

# Barley

The Renewable Fuel Grown In  
Alaska





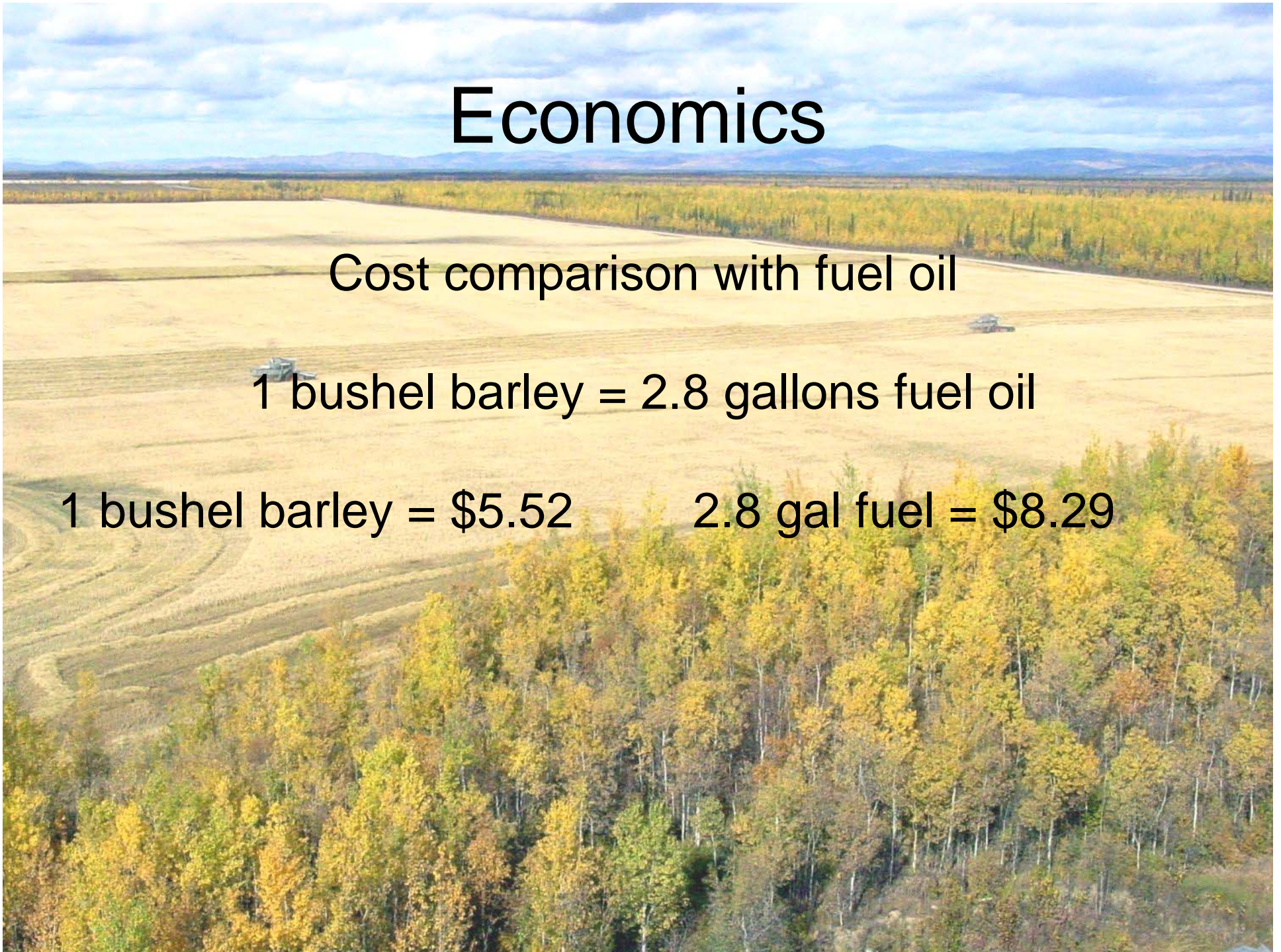
# Economics

Cost comparison with fuel oil

1 bushel barley = 2.8 gallons fuel oil

1 bushel barley = \$5.52

2.8 gal fuel = \$8.29





# Economics

Cost per million BTU

