Farms with > 50% in soil class 5 = 21% (37 farms)
  - Whatcom higher capability
  - Skagit not as high as Snoqualmie
- 

# World and National Records

- Milk production per cow.
  - Bushels of wheat per acre – Whidbey.
  - Almost controlled national berry market in early 1900's – Snohomish.
  - 95% national raspberry production – Whatcom.
  - 95% of Red potato production in the State – Skagit.
  - Over half of world spinach and beet seed production – Skagit.
- 

## Projected impact of climate change on agricultural yields



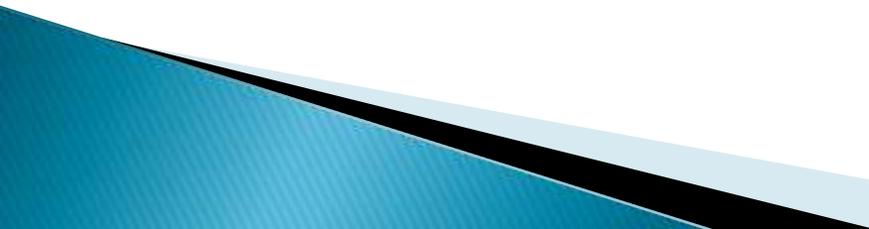
Source: Cline W., 2007, *Global Warming and Agriculture*.

# Land in Farms\* in King County

(from: Regional Agriculture Land Use Technical Study,  
1974, Puget Sound Governmental Conference)

<u>Year</u>	<u>Acreage</u>
1945	165,635
1949	153,301
1954	145,111
1959	114,719
1964	82,355
1969	61,107

(\* Includes all lands within the boundaries of a farm as opposed to just the Class II and III Soils included in "Croplands harvested and pastured.")



# How to Protect this Asset?

- 1. Comprehensive Plans
  - 2. Zoning
  - 3. Purchase the Development Rights
  - 4. Current Use Taxation
- 

