

Online Resources

ATTRA

- Appropriate Equipment for Sustainable Agriculture https://attra.ncat.org/newsletter/attra-news_spring07.html
- Market Gardening – A Startup Guide. Includes a table about selecting equipment and equipment needs for market garden of various sizes. <https://attra.ncat.org/attra-pub/marketgardening.html#selecting>
- Resource Guide to Organic and Sustainable Vegetable Production <https://attra.ncat.org/attra-pub/vegetable-guide.html>
- Draft Animal Power for Farming. Has a section on horse-drawn equipment. https://attra.ncat.org/attra-pub/draft_animal.html
- Conserving Fuel on the Farm. For maintenance of equipment that is powered by gas. <https://attra.ncat.org/attra-pub/consfuelfarm.html>



Other Online Resources

- Buying Farm Equipment. Small Farm News, Fall 1998. <http://sfp.ucdavis.edu/pubs/sfnews/Fall98/farmequip.html>
- Grower to Grower: Creating a Livelihood on a Fresh Market Vegetable Farm. Has several sections on farm equipment and an appendix about equipment options at different farm scales. <http://www.cias.wisc.edu/wp-content/uploads/2008/07/grwr2grwr.pdf>
- UC Small Farm Program. Search the word ‘equipment’ and you’ll get a long list of resource publications, including many cost studies. These have a section on useful equipment for that crop. Some are a little outdated but it’s a good place to start. <http://sfp.ucdavis.edu/>
- Healthy Farmers, Healthy Profits Project. Has a list of tip sheets for vegetable growers to help improve productivity and personal comfort by using certain tools, equipment, etc. Only some are equipment related. <http://bse.wisc.edu/hfhp/tipveggy.htm>
- Maintaining Farm Vehicles and Machinery. Includes links to maintenance checklists for different machines and safety information. The legal side of using equipment on your farm and around workers. <http://www.businesslink.gov.uk/bdotg/action/detail?itemId=1083572202&type=RESOURCES>

Print Resources

- ***Small Farm Handbook***. 2nd Edition. 2011. UC ANR Publication #3526. Buy online: <http://anrcatalog.ucdavis.edu/Items/3526.aspx> Has a great section on buying used equipment.
- ***Backyard Market Gardening: The Entrepreneur's Guide to Selling What You Grow***. 1993. Andrew W. Lee. Good Earth Publications, Columbus, NC. Good section on farm equipment with photos. Most of the book is geared to the marketing and business side of market gardening.”
- ***Sustainable Vegetable Production from Start-Up to Market***. 1999. Vern Grubinger. Helpful to farmers just starting to mechanize, overview of the types of equipment appropriate for small vegetable farms.

- **Used Farm Equipment: Assessing Quality, Safety, and Economics.** NRAES (Natural Resource, Agriculture, and Engineering Service). Buy online: http://www.nraes.org/nra_order.taf?_function=detail&pr_id=130&_UserReference=B045A1AC05F5C6334E135CB1 Shows how to inspect machinery for reliability and safety . Covers the economics of owning and operating used machinery and methods of acquiring it.
- **Getting Started in Farming on a Small Scale.** USDA Publication. Free hardcopy on request. 202.401.4587, Fax: 202.401.5179, E-mail: llewis@reeusda.gov

