

# TILLERS

international



“ I recommend that farmers keep  
*learning.*”

ESTRELA AUGUSTO ANTONIO

Farmer, Mother of Four



# Why Traditional Skills Still Matter

*For many communities, historic skills and tools are as relevant now as they were generations ago.*

Estrela Augusto Antonio understood that the best way to keep her family alive was to keep her cow alive. The cow, a frail jersey as pale as the dry soil beneath her, looked gaunt and barely produced half a gallon of milk a day.

Estrela's family lives in Matsinho, Mozambique, in Southeast Africa, where a merciless dry season can be followed by an equally vicious typhoon season the following year. The unpredictable weather often brings brutal challenges to farmers needing to feed themselves, their families and, their animals.

Estrela kept her cow in a pen and foraged for sparse grasses and plants as feed. In a part of the world vulnerable to extreme weather, farmers often struggled to find enough feed for their livestock especially over the dry season.

Estrela learned about trainings offered by the United States Department of Agriculture's Food For Progress Program implemented by Venture 37 and carried out by Tillers International. The now defunded program offered trainings for farmers on how to make silage, a form of fermented, high nutritional value feed that can sustain livestock over the dry season. In the spring, Dense and rich vegetation is grown, harvested, chopped, then placed into airtight storage to begin the fermentation process in order to have it ready for the dry season.

Estrela and her family worked hard to implement what she learned with Tillers International. She set aside space as pasture, grew a variety of grasses, and made silage for her cow.

As the months passed and her cow enjoyed a steady diet of nutritious feed, her cow began to produce more milk. Her once skinny cow that could barely produce half-a-gallon of milk per day became a beautiful healthy cow able to produce almost two gallons a day, a jump of nearly 300-percent. In a country where farmers make as little as \$6 USD a day, increasing a cow's output by four times makes an incredible difference.

Estrela plans to continue to work hard and attend additional Tillers International trainings to learn more about farming, animal care, and tool production. Estrela sees continuous learning as her family's path away from extreme poverty and towards a brighter future.

"My goal is to continue producing silage so that we can make enough money from selling milk so that I can finish our house for my children," said Estrela.



Tillers International's training in developing countries offer farmers the opportunity to develop the skills and knowledge to produce more for themselves, their families, and their communities. These life-changing training sessions are only possible thanks to support from people and organizations like you that understand the importance of having access to the right tools and knowledge.

We teach variations of the same skills at Tillers International USA though mostly for personal and professional development and seldom for stakes as high as those faced by smallholder families internationally.

The classes in this catalog reflect the core skills we teach internationally -- animal care and handling, blacksmithing, and woodworking (the latter two are used to make appropriate-scale farming tools). To some, the classes may seem traditional, sentimental, and timeless, but for millions of smallholder farmers in poverty stricken communities, pre-industrial skills and tools are as relevant and useful today as they were in 19th Century America.

As you browse through the catalog, we invite you to imagine how these skills would be helpful to communities with limited access to modern resources. We ask you to consider making a donation to Tillers International so that farmers such as Estrela can face tomorrow with hope, dignity, and the ability to feed themselves and their families.

# “Keep visiting us.”

HELENA JOSE GUMBO  
Farmer, Mother of Five  
Mozambique Training Participant

## What Tillers International Does

Tillers International is a non-profit that teaches the skills and knowledge needed to use animal power effectively on small-scale farms in developing countries. Our objective is to collaborate with farmers to create tools and training that take local agricultural conditions, animals, and resources into account.

Millions of small-scale farmers live “off the grid” in developing countries because, in a practical sense, there isn’t a grid they can use. Caught between a lack of resources and reliable access to power, many farmers have little choice but to farm by hand.

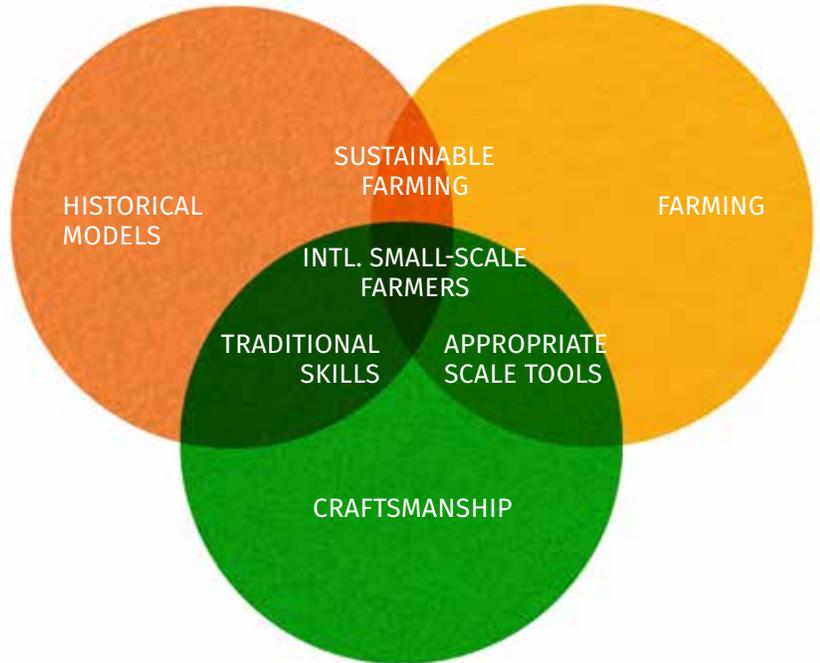
The leap between farming with hand tools and farming with

animals can make an incredible difference in the lives of these farming families.

Industrialized countries, such as the U.S., have hundreds of years of pre-industrial farming technology and knowledge that is still globally invaluable.

We work with small-scale farmers to adapt the historic knowledge and concepts behind pre-industrial ag tools to their needs and provide hands-on training to put everything into practice.

The classes offered at our U.S. site are based on the skills we teach and rely on in our international work.



**OUR MISSION:** To preserve, study, and exchange skills and tools that empower communities worldwide to improve livelihoods and agricultural productivity.

## The *true* size of Africa



KENNETH FIELD  
Kingston University London  
THE CARTOGRAPHIC JOURNAL  
THE BRITISH CARTOGRAPHIC SOCIETY

<sup>1</sup>“The State of Food and Agriculture; Women in Agriculture - Closing the gender gap for development”, Food and Agriculture Organization of the United Nations, 2011, [www.fao.org/3/i2050e/i2050e00.htm](http://www.fao.org/3/i2050e/i2050e00.htm)

Most of our projects in recent years have been in Africa where more than 1.3 billion live. It’s easy to imagine Africa as being one large country, but it’s, in fact, 54 countries that span across an enormous ecologically diverse landmass. Most people reading this understand the diversity found in the ecosystem within the United States. Scale that diversity to a continent the size of Africa and it becomes plain to see how a cookie-cutter approach to working with farmers is impossible. The complexity increases when you take into account the more than 3,000 ethnic groups, 2,100 languages, and many religions including Christianity, Judaism, Islam, Hinduism, and ethnically specific traditional religions.

People have been farming with animals for thousands of years including in parts of Africa. For a variety of reasons - including

parasitic borne diseases among domesticated livestock - farming with animals was nearly impossible throughout most of the continent.

Veterinary science helped combat the tsetse fly in Africa during the 1970s which made it possible for people to keep domesticated animals like dairy cows and oxen healthy and strong.

Nearly 61-percent of people in Africa are farmers with an estimated 33 million smallholder farms.

According to The Food and Agriculture Organization of the United Nations<sup>1</sup>, providing women with the same agricultural resources as men - which we do - can reduce the number of hungry people by 12-17-percent, or 100 to 150 million people worldwide.