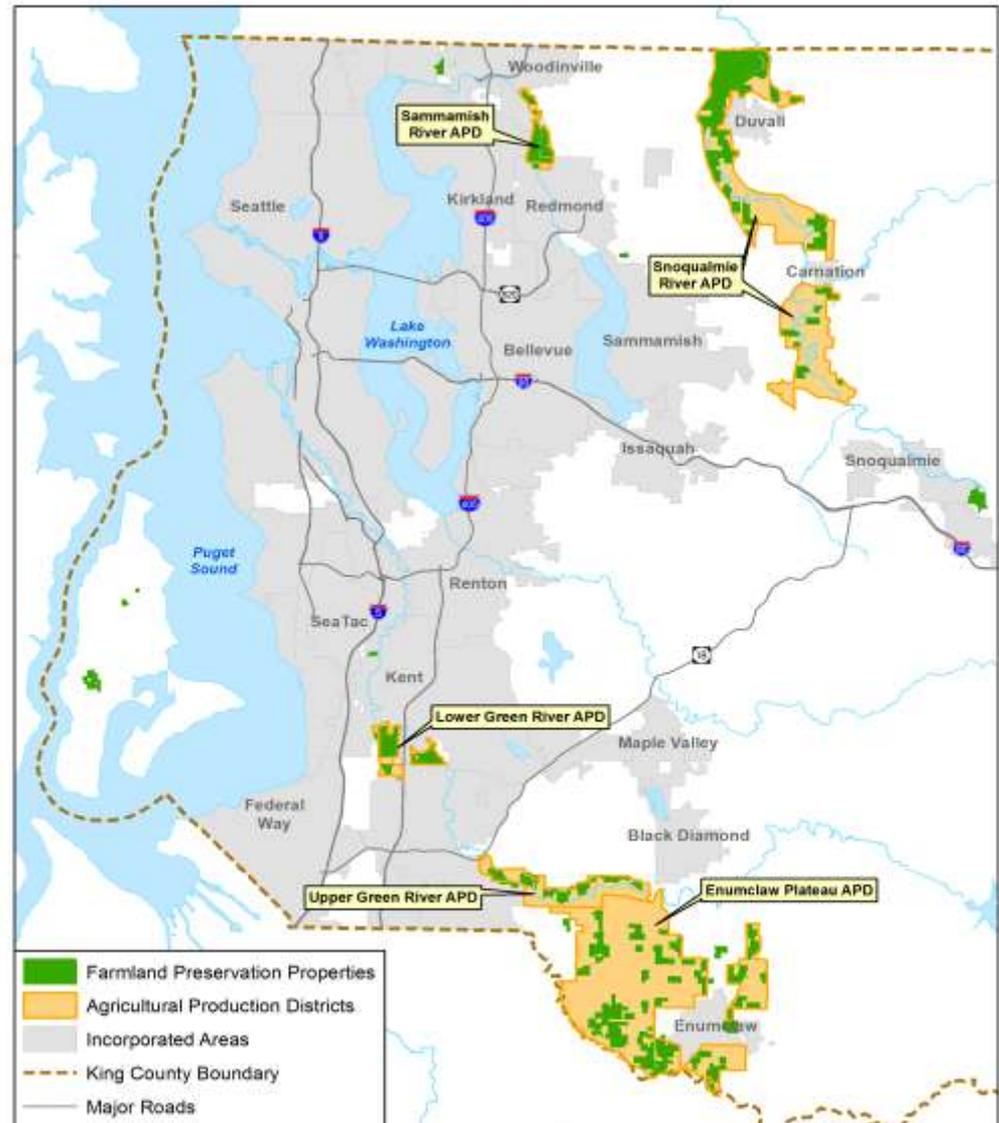
# Zoning Restrictions

- To protect agriculture land from incompatible uses, the agriculture zone conditions are restrictive:
  - Impervious surface limitations (10% and 15%)
  - Minimum lot sizes (10-acre or 35-acre)
  - Restrictions on number of dwelling units
  - Restrictions on allowable uses

# Farmland Preservation

- Deeds and Covenants
  - 5% non-tillable surface
  - Limited number of dwellings
- \$50 million bond in 1979
- Now over 14,000 acres
- Constraints on uses and potentially on fish recovery

## Protected Farmlands in King County





# Definitions of Agriculture per Current Use Taxation\*

- (d) "Agricultural product" means livestock and plants that are produced for commercial purposes and includes any agricultural, horticultural, or aquacultural produce or crop; the raising of livestock, poultry, bees, or fur-bearing animals; or the production of milk, eggs, wool, fur, meat, honey, or other substances obtained therefrom. When used in relation to livestock or fur-bearing animals used for food or fiber, "raising" means breeding or increasing the value, size, or weight of the animal.
- (g) Any land that is used primarily for equestrian related activities for which a charge is made, including, but not limited to, stabling, training, riding, clinics, schooling, shows, or grazing for feed and that otherwise meet the requirements of (a), (b), or (c) of this subsection.