Periodicals

- **VGN (Vegetable Growers News)** <http://www.vegetablegrowersnews.com> Search “equipment”. Has a great list of equipment suppliers in the back. Stories about innovative/alternative equipment. <http://vegetablegrowersnews.com/index.php/search/results/19411dcc68a7bae3a94d985d49248e2c/>
- **Small Farm Today Magazine** <http://www.smallfarmtoday.com/content-subscribe.html> The November/December issue of the magazine is focused on the topic of equipment, herbs, and greenhouses. You can order a yearly subscription or simply buy the November/December issue for \$4.95.
- **Growing for Market** (<http://www.growingformarket.com/>) Print or on-line subscriptions.
 - DIY Tractor (May 2011) Ever think about building your own tractor? Most farmers haven't, but that could change as word spreads about LifeTrac, an open source tractor that can be built for \$4,000 in materials. More info on this tractor at <http://opensourceecology.org/wiki/LifeTrac?old-url=true&title=LifeTrac>
 - Choose the Best Spreader for Your Fertility Needs (Aug 2010)
 - Internet Can Help you Find Used Tractors, Parts (Mar 2003)
 - Basic Tools for Mechanical Cultivation (Aug 2008) Need to weed? An equipment expert describes the basic tools and methods for weeding vegetable crops mechanically.
 - Essential Equipment for 10-Plus Acres (Jan 2011)
- **Small Farm Today** <http://www.smallfarmtoday.com/BackIssues.html>. Each back issue is \$5.00.
 - November/December 2001. Has a section about vegetable grower equipment.
 - November/December 2003. Has a section on small farm equipment.
 - Equipment Primer (10 pages): \$4.50. A three-part series on equipment for the small farm, including descriptions and pictures.



ATTRA News Tools for Small Farms

Lee Rinehart, NCAT Agriculture Specialist

Hand-held and non-motorized farm equipment is a great choice for small farms. Low-input, appropriate technology such as human-powered seeders, subsoiling forks, cultivators, hoes, and good old shovels exercise the muscles as well as the soil (and the soul, too). These human-powered tools are quiet, don't produce fossil fuel emissions that hurt the environment, and allow people to make a more solid connection with the land. The following suppliers offer an assortment of tools especially well-suited to small farms:

- **Earth Tools:** Heavy, well-made, substantial hand tools for the serious farmer. Owenton, Kentucky; 502-484-3988; www.earthtoolsbcs.com
- **Hida Tools:** Specializing in Japanese handcrafted weeders, hoes, sickles, and cutting implements. Berkeley, California; 800-443-5512; www.hidatool.com
- **Johnny's Selected Seeds:** Complete line of tools for the gardener or commercial grower, including flame weeders, Glaser wheel hoes, row covers, and more. Winslow, Maine; 877-564-6697; www.johnnyseeds.com
- **Lee Valley Tools:** Extensive inventory of gardening tools and implements. Ogdensburg, New York; 800-267-8735; www.leevalley.com
- **Peaceful Valley Farm and Garden Supply:** Full line of hand tools, orchard supplies, bare root stock, cover crop seed, and bulbs. Grass Valley, California; 888-784-1722; www.groworganic.com/default.html
- **Seeds of Change:** Seeds, digging and cultivating tools, hand tools, rakes and hoes, and seed-saving supplies. Santa Fe, New Mexico; 888-762-7333; www.seedsofchange.com



Emission Standards for Farm Equipment – from SARE website <http://www.sare.org/>

- EPA <http://www.epa.gov/nonroad/>
- California Air Resources Board <http://www.arb.ca.gov/msprog/offroad/preempt.htm>
- San Joaquin Air Pollution Control District http://www.valleyair.org/General_Info/AGLoader.htm
- Santa Barbara Air Pollution Control District <http://www.sbcapcd.org/itg/itg.htm>
- West Coast Collaborative <http://www.westcoastcollaborative.org/grants/or-const-equip-emissions.htm>
- Diesel Forum <http://www.dieselforum.org/where-is-diesel/farming-mining-construction/>
- Florida Departments of Agriculture and Environment - covers both water and air pollution <http://www.floridadep.com/water/nonpoint/docs/nonpoint/agbmp3p.pdf>
- From the Seattle Times: http://seattletimes.nwsourc.com/html/nationworld/2002049879_diesel30m.html
- For compliance look at these tools:
<http://www.cdfa.ca.gov/exec/aep/aes/AgReg/tool.htm>; <http://www.agcomplyit.com/index.cfm>



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