In 2022, we’ll have projects in Burkina Faso, Mozambique, and Senegal.

# Ways that *Your Support Matters*

The classes we teach in the U.S. reflect the skills we teach and rely upon in our international work. Currently, tuition covers materials, instructors, facilities, and other related expenses, but not toward our work internationally.

We typically rely on support from donors and grants for anything

outside of the classes themselves including the care and feeding of the draft horses and oxen, maintaining the U.S.-based training center, community outreach, etc., and, most importantly, our life-changing work with small-scale farmers in developing countries.

Here are some ways we can put your financial gift to work:



International Draft Animal Health and Training Clinics



International Tool Building



Training Farming Families



Community Outreach through schools and events



U.S. Based Development of Appropriate-Scale Farming Tools for International Use



Facilitating the Teaching of Traditional Skills in the U.S.



Care and Feeding of Our Oxen and Draft Horses



Upkeep of Barns, Tools, Fences, and Other Training Center Related Expenses

## How to Support the Sharing of Traditional Skills and Knowledge Here and Abroad

Donations and other means of financial support play a critical part in getting tools and training to small-scale farmers.

This year, as in past years, tuition mainly covers the costs of providing the classes and contribute towards Tillers International USA, our training site in Scotts, MI.

We're always looking for support in whichever way it can be provided. For example, several businesses helped offset the cost of this year's class catalog for which we

are immensely thankful.

A supporting gift can be made on our website, by calling (269) 626-0223, or by mail at Tillers International, 10515 E. OP Ave., Scotts, MI, 49088.

Businesses or organizations interested in sponsoring domestic or international projects, future catalogs, events, or special projects can contact us via email at [Tillers@TillersInternational.org](mailto:Tillers@TillersInternational.org)

In-Kind gifts of goods or services are also appreciated.

### Leave a Legacy Around the World

As you plan your legacy, please consider leaving a gift to Tillers International. There are many ways to make a contribution including donations through Required Minimum Distributions (RMDs), Bequests, Tax-Free Charitable IRA Transfers, Charitable Gift Annuities, Outright Gifts, and others. Please consult with your estate planning attorney about contributing a gift to Tillers International.

### Volunteering

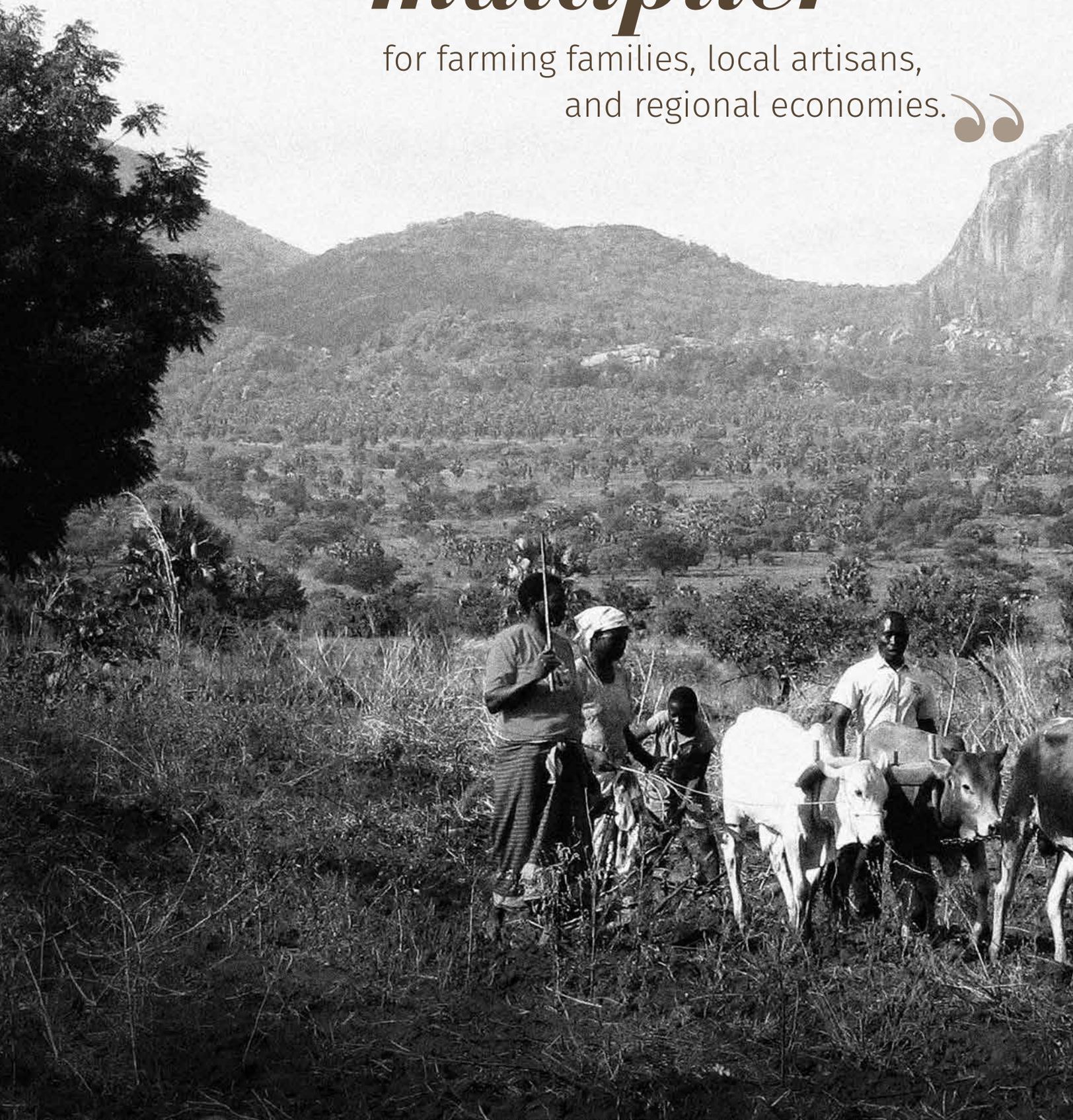
We can always use people interested in volunteering their time and/or expertise. Whether you enjoy refurbishing tools, working with animals, landscaping, website design, t-shirt design, CAD, event planning, cleaning, helping us around the office, consultation services within your area of expertise, or anything else, please let us know so we can work with you to help continue the mission here and abroad. Any help is always appreciated.

