

TEN DESIGN PRINCIPLES FOR WOOD BURNING STOVES



Aprovecho Research Center
Advanced Studies in Appropriate Technology



By Dr. Larry Winiarski

- 1** *Insulate around the fire* using lightweight, heat-resistant materials.
- 2** Place an insulated short *chimney right above the fire* to burn up the smoke and speed up the draft.
- 3** Heat and burn the *tips of the sticks* as they enter the fire to make flame, not smoke.
- 4** High and low heat are created by *how many sticks* are pushed into the fire.
- 5** Maintain a *good fast draft from under the fire*, up through the coals. Avoid allowing too much extra air in above the fire to cool it.
- 6** *Too little draft* being pulled into the fire *will result in smoke and excess charcoal*.
- 7** *Keep unrestricted airflow* by maintaining constant cross sectional area through the stove. The opening into the fire, the size of the spaces within the stove through which hot air flows, and the chimney should all be about the same size.
- 8** Use a *grate* under the fire.
- 9** *Insulate the heat flow path*, from the fire, to and around the pot(s) or griddle.
- 10** Maximize heat transfer to the pot with *properly sized gaps*.