

Build a hands-free washer

Market gardeners have few inexpensive mechanical devices for washing produce by hand. They often wash produce at a spray table with a garden hose and hand held spray nozzle. For under \$50, you can make a simple sprayer that does not need to be held or squeezed by hand. With both hands free, you can process produce faster and more efficiently with less strain on your body.

What's wrong with a garden hose and nozzle?

Usually people use their dominant hand to grasp the spray nozzle and direct it at the produce, and their other hand to turn the produce as it gets washed and to move it to a box for packing. This can cause hand, wrist and arm fatigue from gripping the nozzle and holding the hose, and awkward postures as you move your body to reach the produce. Most garden hose nozzles spray water at higher pressure than needed to wash vegetables. This wastes water, and may also damage produce, resulting in shorter shelf life and wasted effort.



Old way: One hand always grips the sprayer.



New way: both hands free for washing

Benefits of using fixed sprayers:

Less stress on the body. A hands-free washer allows you to wash the produce comfortably and efficiently. For most right-handed workers, this means moving the produce through the stream from your left hand to your right. Since you eliminate the need to hold, squeeze and direct the hose, your hands and arms are less likely to fatigue.

Faster. Using a hands-free washer can be nearly 40% faster than using a hose and nozzle. Faster washing means higher quality produce and savings in labor time.

Less damage to crop. You can choose a nozzle with the right spray pattern for your job. For example, use a strong spray for roots and a gentle spray for leafy greens.

Will using a fixed sprayer save me money?

Total cost for parts to make a fixed sprayer ranges from \$25-\$70, depending on what type of nozzle you buy. This investment will be quickly made up in labor savings. You will also indirectly save money by improving product quality and preventing stress and strain on your body.

WORK EFFICIENCY



Tip Sheet

A series of tip sheets on labor efficiency for fresh-market vegetable growers.

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How do I build one?

All the parts you need to build your own hands-free washer are available through plumbing, irrigation or hardware stores. Check the yellow pages or try the following:

- Hummert International
800-325-3055
www.hummert.com
- Waldo and Associates
419-666-3662

(These references are provided as a convenience for our readers, not as an endorsement by the University of Wisconsin.)

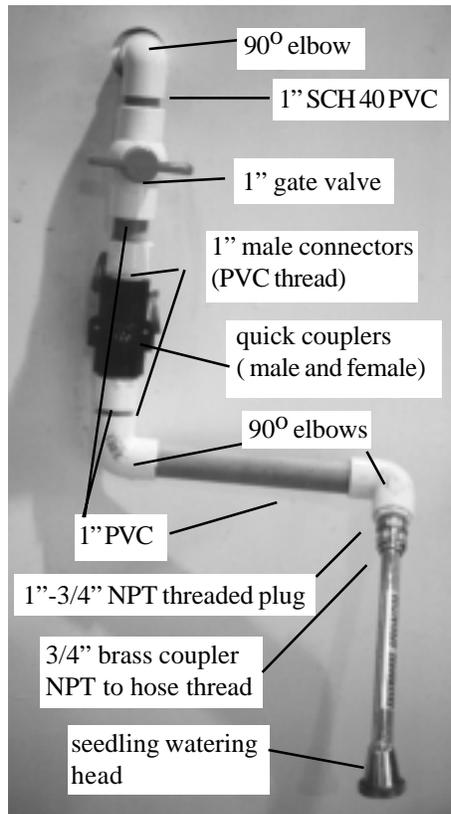
Your design will depend upon the systems in your packing shed and the type(s) of produce you wash. The diagram at right shows a prototype design and parts list

for a wall-mounted hands-free washer. You will also need PVC cleaner, cement, a wrench, and a hacksaw. Install the washer so that when you wash produce, your hands are at a height midway between your wrist and elbow.

Wall-mounted diagram notes:

1) Valve: Use a full flow gate valve made of either brass or PVC. Gate valves have a simple lever handle that turns 90° to go from full

open to full shut. This is easier to grasp and control than a more restrictive spigot type valve.



2) Quick coupling connections:

The hands-free washer shown has a quick coupler that allows the washer to pivot around the vertical pipe, or to be removed easily to change heads.

3) Head: We used a greenhouse seedling watering head. Other potential heads would include “Dramm” type and plastic “all-purpose” watering heads from a hardware store.

4) Abbreviations:

SCH 40= Schedule 40 type
PVC= Poly Vinyl Chloride plastic
NPT= National Pipe Thread



You can also build a free-standing version by making a framework for your hose.

This material was developed by the Healthy Farmers, Healthy Profits Project, whose goal is to find and share work efficiency tips that maintain farmers' health and safety and also increase profits. For more information, call (608) 262-1054 or visit our website at <http://bse.wisc.edu/hfhp/>

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Work Efficiency Tip Sheet: Build a hands-free washer