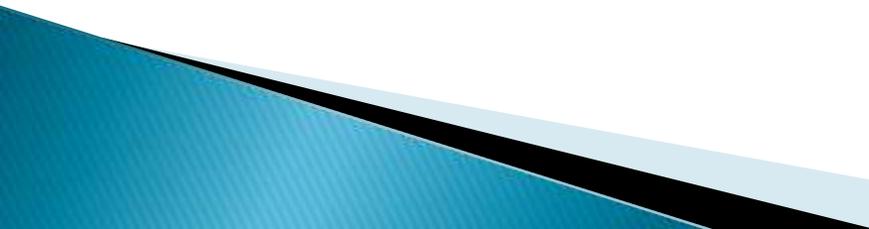
\*WAC 458-30-200

# Floodplain Agriculture

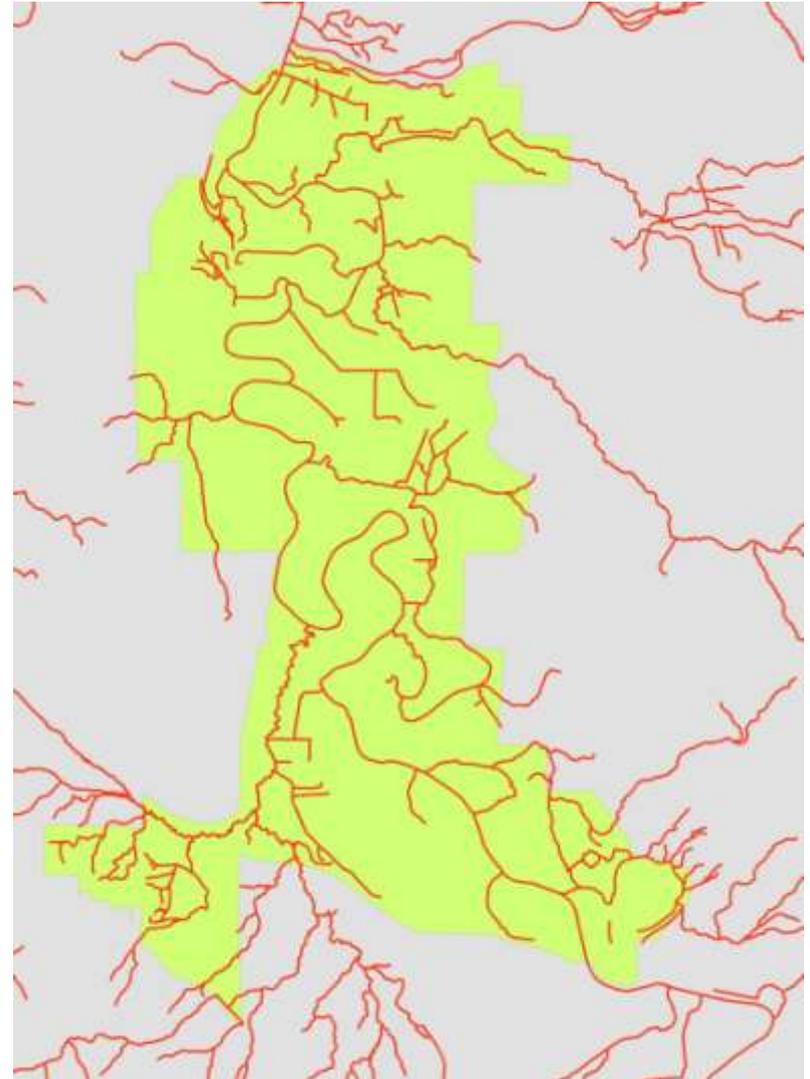
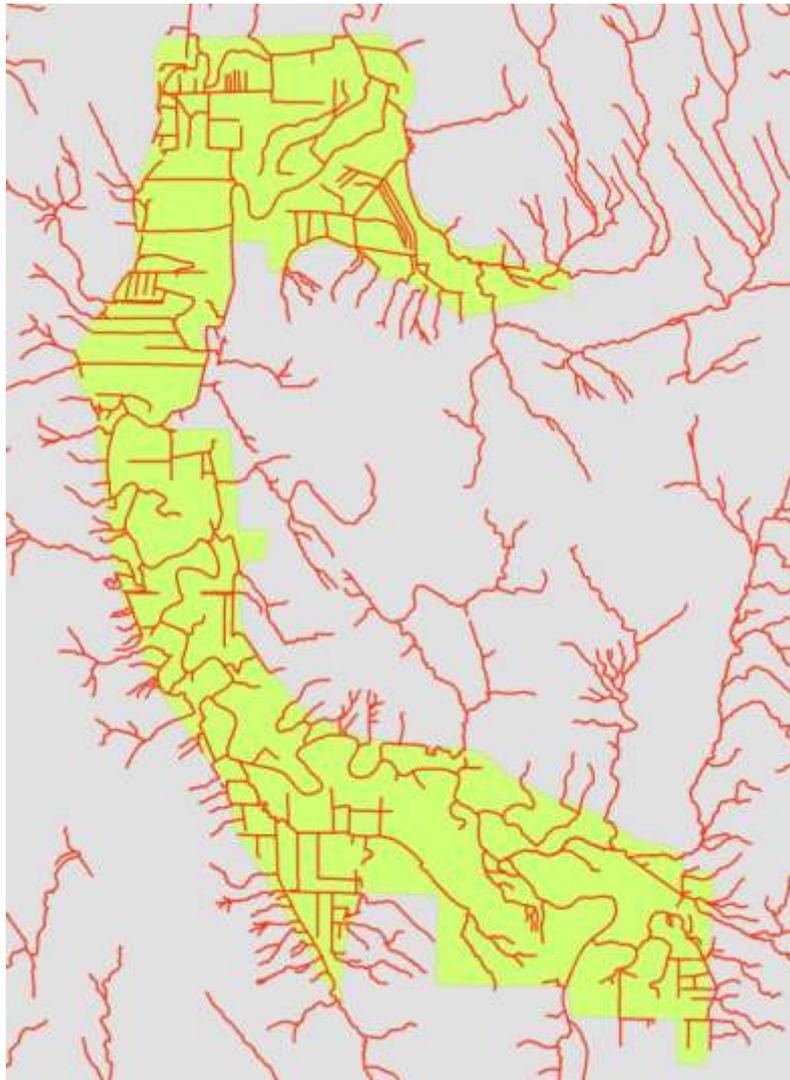
## **Ag in Floodplains:**

