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Rewriting the canola management playbook on oilseed production

W. L. Pan,
WA Biofuels Cropping Systems Coordinator

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Overall Program Objective

Increase sustainable regional crop feedstock production to support regional biofuel industries.

Increase the current ~10-15,000 acres feedstock crops to

~500,000 acres

to contribute to near term

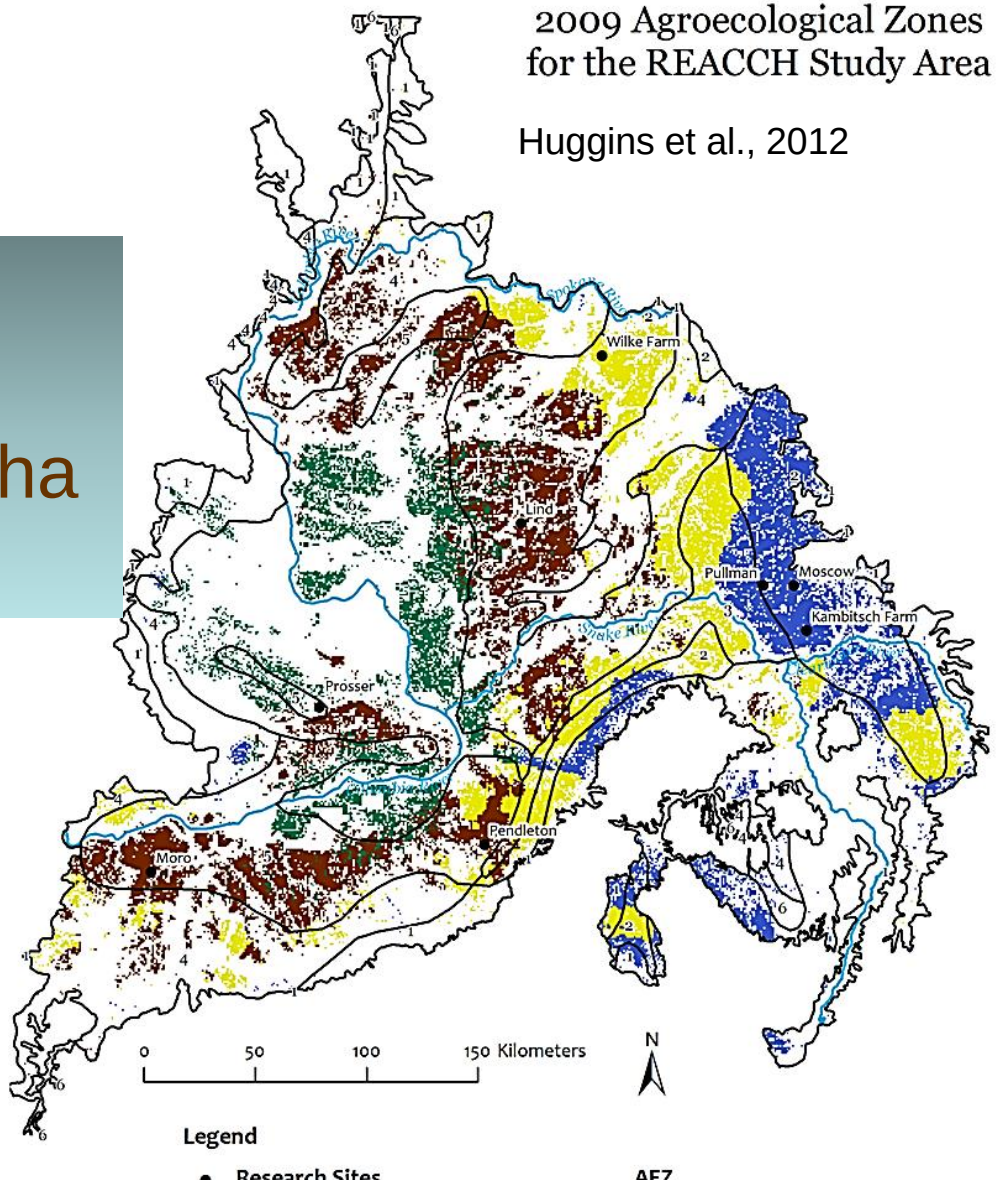
liquid biofuel demand.

Why canola, camelina?

