Propane in the Agriculture Market

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National Propane Gas Association
Propane in Rural America

- 50% use propane in their home.
- 40% use propane on their operation.
  - ~829,000 customers.
  - ~1,000,000,000 gallons.
  - >10% of all sales.
How is propane used on ag operations?

2015 Farm Incentive Program, Irrigation Engine Participants

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furnace</td>
<td>14</td>
</tr>
<tr>
<td>Water heater</td>
<td>14</td>
</tr>
<tr>
<td>Other irrigation engine</td>
<td>12</td>
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<tr>
<td>Forklift</td>
<td>12</td>
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<tr>
<td>Indoor space heater</td>
<td>9</td>
</tr>
<tr>
<td>Grain dryer</td>
<td>7</td>
</tr>
<tr>
<td>Cookstove</td>
<td>6</td>
</tr>
<tr>
<td>Generator</td>
<td>3</td>
</tr>
<tr>
<td>Grill (outdoor)</td>
<td>3</td>
</tr>
<tr>
<td>Oven</td>
<td>3</td>
</tr>
<tr>
<td>None</td>
<td>11</td>
</tr>
</tbody>
</table>

75% of the participants use other propane-powered equipment.
Over 80% of the participants use other propane-powered equipment.
How is propane used on ag operations?

2015 World Ag Expo, Survey Participants

- Forklift: 1000 gal
- Other: 1000 gal
- None: 0 gal
- Irrigation Engine: 5000 gal
- Weed Control: 1000 gal
- Water Heat: 1000 gal
- Generator: 5000 gal
- Tractor: 5000 gal
- Greenhouse Heat: 20,000 gal
- Vehicle: 2000 gal
- Mower: 5000 gal
- Animal Heat: 30,000 gal
- Grain Dryer: 20,000 gal
- Wind Machine: 5,000 gal
- Orchard Heater: 5,000 gal
Details: Irrigation Engines

- Growth market for propane.
- Summer load.
- Demand is driven by Tier 4f regulations.
- Propane, electric, diesel, and natural gas.
- New generation of engines.
Details: Crop Dryers

- Mature market. Seeing productivity and efficiency improvements.
- Pre-winter load.
- Can use 20,000 gallons or more a season.
- Propane and natural gas. About 80% of grain dryers use propane, but about 80% of demand is for natural gas at commercial grain dryers.
- High demand in a short season.
• Mature market. Seeing productivity and efficiency improvements.

• Can use 20,000 gallons or more per year.

• Propane plus natural gas, plus some biomass and heating oil.

• Companies moving to new locations.
Details: Animal Heat

• Mostly swine and poultry. Some dairy.

• Mature market. Seeing productivity and efficiency improvement.

• Can use 30,000 gallons or more per season.

• Propane plus natural gas and biomass.
• Growing market as organic ag grows.

• Uses 4-10 gallons per acre per treatment. Typically two treatments per year.

• Competitive vs herbicides in traditional ag at current propane prices.
A Farm Could Use Around 100,000 Gallons/Year
U.S. Propane Demand in Agriculture

![Propane Demand in Agriculture Graph](chart.png)

- **Other Agriculture**
- **Irrigation Engines**
- **Grain Drying**

Source: API Survey
U.S Propane Demand Outlook

Source: ICF International
U.S. Propane Supply Outlook

Source: ICF International
Reasons why agriculture operations choose propane.

- Equipment cost.
- Installation cost.
- Operating cost.
- Environmentally friendly.
- Proven and reliable.
- Portable and mobile.
- Storable.
- No theft.
- Clean, American Energy
The real advantages operations see with propane.

- A committed partner.
- Unique service.
- Knowledgeable support.
- Real solutions.
- Off-the-grid operations.
- Convenience.
- Connections.
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WE ARE MORE THAN ENERGY
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