

# Request a Biochar Kiln Demonstration



An in-person demonstration and discussion to raise awareness about making and using biochar. Weather and fire restrictions permitting.

## LOCATION REQUIREMENTS:

- Burn permit, and/or participation from a professional fire crew to assure fire safety.
- A light water tender and driptorch, or a reliable water source and way to ignite the kiln.
- A sufficient clearing to safely conduct a fire, 30 ft. radius, or more ideally.
- Roughly 1.5 cubic yards of woody waste pr forest debris, 1” to 4” branches, in 3’ to 4’ lengths or less. Dry is best for the demonstration.

**WORKSHOP GOAL:** Raise awareness about biochar and demonstrate biochar production using a flame-cap kiln.

**EVENT DESCRIPTION:** Biochar are charcoal particles mixed with soil. Participants will learn about building and using a portable flame cap kiln for demonstrating how to make biochar. Details such as burn permits, fire safety, a water source, and lighting and quenching the fire are discussed. Emerging markets for biochar include:

- An agricultural and horticultural soil amendment to improve water retention and nutrient availability;
- Hazardous fuels reduction in forests and wildland urban interface communities, as well as reduction of yard waste;
- Contaminant adsorption for dairies, landfills or mining;
- Production of bioenergy fuels including syngas and bio-oil; and
- Direct carbon sequestration: the half-life of a biochar molecule is 1,000 years.

Benefits and challenges of using biochar are discussed, including: raising awareness about biochar; creating markets; feedstock properties and variability; and matching biochar qualities to specific applications.

**AUDIENCE:** Hazardous fuel reduction managers and volunteers, gardeners and composters, ranchers, landfill & waste management industry, non-industrial forest lands, state, county, tribal and federal lands, mining companies, turf industry, sawmills, horticulture and agriculture industry.

To schedule a demonstration and for more information, contact:

**PRESENTER: Chris Jones, Extension Agent**  
Agriculture & Natural Resources Programs

University of Arizona  
Gila County Cooperative Extension  
5515 S Apache Avenue, Suite 600  
Globe, AZ 85501  
U.S.A.

Phone: (928) 402-8586

Email: [ckjones@email.arizona.edu](mailto:ckjones@email.arizona.edu)

#### **Selected Extension resources about biochar:**

- <https://forestry.usu.edu/news/utah-forest-facts/hazardous-fuels-reduction-using-flame-cap-biochar-kiln>
- <https://extension.arizona.edu/pubs/guide-making-using-biochar-gardens-southern-arizona>

#### **Biochar Related Resources:**

- Utah Biomass Resources Group: <https://ubrg.usu.edu/>
- UA Gila County Forest Health Extension YouTube Playlist: [https://www.youtube.com/playlist?list=PLfm\\_TJZ-97vX3xCEZSKkviDEIOv4qmLjc](https://www.youtube.com/playlist?list=PLfm_TJZ-97vX3xCEZSKkviDEIOv4qmLjc)
- United States Biochar Initiative: <https://biochar-us.org/>
- USDA Forest Service Rocky Mountain Research Station:
  - <https://www.fs.usda.gov/rmrs/people/ddumroese>
  - <https://www.fs.usda.gov/rmrs/people/nathanielmanderson>
- USDA Forest Service Wood Innovations: <https://www.fs.usda.gov/science-technology/energy-forest-products/wood-innovation>
- Quivira Coalition Carbon Ranch Initiative: <https://quiviracoalition.org/carbon-ranch-initiative/>