“Effective and innovative animal power

is a

# *force multiplier*

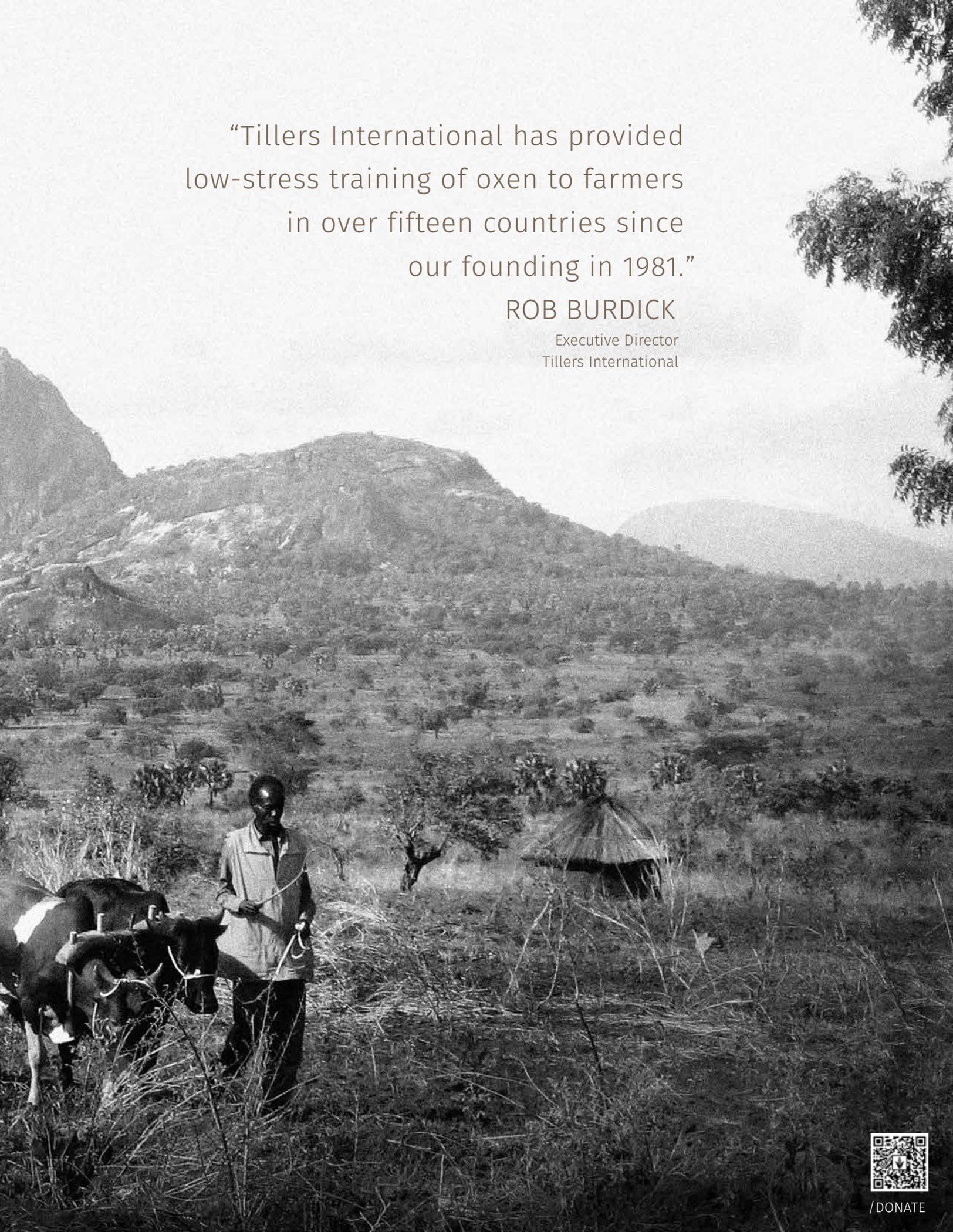
for farming families, local artisans,  
and regional economies.



“Tillers International has provided  
low-stress training of oxen to farmers  
in over fifteen countries since  
our founding in 1981.”

ROB BURDICK

Executive Director  
Tillers International



/DONATE



# Ox

## Driving

Intro

ROB COLLINS AND JERHA SMITH

Farmers have been working with oxen for more than 6,000 years. In many parts of the modern world, oxen are still in heavy use because they're an inexpensive alternative to tractors and an excellent resource on small farms or in woodlots.

This class will teach you to drive oxen using visual, verbal, and tactile cues. Expert instructors introduce you to these amazing animals by concentrating on driving skills, yoking, training, hitching, and alternatives to standard techniques. No previous experience with large animals needed.

MARCH 12 - 13  
SAT - SUN  
\$305

# Farming

with

# Oxen & Horses



RICK ESHUIS AND JEHRA SMITH  
\$495

This course is a unique opportunity to put skills in ox and horse handling to work. We immerse you in a wide variety of field work—tillage and planting, the first hay cutting, and cultivating early weeds. Part of each day is spent learning skills and the rest in field practice. Coaches help refine field skills and draft animal handling. Assignments depend on skill and specific activities may be weather dependant.

JULY 21 - 24 THUR - SUN

### OXEN BASICS

ROB COLLINS AND JEHRA SMITH  
\$495 WITH YOKE IN JUNE  
\$395 WITHOUT YOKE IN AUGUST

This comprehensive class lead by the former president of the Midwest Ox Drovers Association, Rob Collins, develops skills in driving, training, and yoking. Learn to select, team, and care for oxen. Use low-stress training to teach calves. Drive teams hitched to various loads, practice field tasks, and June participants can try their hand at making their own small yoke (added charges for yokes more than 6" bow width. Note: The August class does not make a yoke).

JUNE 19 - 23 SUN - THUR  
AUGUST 20 - 22 (NO YOKE) SAT - MON

### OX TRAINING/DRIVING CLINIC

ROB COLLINS AND JEHRA SMITH  
\$375

Designed to take your ox training skills to a higher level. Experienced teamsters share training skills for remote commands, driving from behind, use of lines, etc. Participants are also encouraged to bring their own animals for focused training

OCTOBER 15 - 16 SAT - SUN

### ADDITIONAL DRAFT ANIMAL RESOURCES

Tillers International.org > Resources  
All Things Oxen Facebook Group  
Appropriate Scale Mechanization Consortium: ASMC.Illinois.edu

Draft Animal-Power Network (DAPnet): DraftAnimalPower.org  
Farming Magazine: Farming Magazine.net  
Feed the Future: Feed the Future.gov

# Draft Horse Basics

**MICHIGAN | NEW YORK**

**DONN HEWES | RICK ESHUIS | JEHRRA SMITH**

**MI: \$425**

**NY: \$495**

**Please note:** The April class will be taught at Tillers International's training site in Scotts, Michigan, and the October class is being offered at Donn Hewes' Northland Sheep Dairy Farm in Marathon, New York.

Draft horse experts share draft horse handling, hitching, and driving skills. Participants begin by building confidence with the gentle giants in the barn, brushing, and harnessing. Then, skills will be honed with simple ground driving of a single horse before progressing to plowing and other fieldwork with a team.

More details on our website.

**MI: APRIL 22 - 24 FRI - SUN**

**\$425**

**NY: OCT. 20 - 23 THUR - SUN**

**\$495**



## Draft Horse Training Seminar

**HARLAN YODER**

This rare class will take place at the farm of an Amish ferrier in Centerville, MI, and will cover Draft Horse Basics for students interested in training techniques. Harlan Yoder, who specializes in training working horses, will take you through the steps for transforming an inexperienced colt into a well-behaved workhorse. Topics include working inadequately trained horses and building confidence in horses.

**SATURDAY, APRIL 30**

**\$150**

### ADDITIONAL DRAFT ANIMAL RESOURCES (continued)

Horse Progress Days.com

Midwest Ox Drivers Association: [MidwestOxDrovers.com](http://MidwestOxDrovers.com)

North American Suffolk Horse Association: [SuffolkPunch.com](http://SuffolkPunch.com)

Percheron Horse Association of America: [PercheronHorse.org](http://PercheronHorse.org)

Rural Heritage Magazine: [RuralHeritage.com](http://RuralHeritage.com)

Small Farmer's Journal: [SmallFarmersJournal.com](http://SmallFarmersJournal.com)



# Blacksmithing I

JOHN SARGE \$305

This fast-paced introduction to blacksmithing moves you through the fundamentals: basic hammer skills, heat treating, forge welding, and identification of "found" steels. By the end of the second day students will be turned loose to make interesting forged pieces with the support and collaboration of a blacksmith with 30 years of experience.