- where the soils and water are
- flat, contiguous acreage
- moderated temperatures
- transportation – water

## **Upland Agriculture:**

- Flood free, better drainage
  - Cooler temps, (though still good in this climate)
  - Shallower soils, generally not as good
  - Access to water needed
- 

# Legacy of Floodplain Agriculture



# Ag in Snoqualmie: a Changing Landscape

- Snoqualmie can and has produced a wide range of agricultural products:
    - fruit, market crops, livestock, dairy, hops, corn, hay
  - Beginning in early part of last century – dairy became predominant type.
  - Dairy infrastructure dominates the valley.
  - Current land–use survey
  - Future?
- 

# Current Snoqualmie APD Landscape

## ▶ Farm Size (in Acres)

	Smallest	Largest	Average	Total
North APD (104 Farms)	6.6	382.8	67.1	6,979.4
South APD (76 Farms)	2.2	447.2	48.2	3,666.3
				10,645.7

## ▶ Farms and Soil Class

- Farms with > 50% in soil class 3 or 4 = 79% (142 farms)
- Farms with > 50% in soil class 5 = 21% (37 farms)

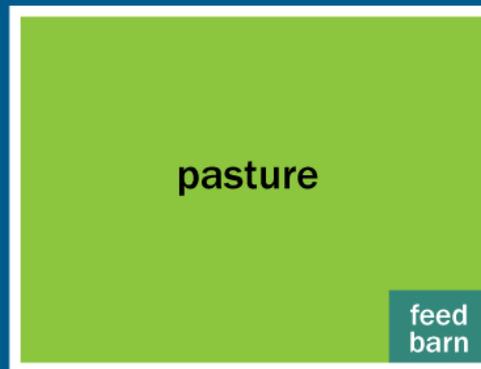
▶ 10 Yr Flood Elevations (as % of Total Acres*)	<u>North</u>	<u>South</u>	<u>Combined</u>
◦ Above zero elev./water surface, not forested	13%	23%	16%
◦ Between 0 and 3ft. below elev./water surface	12%	13%	12%
◦ Below 3ft. elev./water surface	70%	58%	66%

\*Approximately 6% of the acreage is forested and not included in the data.