- Proven high quality feedstock for liquid fuels
- PNW is one of the few wheat producing areas of the world that is not diversified with companion oilseeds in rotation.
- Agronomic, market diversity improves sustainability
- Farm operation adaptability

Inland Pacific Northwest Production Zones

- Annual crop: 559,000 ha
- **Transition: 661,000 ha**
- Wheat-fallow: 1,059,000 ha
- Irrigated: 789,0000 ha

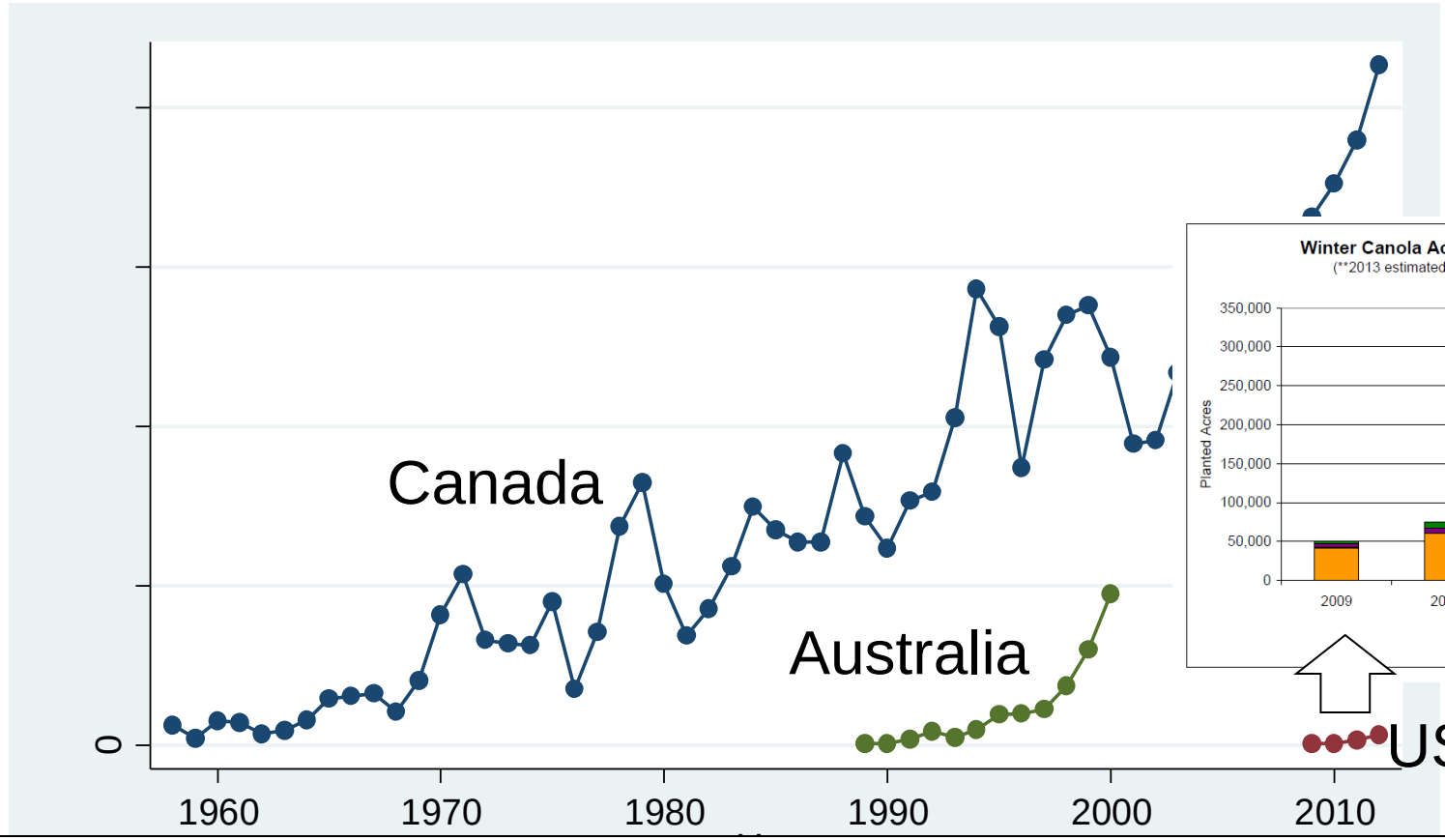


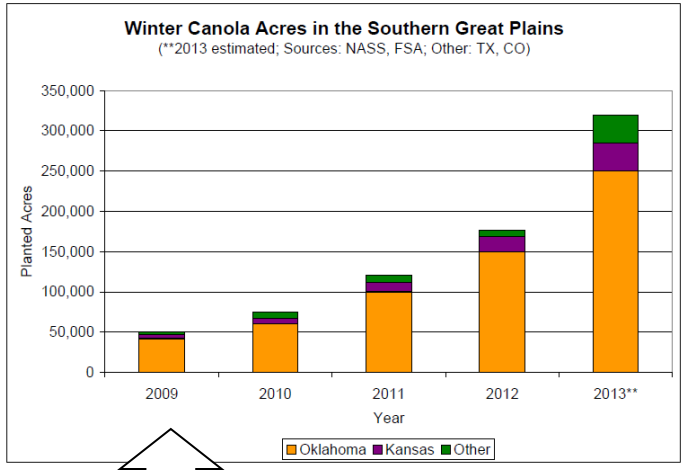
Unique canola growing conditions