Safety, tools, techniques, materials, terminology, and shop set-up will all be explored. With an anvil for each student, there is plenty of hands-on learning and superb coaching in this popular class. Students will work almost exclusively with coal. This class is an excellent start for a hobby, taking advanced classes, or for career development.

9 - 5 PM	A. JAN 15 - 16	SAT-SUN	G. JULY 9 - 10	SAT-SUN
	B. FEB 12 - 13	SAT-SUN	*H. AUG 6 - 7 [OFF-GRID]	SAT-SUN
	C. MAR 5 - 6	SAT-SUN	I. SEPT 17 - 18	SAT-SUN
	D. APR 23 - 24	SAT-SUN	J. OCT 15 - 16	SAT-SUN
	E. MAY 21 - 22	SAT-SUN	K. NOV 17 - 18	THU-FRI
	F. JUNE 25 - 26	SAT-SUN	L. DEC 3 - 4	SAT-SUN

## BLACKSMITHING II: SKILL BUILDING

JOHN SARGE  
\$375

Build on skills learned in Blacksmithing I. Hands-on projects improve your hammer skills and add to your techniques. Work on two projects, a trivet and tongs, and have plenty of time for individual projects. Coaching speeds your progress. A great way to enjoy and refine your smithing skills.

FEBRUARY 19 - 20 SAT - SUN  
AUGUST 27 - 28 SAT - SUN

## BLACKSMITHING FOR WOMEN

JOHN SARGE WITH GUEST INSTRUCTOR  
\$305

This introduction to blacksmithing covers the same projects as Blacksmithing I except in an all female environment. This class is intended to create an atmosphere where students feel free to ask questions and explore tools, materials, and techniques as they begin their journey into the craft.

MARCH 19 - 20 SAT - SUN

## BLACKSMITHING I: OFF-GRID\*

JOHN SARGE  
\$375

If there is one blacksmithing skill in which we uniquely excel in it's blacksmithing in areas under less than ideal conditions. Join us for this one-of-a-kind blacksmithing class where we explore ways to improvize

forges, create anvils, and ways to work with metal when a traditional workshop is nowhere to be found. Great for those into international development, missionary work, homesteading, and those that want to be prepared for anything life throws at them.

AUGUST 6 - 7 SAT - SUN

## ADVANCED BLACKSMITHING

JOHN SARGE  
\$375

The class will primarily focus on two different skills: forge brazing and punching a hole through metal such as a hammer's head. Forge brazing is a way to weld pieces of metal together with softer metals such as copper or brass. Punching allows smiths to create a hole through metal for functional or design reasons.

NOVEMBER 19 - 20 SAT - SUN

## KNIFE MAKING

TIM CARR  
\$375

Instructor Tim Carr shows you the care needed in forging high carbon blades. Refine hammer skills, make corrections with the file, and develop annealing and tempering techniques. Mount a fine wood handle to add beauty and contrast to the steel. Tim is active on the board of the Michigan Artist Blacksmiths' Association (MABA) and has been smithing professionally for nearly 20 years. This class is recommended - but not required - before taking advanced knifemaking classes such as Friction Folder Knife or Knife Making: Hamon Blade. PREREQUISITE: Blacksmithing I or equivalent.

APRIL 30 - MAY 1 SAT - SUN  
SEPTEMBER 24 - 25 SAT - SUN



STORMY KROMER

AS RUGGED AND  
ICONIC AS YOU

THE CLASSIC STORMY KROMER CAP  
WHEN HARD-WORKING FOLKS NEED RUGGED  
EQUIPMENT TO GET THE JOB DONE.

Find Stormy Kromer caps and apparel  
online or at local dealers near you.



1238 WALL STREET • IRONWOOD, MI • 888-455-2253  
WWW.STORMYKROMER.COM

# Parent & Teen Blacksmithing

**JOHN SARGE** \$595

Teens and their parent (or other adult) together can learn metal forging skills in the blacksmith shop with experienced instructors in this popular class. Students make BBQ tools, chisels, and other projects. The fire and tools used in this class demand respect and develop responsibility. Note-Teen and parent/adult need to register together for this class. Tuition and materials price reflects registration for the pair.

**JULY 16 - 17**  
**OCT 8 - 9**

**SAT - SUN**  
**SAT - SUN**



## FRICION FOLDER KNIFE

**JOHN SARGE**  
**\$375**

A friction folder relies on the handle pressing against the blade to “lock” it in place. The simplicity of the design alludes to the fact that this is one of the first styles of folding knives commonly used around the world. This class will focus on creating the blade, handle, and hinge required for this unique knife. The photo above shows roughly what to expect by the end of the second day, but students can continue buffing their knives to their liking at home. Blacksmithing I or similar experience recommended.

**MAY 14 - 15**

**SAT - SUN**

## BEGINNING TINSMITHING

**MIC RUNYON**  
**\$305**

Students will be introduced to the basics of tinsmithing. The class will start with a simple project that each of us will work through at the same time. After finishing up with the first project, we will then choose individual projects to work on for the remainder of the class. There will be a variety of project choices which the student can choose from including mugs, canisters, baking pans, mixing bowls, candle holders, etc. Starting with basic layout and pattern making, we will walk through the cutting, forming, and assembly of the project.

**MARCH 26 - 27**

**SAT - SUN**

TILLERSINTERNATIONAL.ORG

# Copper Smithing

**DOC SCHERTZ**  
**\$375**

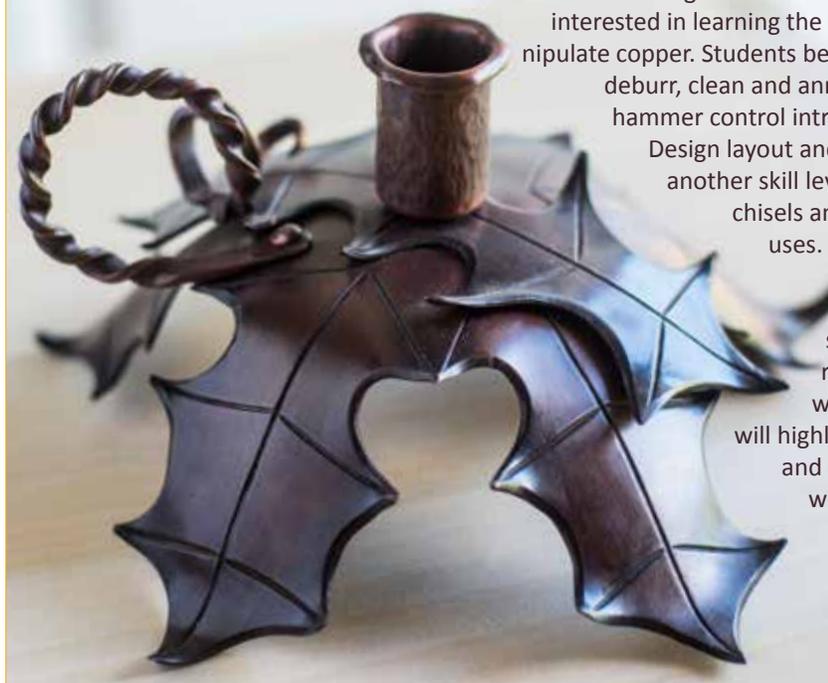
This is a beginners class for those who are interested in learning the basic skills to manipulate copper. Students begin by learning to deburr, clean and anneal copper. Basic hammer control introduces texturing.

Design layout and chasing will add another skill level by introducing chisels and their unlimited uses. Students will also

learn the technique of silver soldering and low relief. Finishing up

with a patina finish will highlight the texturing and designs. Students will take home four class projects.