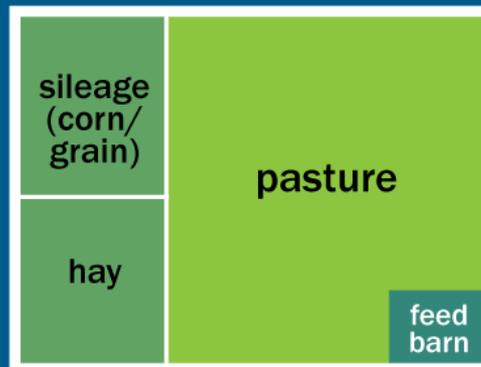
# Types of Floodplain Ag Operations

## Beef Operations (Cow/Calf vs. Finishing)

OPTION 1



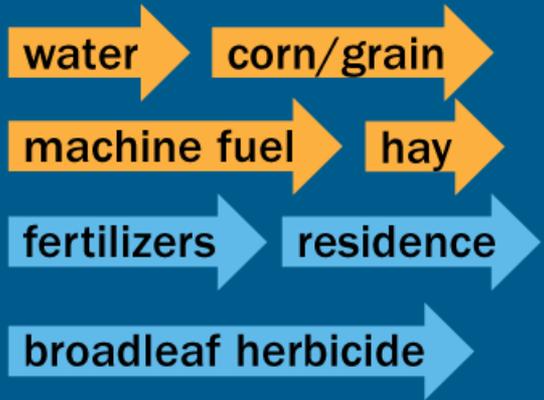
OPTION 2



# Beef Operations

(Cow/Calf vs. Finishing)

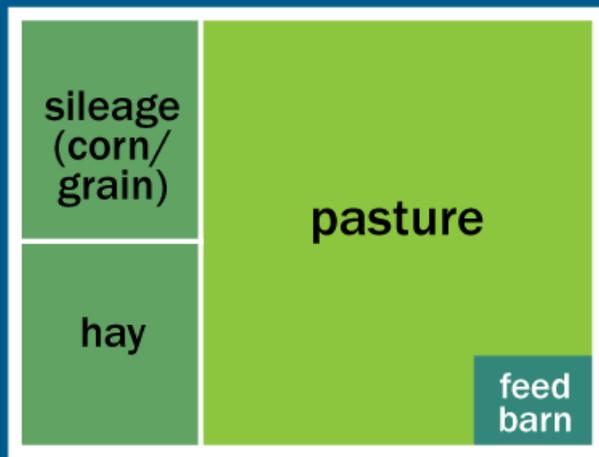
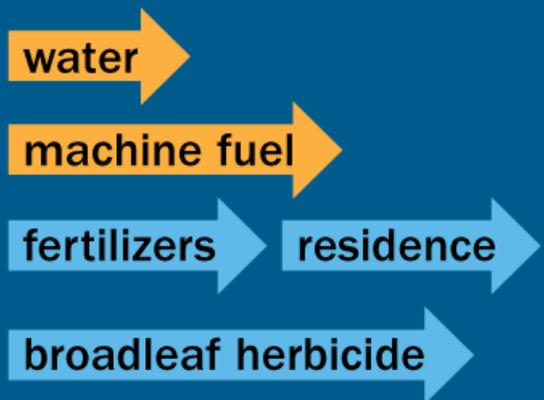
**Inputs** → **Potential Inputs**