Area	Minimum Temp	Maximum Temp	Annual Precipitation	%Precipitation During Major Growing Season	Soils
Inland PNW	-15* to -5 ºC	30-38 ºC**	260 to 660 mm	20-40%	fertile, high H_2O capacity
US Great Plains	-17 to -2°C	25 to 41°C	100 to 840 mm	70-75%	fertile, high H_2O capacity
Canadian Prairies	-21 to -15* ºC	30 to 32°C	250 to 510 mm	>50%	fertile, high H_2O capacity
SW Australia	+4 to 5º C	30 to 35 ºC	325 to 700 mm	65-75%	Old, less fertile

*freeze kill **flower, pod abortion

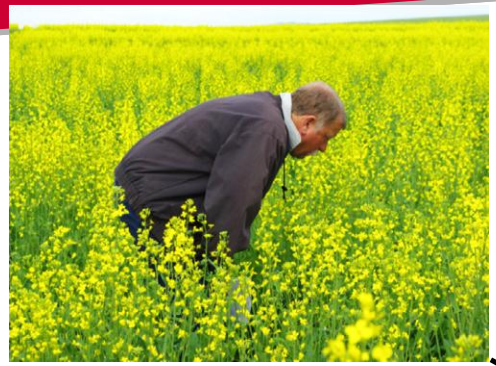
Canola Adoption in Semi-Arid World Regions