**AUGUST 13 - 14**  
**SAT - SUN**



## TINSMITHING: PATTERN LAYOUT

**MIC RUNYON**  
**\$305**

Being able to layout patterns is vital to increasing your overall tinning skills. Starting with the study of construction techniques, we will be exploring the development and layout of patterns used in the creation of tinware. Parallel and radial line development will be

demonstrated and practiced in depth with easy to understand steps. Students will be laying out the flat patterns for various geometrical shapes, including frustums of cones. We will also be looking at the art of reproducing an object, and how to get full size measurements from a photograph.

**AUGUST 20 - 21**

**SAT - SUN**

“There is a real sense of  
*teamwork*  
between you and the animals.”

KODY HARRIS

Tillers International  
Intern 2021

People have been working with draft animals for thousands of years. The partnership with draft horses, oxen, donkeys, and other draft animals, enabled people to farm around the world, travel across continents, create industries, and literally establish nations.

Millions of people still work the land with hand tools and don't have the resources to acquire and maintain machines such as tractors or trucks. Draft animals with appropriate scale tools allow these communities to achieve more in a sustainable and meaningful way.

In North America, many people are rediscovering what was so common only a few generations ago: the effectiveness,

versatility, and pleasure of working with draft horses and oxen.

The Plain Community (the Amish and Mennonites) have proven that even American farmers can thrive and find success working with draft animals regardless of how traditional the technology being used may appear on the surface.

Whether you're interested in food security in developing countries, farming, homesteading, history, sustainability, or simply love animals, we'd love to have your support. Please consider taking any one of our classes, telling a friend about us, or simply showing your support by making a donation.



/DONATE



# Knifemaking: Hamon Blade

**BEN GRABER**    \$375

Blending styles and techniques from both Japanese and Western knifemakers, this class will cover clay hamon heat-treating, acid etching the blades, hand-sanding and finish of the blade and handle, and the importance of a good grind.

Hamon is a visible indication between the hard and soft portions of the blade obtained by using differential hardening. The end effect is an organic-looking line separating two tones on the blade



which looks even more striking against a finely sharpened edge.

This class will focus on both the functionality and beauty of the knife.

Guest instructor Ben Graber has been making knives since 2017 specializing in hunting and kitchen blades. In recent years, he's shipped his handcrafted Graber Knives to sportsmen, chefs, and collectors around the country.

**JUNE 11 - 12    SAT - SUN**

## Small Foundry & Pattern Making

**RUSS ALLEN AND PAUL MCGUIRE**

Learn to cast aluminum in green sand molds. Begin with mixing your own sand and making a small furnace. Fuels, furnaces, and crucibles are discussed, challenges of patterns and molding are explored. Learn different techniques for duplicating objects. Bring a small, simple object for use as a casting pattern.

**APRIL 9 - 10  
SAT - SUN  
\$375**



### **APPALACHIAN BROOM MAKING**

**NANCY BINKOWSKI**  
\$375

Take a traditional skill to a new artistic level. Use hand-tying and stitching techniques to make superb sweeping brooms and great gifts. Learn broom handle selection, preparation, surface finishing, and broom corn selection. Learn the history of broom making. Nancy Binkowski of Wilder Creek Workshops will prepare you to move forward with your skills and continue to develop this unique craft. All skill levels welcome.

**AUGUST 13 - 14**

**SAT - SUN**

[800] 498.2700



### COOPERING BUCKETS / PIGGINS

JOHN DAVENPORT AND DAVE KRAMER  
\$375

The cooper was essential to packaging early fluid products. Learn to make your own small bucket or piggins with hand tools only. Among other things, students will shape bucket staves on the shaving horse with draw knives. They will also use a croze, inshave, hollowing knife, floor jointer, and hoop driver to complete the project.

APRIL 2 - 3  
AUGUST 27 - 28

SAT - SUN  
SAT - SUN

### IDENTIFYING WOOD FOR PROFESSIONALS AND ENTHUSIASTS

TOM NEHIL  
\$150

This class targets woodworking professionals and serious amateurs wanting to learn how to identify wood no matter the sample size, be it a board, a log, antique chair, or a splinter. Learning to identify wood is an indispensable skill whether you are trying to sort through a stack of mixed timber to attempting to evaluate the strength of an existing timber building.

MAY 7

SATURDAY

# Blacksmithing *Masterclasses*

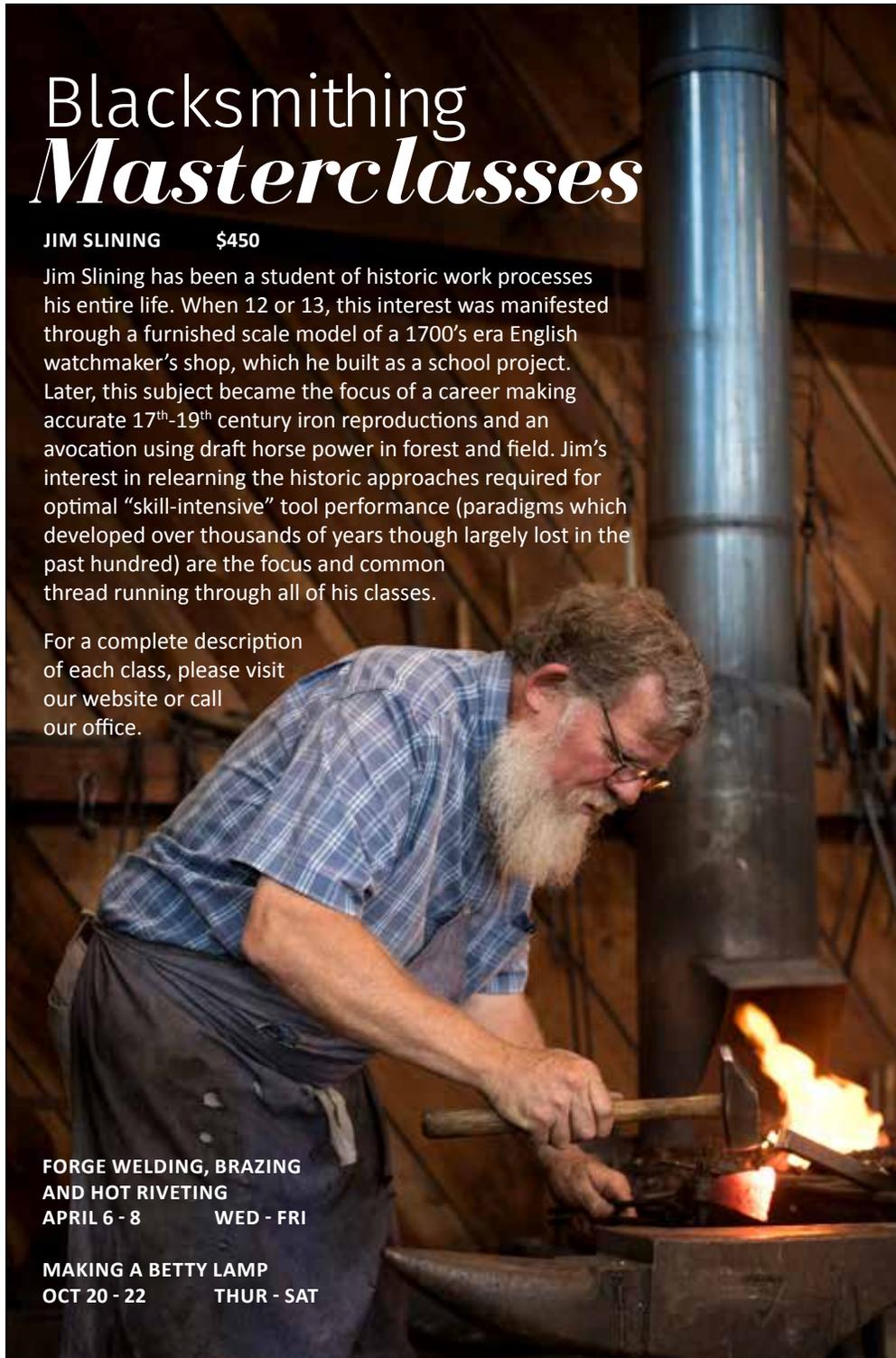
JIM SLINING \$450

Jim Slining has been a student of historic work processes his entire life. When 12 or 13, this interest was manifested through a furnished scale model of a 1700's era English watchmaker's shop, which he built as a school project. Later, this subject became the focus of a career making accurate 17<sup>th</sup>-19<sup>th</sup> century iron reproductions and an avocation using draft horse power in forest and field. Jim's interest in relearning the historic approaches required for optimal "skill-intensive" tool performance (paradigms which developed over thousands of years though largely lost in the past hundred) are the focus and common thread running through all of his classes.