OPTION 1

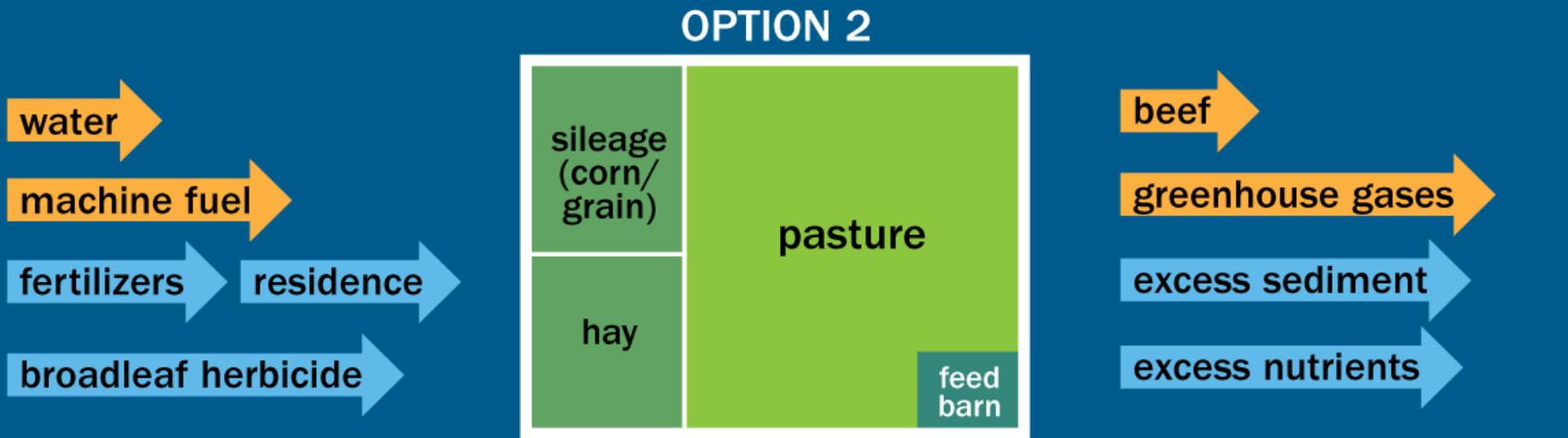
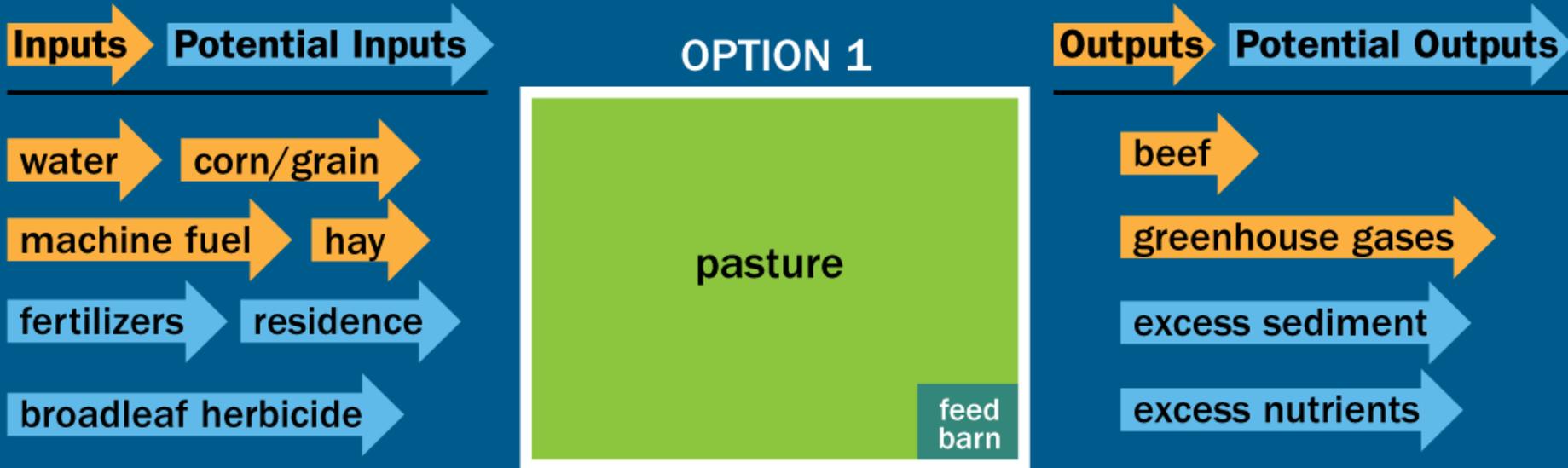