$$1,000,000 / 393,600 \times \$5.52 / .85 = \$16.50 \text{ (barley)}$$

$$1,000,000 / 142,393 \times \$2.96 / .85 = \$24.46 \text{ (fuel oil)}$$

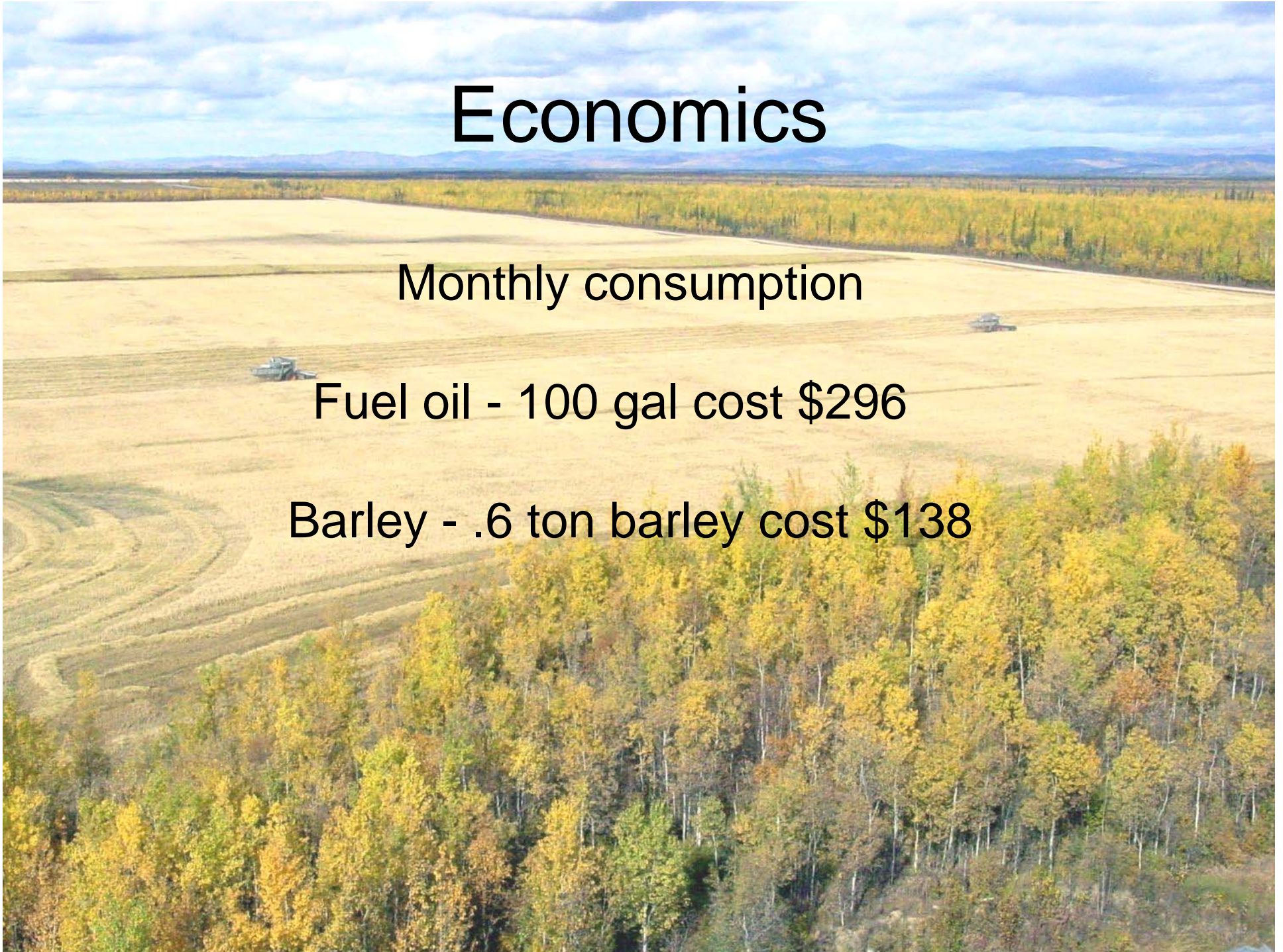


# Economics

Monthly consumption

Fuel oil - 100 gal cost \$296

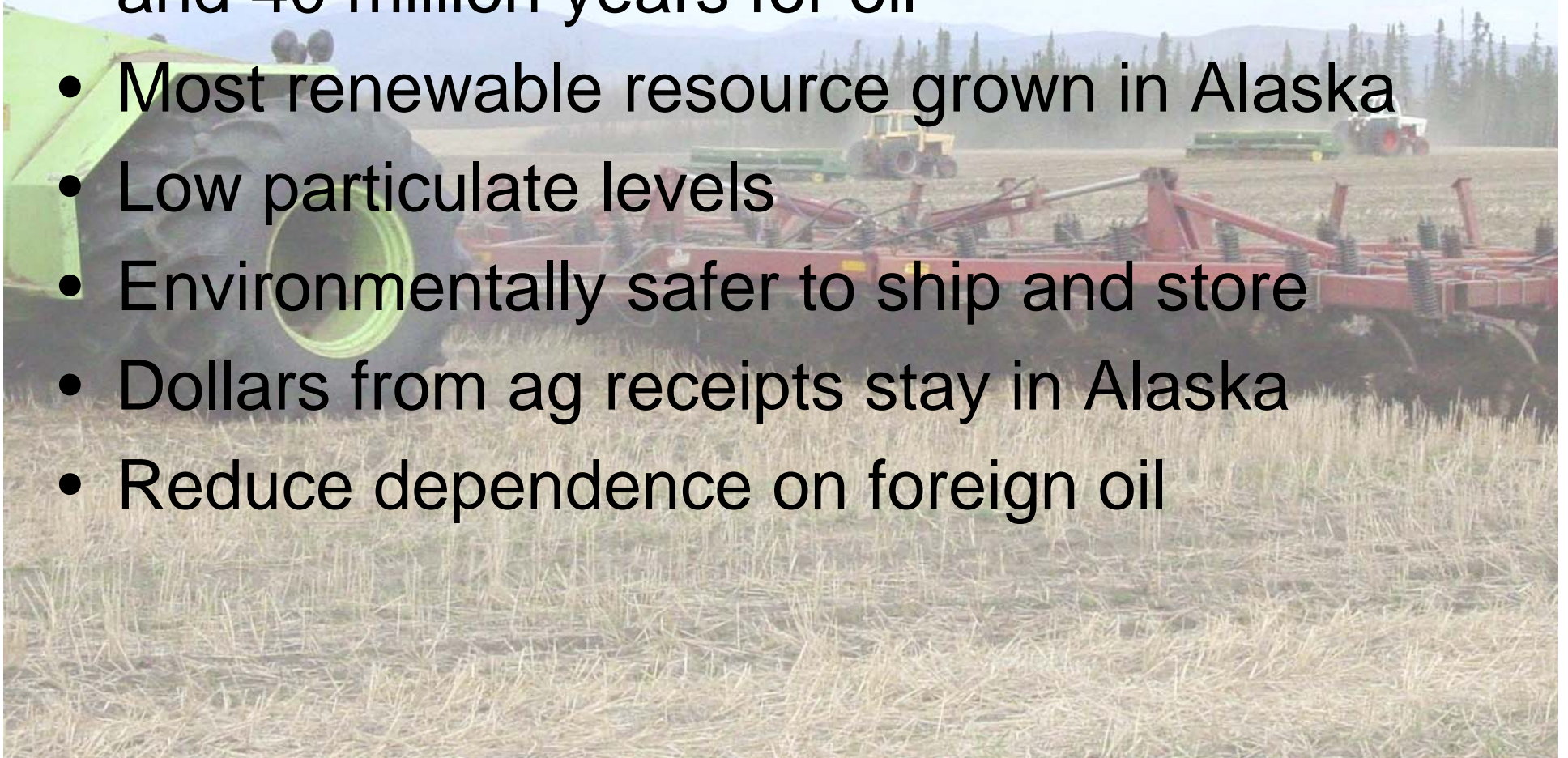
Barley - .6 ton barley cost \$138





# Benefits of Barley Fuel

- 1 year harvest cycle vs. 100 years for wood and 40 million years for oil
- Most renewable resource grown in Alaska
- Low particulate levels
- Environmentally safer to ship and store
- Dollars from ag receipts stay in Alaska
- Reduce dependence on foreign oil