For a complete description of each class, please visit our website or call our office.

FORGE WELDING, BRAZING  
AND HOT RIVETING  
APRIL 6 - 8 WED - FRI

MAKING A BETTY LAMP  
OCT 20 - 22 THUR - SAT



/DONATE



## Handmade Brooms *Wilder Creek* WORKSHOP

MARSHALL, MI

wilder creek workshop@gmail.com

(616) 318-9360



# Timber Framing & Raising

CHRIS NEWMAN AND TOM NEHIL \$850

This class is widely considered one of the best values for learning timber framing in North America as we're more interested in keeping this skill alive rather than profiting from students.

Participants can expect to begin hands-on learning within a few hours of the first day of class. An engineer will discuss design elements and experienced framers guide you through layout, boring and chiseling mortises, forming tenons, cutting wind braces, assembling bents and more.

Please enroll at least a month in advance to give the Amish sawmill enough time to prep materials.

MAY 9 - 14 MON - SAT  
SEPT 19 - 24 MON - SAT



## INTRO TO HAND TOOLS

DAVE KRAMER AND ROB BURDICK

\$150

In this day and age, so many people are rarely taught how to use basic hand tools even though most of these tools have been around for hundreds of years. This is Part One of a series of fundamental classes for those wanting to return to basics and be able to work and create with your hands. The skills covered in this class will get you started creating your own small wood projects. This class will cover fundamentals such as:

- Identifying chisel types and best uses
- Identifying saw types and best uses
- Identifying hand plane sizes / styles
- Hammers and mallets
- Measuring and marking / basic layout tools
- Vices and clamping methods

MARCH 1 & 3 TUES & THUR 6 PM - 9 PM  
MAY 18 WEDNESDAY 9 AM - 5 PM  
NOVEMBER 2 WEDNESDAY 9 AM - 5 PM

## BASIC JOINERY

DAVE KRAMER

\$150

Accurate joinery gives strength and beauty to wood projects. Learn what type of joint to use for different situations. You will have a chance to practice laying out and cutting by hand a variety of wood joints including: through dovetails, dados, and mortise and tenon joints. This last class in the wood fundamental series will elevate your skills to the next level. Taking the previous wood fundamentals classes or their equivalent, is HIGHLY recommended.

MARCH 16 WEDNESDAY 9 - 5 PM  
MAY 25 WEDNESDAY 9 - 5 PM  
NOVEMBER 15 & 17 TUES & THUR 6 PM - 9 PM

## TOOL SHARPENING

DAVE KRAMER AND ROB BURDICK

\$75

Working with dull tools is dangerous and inefficient. Learn how to grind a bevel to the correct angle, and use a honing guide to get

a razor-sharp edge. The focus of this class will be on sharpening wood chisels and hand plane irons. We will also briefly cover filing and setting teeth on a hand saw. Bring a dull tool with you to work on.

MARCH 8 TUESDAY 6 PM - 9 PM  
NOVEMBER 8 TUESDAY 6 PM - 9 PM

## SQUARING ROUGH LUMBER WITH HAND TOOLS

DAVE KRAMER

\$75

Squaring lumber to size is the first step in most woodworking projects. Learn how to use a scrub plane, winding sticks, bench plane, try square, marking gage, block plane, and shooting board to make a smooth and perfect rectangle from a rough sawn, warped piece of lumber.

MARCH 10 THURSDAY 6 PM - 9 PM  
NOVEMBER 10 THURSDAY 6 PM - 9 PM

# Mary Rose Tankard

JOHN DAVENPORT \$375



This small coopering project is a straight staved small container, with a twist, mainly the handle, and cover.

This style of tankard is based on those found on The Mary Rose, a warship in King Henry VIII's navy that was sunk in 1545. Its wreck was rediscovered off the coast of the Isle of Wight in 1971. Coopers have been using its distinct profile as inspiration ever since.

OCTOBER 1 - 2 SAT - SUN

## COOPERING TOOLS: FLOOR JOINER, HOOP DRIVER & BANDS, AND A FROE

JOHN DAVENPORT AND DAVE KRAMER  
\$375

Many of the specialty tools of the cooper are hard to find, new or used. Learn to make your own using basic blacksmithing and machining skills. This class has substantial value and expands the skills of a cooper into the realm of tool-making.

MARCH 12 - 13

SAT - SUN



/CLASSES

## BUILDING RENOVATION LLC.COM

**We Teach Historic**  
Tuckpointing & Repointing  
Brick Masonry  
Stone Masonry  
Plaster / Stucco

**We Do**  
Aerial Drone Inspection  
Aerial Drone Photography/  
Video

**(269) 680-9615**

WEST MICHIGAN

Blair E. Bates, C.T., President

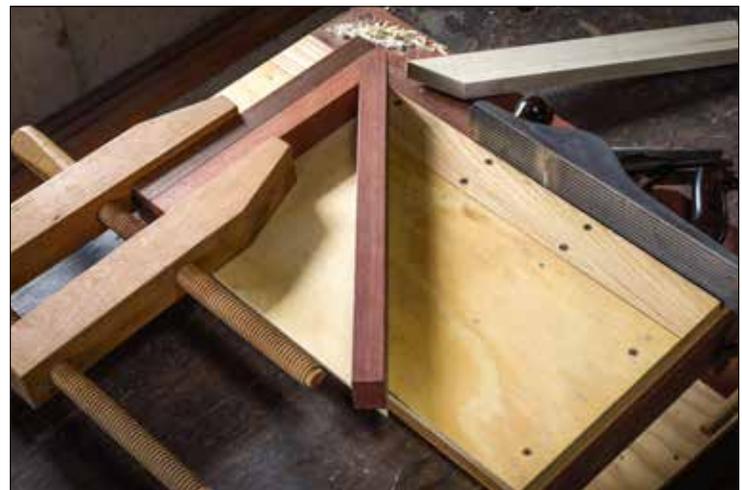


# Stone Masonry

BLAIR BATES  
TOM NEHIL  
\$425

Instructors will take you through the history and theory of stone construction, making of mortar, and shaping of fieldstone into building stone. Presentations will provide insight into geology and the characteristics of different stone types, the mechanics of splitting and dressing stone, and the evolution of mortar systems from ancient to modern. You will then have opportunities to practice selecting, splitting, shaping and building with raw materials quarried locally.

SEPTEMBER 15 - 17  
THUR - SAT



## BENCH HOOKS, MITER BOXES, AND SHOOTING BOARDS

DAVE KRAMER  
\$150

Shooting boards and bench hooks (pictured) offer woodworkers quick and easy ways to hold a project in place while sawing and planing. Miter boxes hold hand saw blades to make accurate cuts at set degrees of 90 and 45. In this day long class, you will construct and learn how to use your own bench hook, miter box, and shooting board.

