

Flaming

for Weed Management on Small Farms

Ted Radovich

**Sustainable Farming Systems Laboratory
Department of Tropical Plant and Soil Sciences**

University of Hawaii at Manoa

3190 Maile Way, St. John 102

Honolulu, Hawaii 96822

PHONE: 808-956-7909

FAX: 808-956-3894

www2.hawaii.edu/~theodore





Flaming

Basic principles

- **Most effective on broadleaf weeds.**
- **Grasses more resistant.**
- **Can be done before and after crop emergence.**
- **Tolerance of crops to flaming varies with species and size.**



Flaming

Rates

- **Recommended rate = 18-27 pounds propane per acre.**
- **1 gallon liquid propane = 4 pounds.**
- **5-7 gallons of liquid propane per acre.**

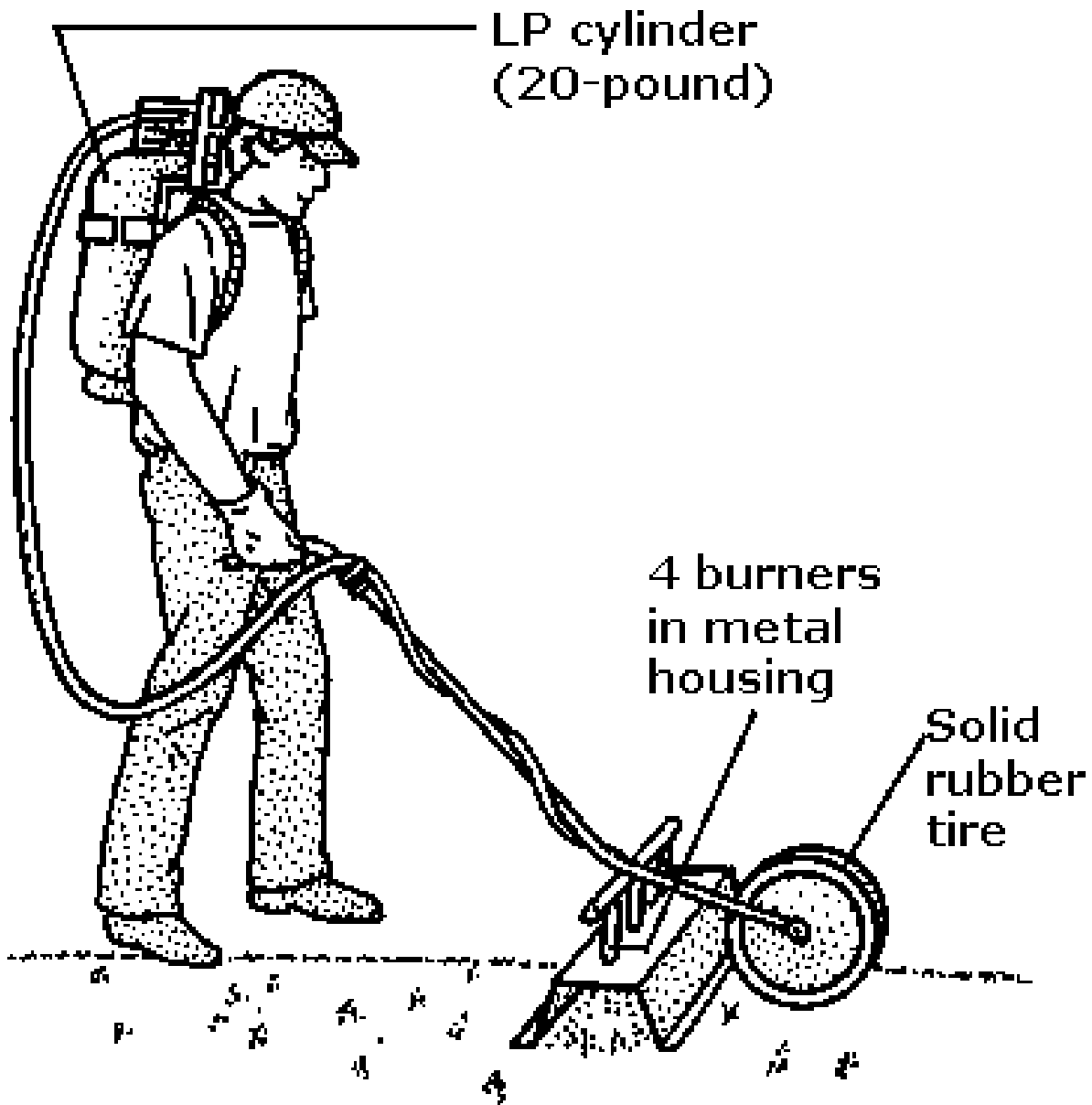


Flaming

Basic principles

- **High temperatures burst cells (not burn plants).**
- **Weeds should be small (< 3”).**
- **Weeds should be well-watered, but with dry leaf surface.**
- **Flaming at night increases efficacy**











A black irrigation pipe runs diagonally across a field of young green plants. The soil is dark brown and appears to be in a newly planted area. A white text box with the words "Watch out!" is overlaid on the left side of the image.

Watch out!



Stale seed bed technique

- This technique is used to exhaust the active seed bank in the first several inches of soil.
- The area is tilled, fertilized and irrigated to promote weed germination.
- Flame newly emerged weeds to kill them.
- A second flush of seeds may be germinated and killed.
- Seeds or transplants are placed in the field with minimal or no tillage to avoid promoting new germination.



Resources

STEEL IN THE FIELD (book)

<http://www.sare.org/publications/steel/index.htm>

FLAMING Website

<http://www.attra.org/attra-pub/flameweedveg.html>

Airgas/Gaspro Airgas Gaspro 2305 Kamehameha Hwy., Honolulu, HI 96819, (808) 842-2222.

Peaceful Valley Farm Supply, P.O. Box 2209, 125 Clydesdale Court, Grass Valley, CA 95945, (530) 272-4769.

<http://www.groworganic.com>

Flame Engineering, Inc., P.O. Box 577, LaCrosse, Kansas 67548, 1-888-388-6724, <http://www.flameengineering.com>