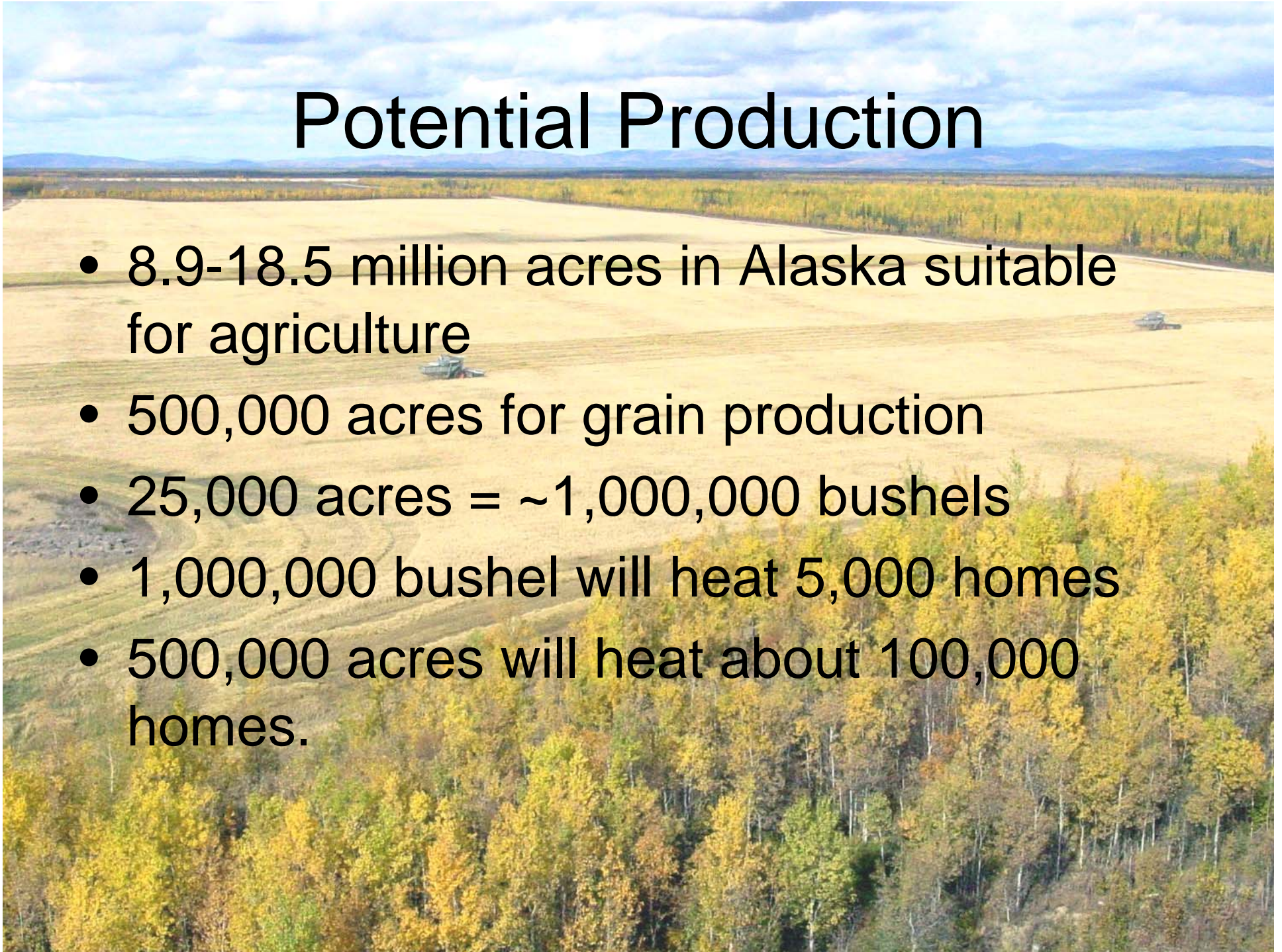
# Current Production Capability

- Markets are the limiting factor to grain production in Alaska
- ~4,000 acres of barley grown in Delta last year
- 18,000 acres in Delta in < 2 years
- 25,000 acres < 3 years
- 50,000 acres is possible by 2015



# Potential Production

- 8.9-18.5 million acres in Alaska suitable for agriculture
- 500,000 acres for grain production
- 25,000 acres = ~1,000,000 bushels
- 1,000,000 bushel will heat 5,000 homes
- 500,000 acres will heat about 100,000 homes.







Bio-diesel



# Moving Forward

- Include barley and other farm products in the state energy plan
- Include barley fuel in the Heating Assistance Program
- Consider a program to assist villages to transition to barley heat
- Fund research for other bio-fuels produced on Alaskan farms



# Questions

- Is it ethical to use feed for fuel?
- Is there be enough barley to meet feeding needs and also burn?