APRIL 13

WEDNESDAY

9 - 5 PM

# How to Make a *Rocking* Chair

DAVE KRAMER  
\$450

Students will learn to make a Mission-style rocking chair. The class will focus on learning mortise and tenon joinery, steam bending and laminate bending, and more. Please note, students will be working in groups to construct a chair but will not be creating individual chairs to take home. The class is focused on building skills for chair construction. Details on our website.



## WOODEN BOX WITH HINGED LID AND DOVETAILED CORNERS

DAVE KRAMER AND ROB BURDICK  
\$375

Build a wooden box for keeping your tools, memories, gadgets, or anything you treasure, safe and organized.

This two-day class will focus on laying out and hand cutting dovetails for the box and apron corners, gluing and assembling the box and apron, and fitting the lid.

Commercially purchased hinges will be provided, but you will need to purchase your own handles. We will not be applying any finish during the class as you can enjoy doing this final touch at home where the finish can dry properly.

Additional details, along with photographs of past versions of the box, can be found on our website.

JULY 29 - 30

THUR - FRI

## WINDSOR CHAIR MAKING

JIM CRAMMOND  
\$650

Students will transform literal logs into an iconic chair in the world of traditional American furniture. Versions of the Windsor Chair can be found in museums, living history sites, homes around the world, and has served as the inspiration for countless chair designs that followed it.

In this five day class, students will fabricate parts and assemble them for the construction of a Windsor bowback chair.

The topics covered will include riving a log, sharpening, and using a drawknife and spokeshave, bending wood, edge jointing, carving a seat, round mortise and tenon joinery, spindle turning on a lathe, chair assembly, and finishing with milk paint.

SEPTEMBER 13 - 17

TUE - SAT



## WHEELWRIGHTING

DAVE KRAMER AND JOHN SARGE  
\$375

Learn to construct wooden wheels for wagons. See how small hubs are turned and mortised. Practice shaving spokes. Felloes are steam bent. Lend your hand as the team heat shrinks steel tires onto wheels in a cloud of steam. Wheel wrighting is a fascinating combination of early precision wood and metal working. This is the only class like this in North America. Discount available for members of the Association for Living History, Farm and Agricultural Museums (ALHFAM). ALHFAM members should contact us for discounted rate.

JUNE 4 - 5

SAT - SUN

## MAKE A SHAVING HORSE

JOHN SARGE  
\$305

A shaving horse is an invaluable aid when using tools such as a draw knife. Working with a shaving horse allows you to "clamp" a piece of wood in place while you work on it then quickly move it as needed. It's a surprisingly helpful tool! Photos on our website.

DECEMBER 10 - 11

SAT - SUN

## MAKE A BOW SAW

DAVE KRAMER  
\$150

Make a bow saw that can be used to cut curves and make ripping and crosscutting faster. A variety of sizes and blade options will be available to choose from. Cut and shape parts on the band saw, then mortise and tenon the cross member and turn handles on the lathe.

JUNE 15

WEDNESDAY

9 - 5 PM

# Using a Wood Lathe

DAVE KRAMER AND TOM HURST  
\$150

This class introduces you to a lathe, one of the most useful tools in woodworking. Wood lathes allow you to make handles, legs for pieces of furniture, rolling pins, candlestick holders, and so much more. Join us to learn the basics of the Wood Lathe and how it can work for you.

APRIL 5 & 7 TUE - THUR 6 PM - 9 PM  
SEPTEMBER 7 WEDNESDAY 9 - 5 PM

# Herb Walk & Medicine Making

BRENNA PIXLEY  
\$75

Herbs are a traditional source of nutrition and medicine. Join us for an herb walk to learn to identify and responsibly forage native seasonal plants with an emphasis on those that foster immunity and vitality, followed by a workshop on preparing herbs for use in teas, tinctures, infusions, and salves.

AUGUST 6, SAT  
9 AM - 12 PM  
OR 1 PM - 4 PM



## WOODEN RAKES

ROB COLLINS  
\$150

This is a basic woodworking class. Students will start with a pair of blanks, cut to size. They will first split the handle blank and rivet the handle to make a split end, then drill the head for tines and cut a joint to hold it all together. Once assembled, they'd shape the handle on a shaving horse using a spokeshave. Each student should complete a rake.

JULY 20 WEDNESDAY 9 - 5 PM

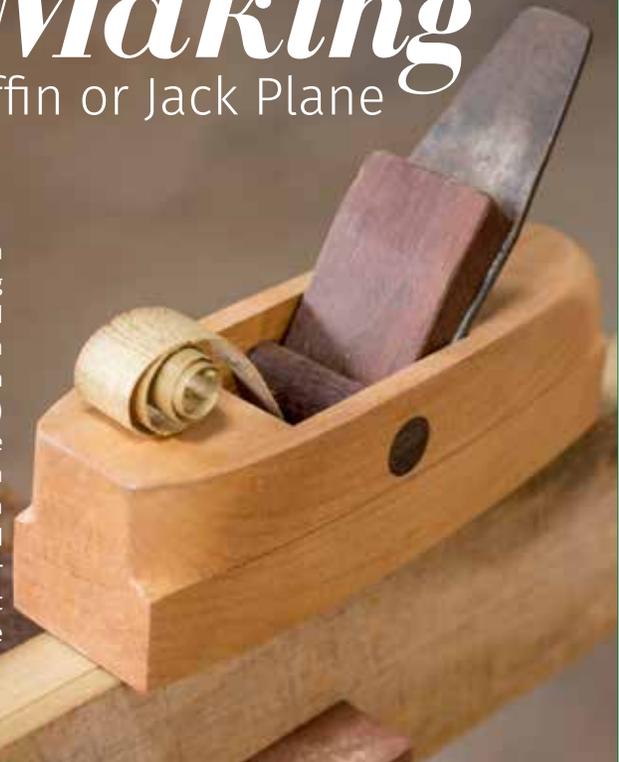
# Wooden Plane Making

## Rabbit Plane & Coffin or Jack Plane

DAVE KRAMER AND ROB BURDICK  
\$375

Shaping and finishing a project with a plane you crafted yourself is a rewarding experience. In this class, every student will make two planes. Each student will make a rabbeting plane (a tool used to cut a notch — a rabbet — along the edge of a board) and then choose between a coffin profile smoothing plane or a jack plane with a handle. Learn how to shape the wooden bodies for the planes and then harden and temper your own cutting irons to fit your planes. You will also be taught how to set and adjust the blade in a wooden plane with the blade secured by a wedge.

OCTOBER 27 - 28 THUR - FRI





Tillers International USA is located at 10515 E. OP Ave. Scotts, MI 49088.

Most classes meet at the Stone House on the first day unless otherwise noted.



## OUR SITE

Tillers International USA, is located on a 200+ acre farm in Scotts, MI. We have several timber-framed structures onsite including picturesque barns, two main workshops, and a beautiful stone-house where students may stay overnight at additional charge.

## WHERE TO STAY

We offer neo-rustic bedrooms with access to a fully-equipped kitchen, a dining area, a library, and more. Most bedrooms have their own private bathrooms. The house's stone walls help keep the rooms cool through the early part of summer and a wood-fired furnace keeps rooms toasty in the fall and winter. The house includes rural Wi-Fi. Rates for the rooms start at \$75 per night.

Students are welcomed to camp on-site for only \$10 per night or \$15 per night with power (water or septic hook-ups for RVs are not available). On-site camping comes with access to bathrooms and a shower in The Stone House.

