

A strap-on stool for nursery field work

Stoop labor is unavoidable on many nurseries, since at times plant care and other tasks need to be done by hand. If you spend too much time stooping, kneeling or squatting, you may experience fatigue, muscle soreness or injuries now that can contribute to worse injuries later in life. One alternative is to use an adjustable strap-on stool that lets you sit while you work and reduces strain on your back, hips and knees.

How does it work?

The one-legged stool features a nylon belt that fastens around your waist, and has straps extending from the belt to the seat of the stool that adjust to fit your body. Once you have fastened the belt and adjusted the straps, the stool moves with you and is easy to sit down on again in a new location. The seat is made of durable hard plastic, and the single metal leg is adjustable to three different heights for performing a variety of tasks. The lightweight stool features a 3 1/2" wide, spring-like base, so that you do not sink into the ground.

Strap-on stool benefits: Less fatigue and discomfort.

Prolonged stooping or kneeling while performing tasks such as weeding container stock, harvesting seeds, plant shaping, dead-



Strap-on stool. Height adjusts 24-32".



Carrie Portz of Avant Nursery in McFarland, WI uses a strap-on stool to weed perennials.

heading spent flowers, and taking cuttings puts nursery growers in one of the highest risk groups for occupational injuries. If you do these tasks while sitting, you eliminate knee strain and lessen strain on your back, hamstrings, and torso. Your body doesn't get tired as quickly and you can comfortably work for a longer time. Studies that have evaluated field work at seated heights with and without strap-on stools have shown that the stools measurably reduce stooping, bending, kneeling and other less desirable postures. A Finnish research study showed that using the stool reduced the amount of time spent in "unacceptable" postures from 82 percent to 65 percent.

Lets you change positions.

Using a strap-on stool lets you move from sitting to standing, and then back to sitting, and then forward-leaning sitting, and then to kneeling. If you change your position often, you can better alleviate muscle stress and prevent pain. The strap-on stool lets you give your knees or back a rest. Seasonal workers might enjoy using strap-on stools. They might find the work experience more comfortable with a stool, which would perhaps reduce down time.

WORK EFFICIENCY



Tip Sheet

A series of tip sheets on labor efficiency for nursery field work

by Astrid Newenhouse
Marcia Miquelon
and Larry Chapman

University of Wisconsin,
Madison
Healthy Farmers,
Healthy Profits Project

Both hands free. Some growers sit on an upturned five-gallon plastic bucket or use a padded kneeling stool to give their backs and knees a break. The disadvantage of these types of seats is that every time you move to a new place in the bed or row, you need to pick up your seat and reposition it. Since the strap-on stool fits snugly to your body and moves with you, you always have both hands free to weed or tend plants. A field stool is unlikely to slow down any kind of work; and is especially capable of easing or speeding work in the field that takes place at or near seated height.

Affordable. The price for a strap-on stool ranges from \$22-\$38. If the stool saves you the cost of just one day when you or your workers are too sore to work, then it will pay for itself very quickly.

How can I get a strap-on stool?

The strap-on stool we describe here is designed for milking cows. It is manufactured by Kruuse, a Danish company, and is called the Port-A-Stool, Texas Milking Stool, or Strap-On Milk Stool. You can also build or modify your own stool to fit your needs. This strap-on milking stool or similar ones can be obtained from:

- Your **local farm supply store** or dairy equipment dealer (if they do not have one in stock, they may be able to order one for you from the Coburn Company, a distributor).
- **Nasco**
P.O. Box 901
901 Janesville Ave.
Fort Atkinson, WI 53538
1-800-558-9595
www.enasco.com

- **American Livestock Supply**
P.O. Box 8441
Madison, WI 53708
1-800-356-0700
www.americanlivestock.com
- **Lehman's (wooden version)**
PO Box 41
Kidron, OH
1-888-438-5346
www.lehmans.com

These references are provided for the convenience of our readers. they are not an endorsement by the University of Wisconsin.

Tips for choosing and using a strap-on stool.

When choosing strap-on stools for field use, look for a stool that is lightweight, has a base that is wide enough to prevent you from sinking in soil, has adjustable straps from belt to stool, and does not have any parts that would be harmed by weather, dirt, or grit.

Make sure that you adjust the straps so that the stool is tight, not wobbly. Then give yourself a few minutes to get accustomed to having a stool follow you around, and to feel comfortable enough to rely on it to support all your weight. If you position your feet so that your knees form a 90 degree angle, you'll have less knee strain.

You'll find that the stool gives you many posture options. You can sit upright, or let it support you while you sit and lean forward, or sit and lean to the side. If you feel like kneeling or standing for a while, the stool will not be in your way (although it may look a bit strange!).

If you are working in very sandy or in loose, wet soil, you may wish to attach a solid base such as a piece of wood or metal to the spring at the base of the stool.

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/>

Material is not copyrighted. Feel free to reproduce; please mention source: University of Wisconsin Healthy Farmers, Healthy Profits Project, Nov. 2005. Third Edition.

Authors: Astrid Newenhouse, Marcia Miquelon, and Larry Chapman, Department of Biological Systems Engineering, College of Agricultural and Life Sciences, University of Wisconsin, 460 Henry Mall, Madison, WI 53706.

Research data: Mattila, T., Muuttomaa, E. (ed) & Peltonen, M. 2001. The Development of Strawberry Picking Methods. TTS (Work Efficiency) Institute Pamphlet Series 3/2001 (86). Rajamaki, Finland.

Research for this publication was funded by the U.S. Centers for Disease Control and Prevention's National Institute for Occupational Safety and Health (NIOSH).

Work Efficiency Tip Sheet: A strap-on harvest stool for nursery field work

UNIVERSITY OF
WISCONSIN
MADISON