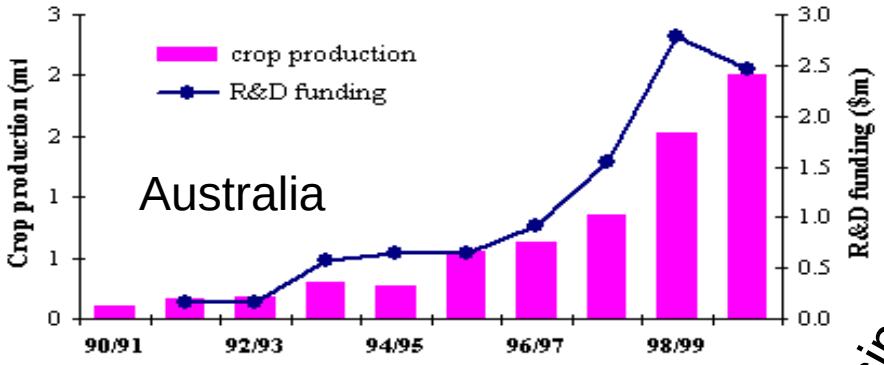


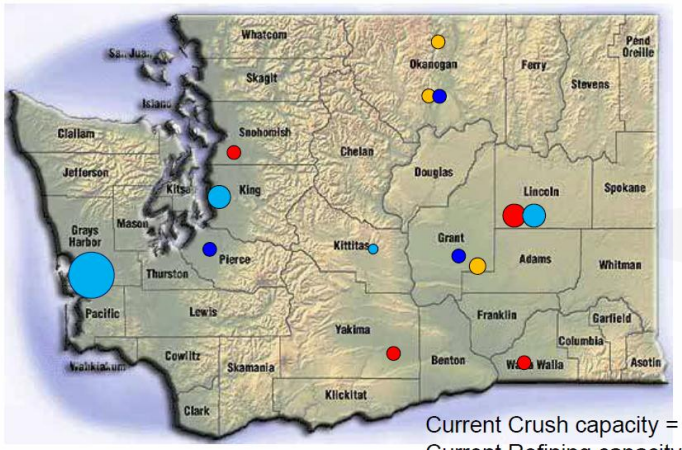


US Great Plains

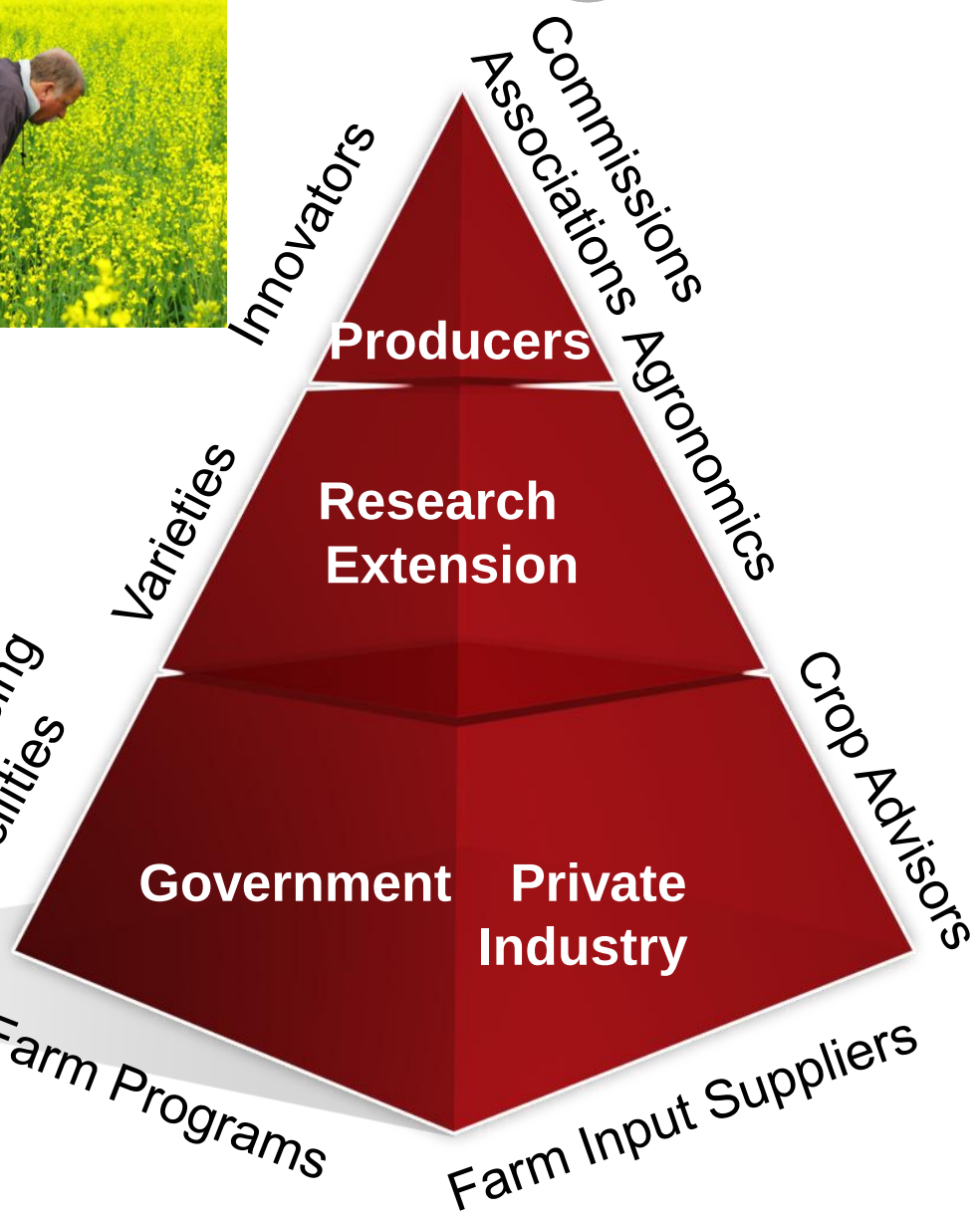
New Crop Adaptation







Current Crush capacity = ~50,000 T/yr
Current Refining capacity = 100+ MGY



Evolving changes in the PNW canola management playbook:

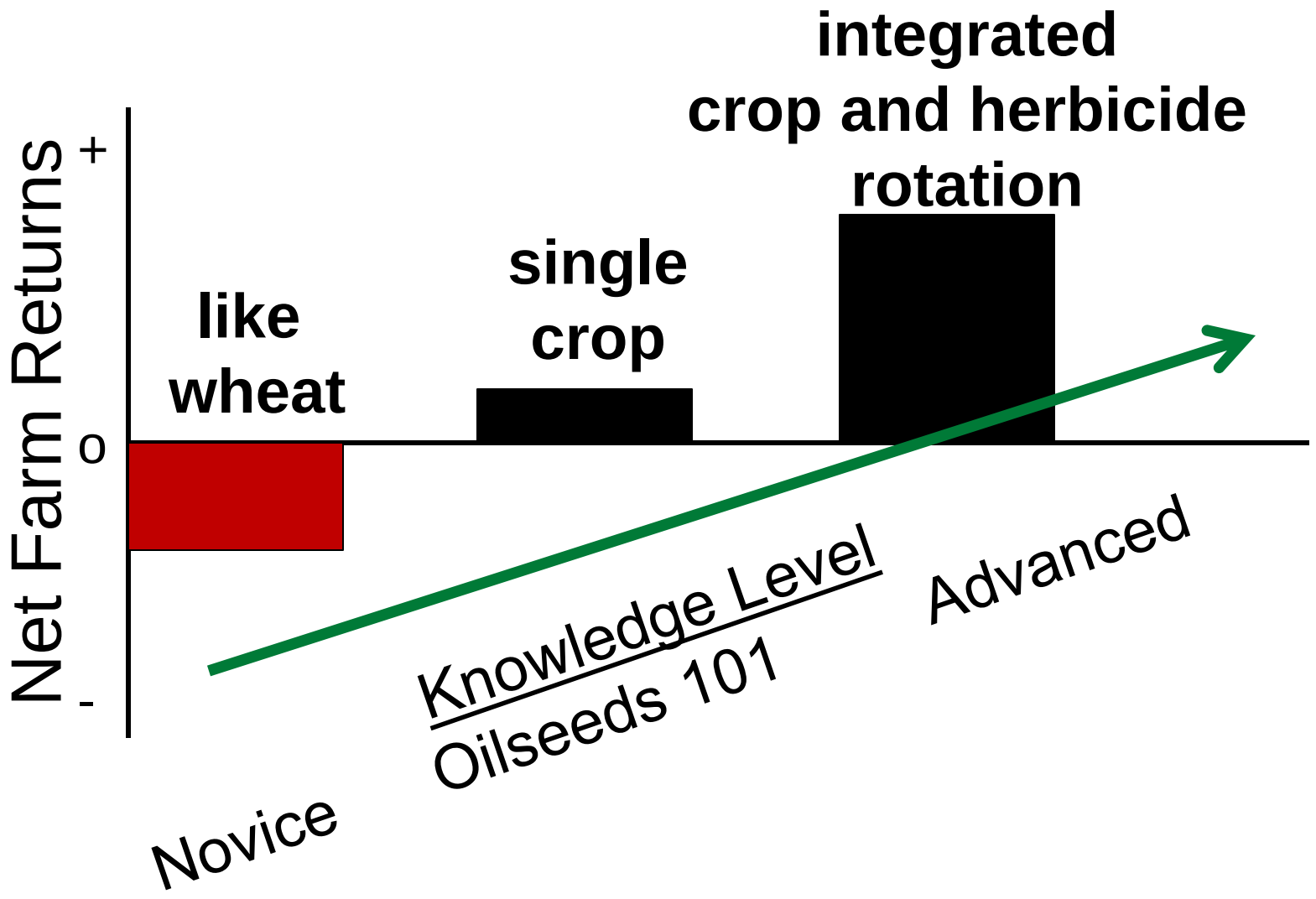
matching unique environment with unique management and varieties

- N fertilizer requirements and timing/placement
- Water use
- Seedbed establishment
- Tailored crop and herbicide rotations
- Biennial canola: forage + grain

PNW Advantages

- Mediterranean climate
  - High N use efficiency
  - Lower pest pressures
- Productive, deep soils
- Zones for producing winter and spring oilseed types-opportunities for diversity of oil characteristics

