A strap-on stool for nursery field work

S
toop labor is unavoidable on many nurser-
yes, 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 than 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
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 3½” 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-
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 comfort-
ably work for a longer time. Studies that
have evaluated field work at seated heights
with and without stap-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.
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.


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 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