OPTION 2



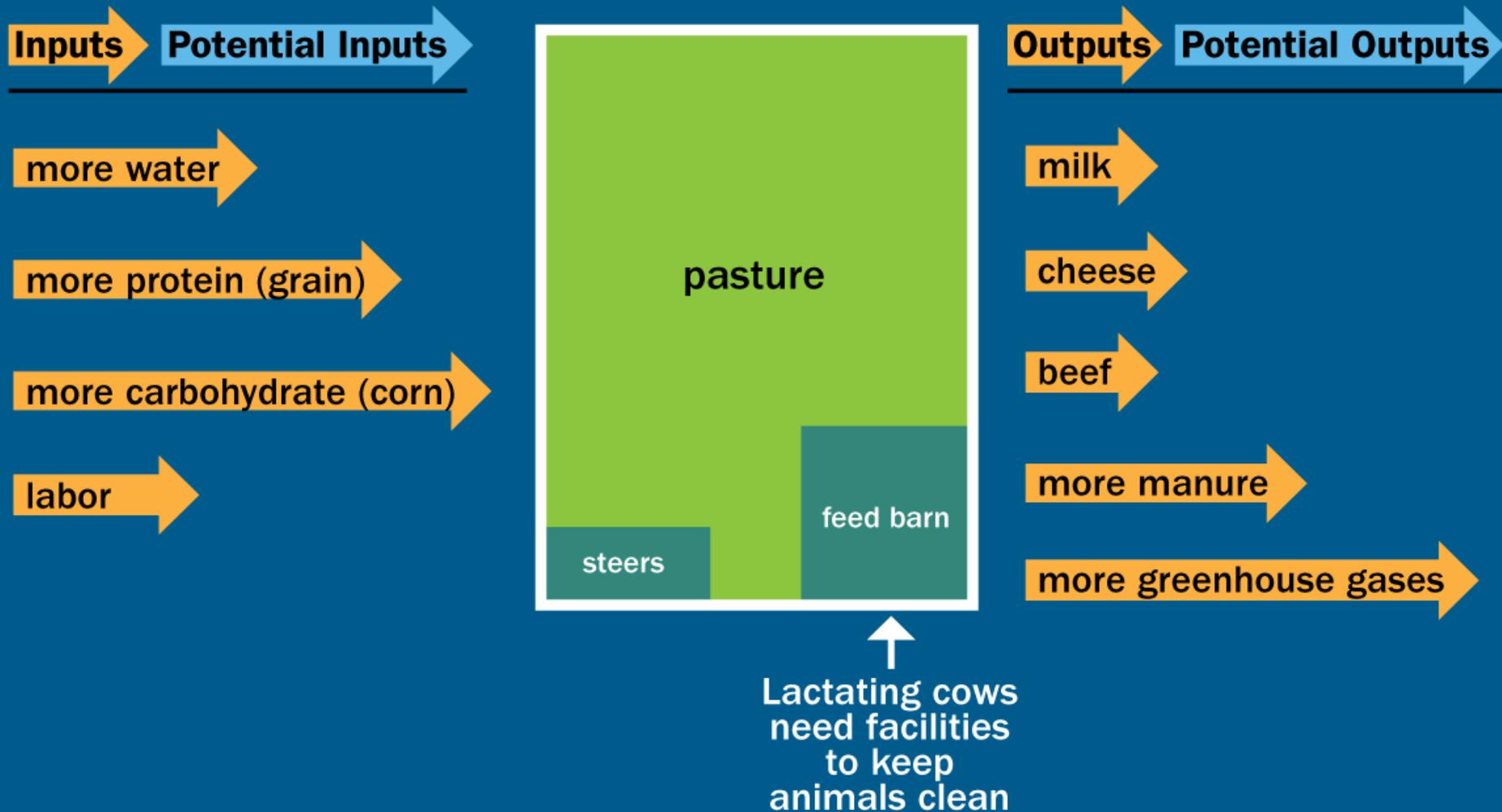
# Beef Operations

## (Cow/Calf vs. Finishing)



# Dairy Operations

compared to beef



# Horticultural Operations

## CONVENTIONAL HORTICULTURE



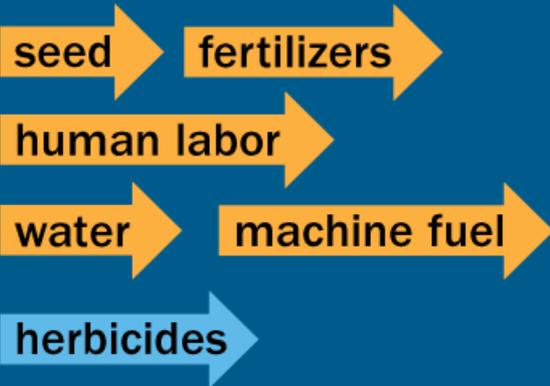
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## "NEW" HORTICULTURE