Oilseed Adoption Curve



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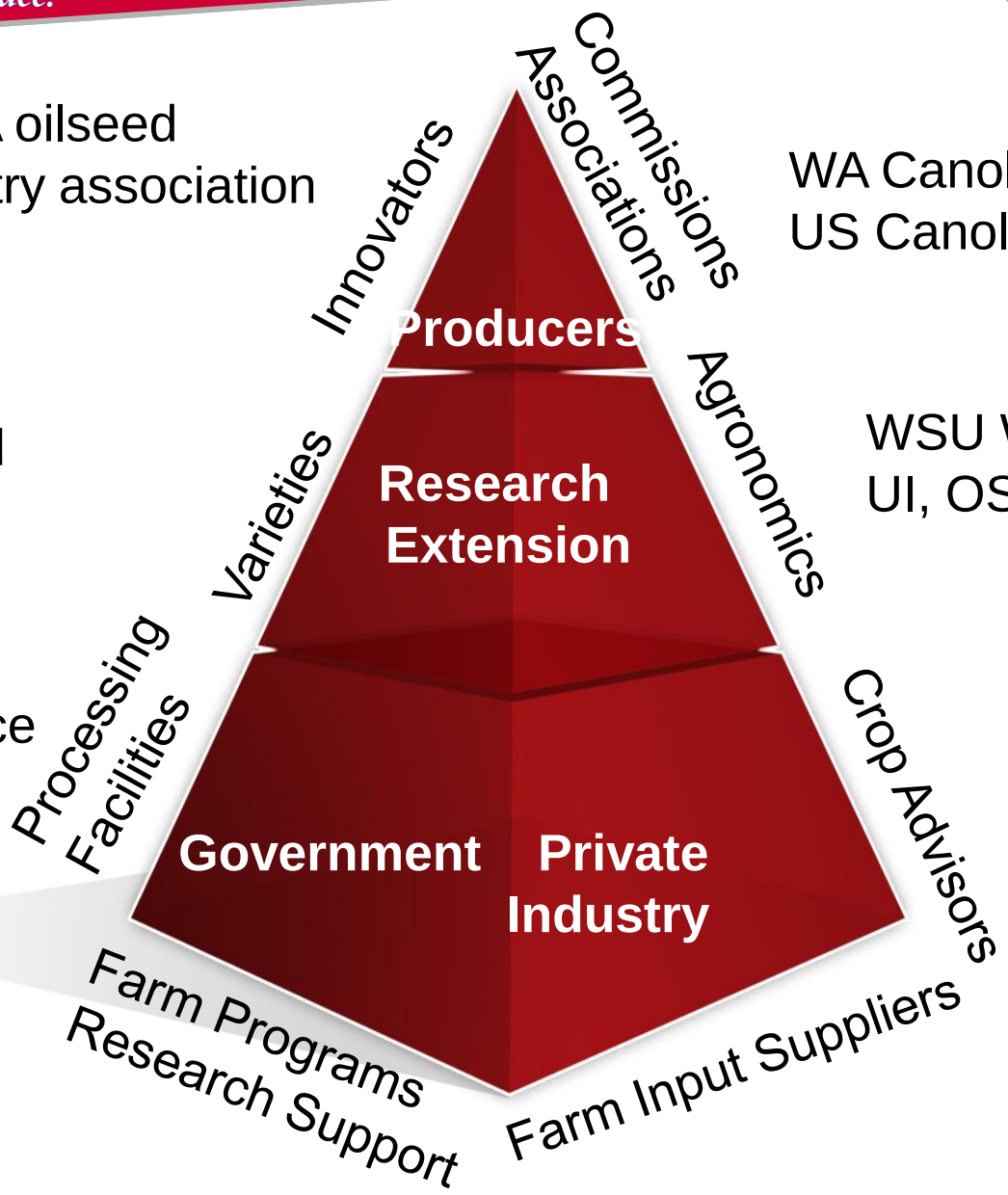

emerging WA oilseed grower/industry association

WA Canola Commission
US Canola Association

private, public breeders, seed suppliers

WSU WBCS, UI, OSU R&E

crushers and processors; WSDA, Commerce Cons. Dist., EPA WSU, UI, OSU, USDA

FWAA, farm retailers