# Horticultural Operations

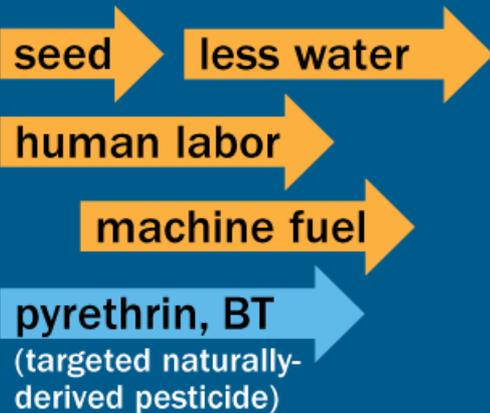
**Inputs** → **Potential Inputs**



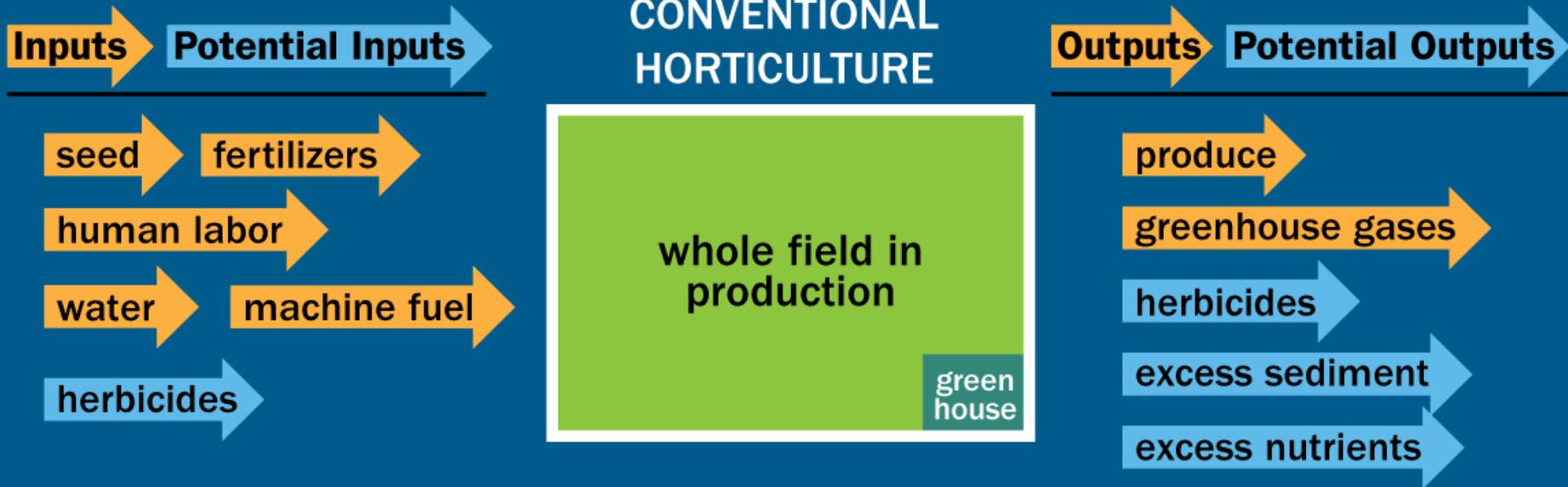
## CONVENTIONAL HORTICULTURE



## “NEW” HORTICULTURE



# Horticultural Operations



# Future of Dairy on West Side ?

- Lynden powered milk plant, growing interest in more from China.
  - 1999: 3 organic dairies sold to Organic Valley in Issaquah.
  - Today: 50 organic dairies sell to Organic Valley.
  - 30 raw milk dairies in state, most on west side.
  - Artisan cheeses – 25 in state, mostly west side.
- 

# “Food Security” and local food.

Assuming 2,000 calories a day,  
10,523 people can be fed on one acre  
of potatoes.

# Take away

- Soils and salmon are both endangered resources; abundance in decline.
  - Salmon and local agriculture: efficient food production, light ecological footprint.
  - The abundance that is Puget Sound and Puget Sound lowlands– unique in the world.
- 