We are located minutes away from Airbnbs and hotels in Kalamazoo and Battle Creek.

**Students planning to take the October, 2022, Draft Horse Basics in New England:** Due to the popularity of fall foliage tourism, Students should reserve a place to stay ASAP. The Three Bear Inn (ThreeBearInnMarathonNY.com) is the nearest hotel to the class site.

## SAFETY & WHAT TO WEAR

Most of the classes we offer come with inherent dangers especially when safety or other instructions are disregarded. Our classes often involve working by an open fire, handling sharp or heavy tools, working with powerful draft animals, etc. While all efforts will be given to student safety, an assumption of risk is still involved.

The specifics of what to wear may vary by class, but as a general rule we suggest dressing in layers as weather in Michigan is often unpredictable. For our blacksmithing classes, we recommend avoiding synthetic fabrics such as nylon or polyester which melt and adhere to skin when they're burning. While all fabrics are flammable, we suggest natural fabrics.

Closed-toed shoes are highly recommended for most classes. Steel-toed boots and other safety shoes are not required, but you're welcome to wear them. Draft animal classes include field work so please bring appropriate footwear such as muck boots. Brimmed hats, sun screen, and general sun protection is recommended. Rain gear should also be brought as most classes are "rain or shine".

We do have some Personal Protective Equipment (PPE) available on site, but encourage you to bring your own protective eyewear, ear plugs, and work gloves. Not all classes require PPE.

## FOOD

All day-long classes include lunch from Scotts Corner Cafe in Scotts, MI. Please let us know if you have any dietary restrictions (e.g., gluten-free, vegetarian, vegan, kosher, halal, allergies, etc.) People staying overnight are welcomed to use our kitchen to prepare their own food. The nearest grocery store is in Galesburg, MI, and is six miles away (ten minutes) from our site. There are many restaurants to choose from in the surrounding areas.

## COVID POLICY

Hundreds of people come to Tillers International USA throughout the year and their safety is our utmost concern. We're asking that people respect other students, volunteers, and staff, by doing your part in creating a safe environment including extending the courtesy of wearing a mask when indoors. We're not requiring proof of vaccination, but rather are relying on your sense of honor to respect the health and well-being of others enough to wear a mask indoors.

Many of our classes take place outdoors or in large, well-ventilated buildings which will have open doors and windows as weather allows. During colder months, when doors and windows are closed, we ask people to please be considerate and wear a mask.

## CANCELLATIONS

Most of our classes require students to make arrangements at home and/or work months in advance meaning it's difficult for us to fill a suddenly available opening – regardless of how popular the class may be – at the last minute.

Cancellations more than 21 days before the first day of class will result in a \$50 administration fee. Due to the cost of materials and preparation required by our organization and instructors, cancellation by the student less than 21 days before the class start date will result in the full forfeiture of tuition. The cancellation policy extends to 30 days before the first day of class on select courses such as Timber Framing, Draft Horse Basics, and Windsor Chair Making.

Failure to attend the class will result in the full forfeiture of tuition.

## SPONSORSHIPS

We'd like to thank the businesses and organizations that helped sponsor the printing and distribution of our 2022 class catalog.

If your business or organization would like to help sponsor future catalogs, events, our farm animals, workshops, or our international work, please email us at [tillers@tillersinternational.org](mailto:tillers@tillersinternational.org) for more information.



Any funds forfeited to Tillers International because of cancellation or failure to attend class will be treated as a donation and used to further the work done by the organization.

Tillers International reserves the right to cancel classes for any reason. In the unfortunate event that Tillers International cancels a class, all paid tuition will be refunded in full.

## PETS

Students are not allowed to bring pets such as dogs and cats to Tillers International while taking a class. Exceptions include draft animals that might be used in a class. If you have a service animal, please let us know by calling (269) 626-0223.

## DRUGS AND ALCOHOL

Impaired students pose a danger to themselves, other students, and our instructors. Illegal drugs are not allowed at Tillers International USA nor is the use of alcohol or recreational cannabis during a class. Tillers International reserves the right to eject a student from our property without refund if that student fails to comply with our policy on drugs and alcohol.

## SEXUAL HARASSMENT AND OTHER INAPPROPRIATE BEHAVIOR

Tillers International is a fun place to hang out and enjoy the company of other people who are into learning new skills. That said, Tillers International will not tolerate sexual harassment of any kind including from our own instructors and staff. If you experience any sexual harassment while at Tillers International – whether it's from a student or member of our staff - please contact our executive director immediately. We will work closely with neighboring legal

authorities and support you and them in any resulting investigations.

Students acting out inappropriately may be asked to leave without refund.

## AGE REQUIREMENTS

Students must be at least 18-years-old at the time of the class. There are a few exceptions such as our Parent & Teen Blacksmithing class. We can make additional exceptions on a case-by-case basis after speaking to the prospective student's or legal guardian.

## INTERNSHIPS

Each year Tillers International invites internship applicants who are interested in international development and/or farming with draft animals. Most intern compensation is the opportunity to learn rare skills. For the duration of three to nine months, interns work on the farm and in our shops. Their work is focused on hands-on learning in farming, blacksmithing, woodworking, tool design & innovation, and international development. Many of our interns have gone on to work overseas or on small farms in North America.

For more information on our internships, please visit our website.

## DISCOUNTS

We offer discounts during sales on select classes throughout the year. However, we will be offering a few permanent discounts:

**10% Senior Discount (65+)**

**10% Veterans Discount**

**10% Member Discount**

Memberships are \$100 for a year.

To use a discount, please call (269) 626-0223 to receive a discount code.

An advertisement for Structural Engineering Services. The background is a light blue grid pattern. The text reads: "Structural Engineering Services for Commercial and Residential Projects." Below this is a stylized 'A' logo. To the right of the logo, it says "NEHIL SIVAK STRUCTURAL ENGINEERS NEHILSIVAK.com". To the right of that, it says "414 S. Burdick St., Ste. 300 Kalamazoo, MI 49007 (269) 383-3111".

# TILLERS INTERNATIONAL

## *School of Practical Skills, USA*

TillersInternational.org/Classes +1 (800) 498-2700

### January

**Blacksmithing I**  
15-16 9 - 5 p.m. \$305

### February

**Blacksmithing I**  
12-13 9 - 5 p.m. \$305

**Blacksmithing II**  
19-20 9 - 5 p.m. \$375

### March

**Intro to Hand Tools**  
1 & 3 6 p.m. - 9 p.m. \$150

**Blacksmithing I**  
5-6 9 - 5 p.m. \$305

**Tool Sharpening**  
8 6 p.m. - 9 p.m. \$75

**Squaring Rough Lumber with Hand Tools**  
10 6 p.m. - 9 p.m. \$75

**Coopering Tools**  
12-13 9 - 5 p.m. \$375

**Ox Driving Intro**  
12-13 9 - 5 p.m. \$305

**Basic Joinery**  
16 9 - 5 p.m. \$150

**Blacksmithing for Women**  
19-20 9 - 5 p.m. \$305

**Beginning Tinsmithing**  
26-27 9 - 5 p.m. \$305

### April

**Coopering Buckets/Piggins**  
2-3 9 - 5 p.m. \$375

**Wood Lathe Turning**  
5 & 7 6 - 9 p.m. \$150

**Forge Welding, Brazing and Hot Riveting**  
6-8 9 - 5 p.m. \$450

**Small Foundry Work & Pattern Making**  
9-10 9 - 5 p.m. \$375

**Bench Hooks, Miter Boxes, and Shooting Boards**  
13 9 - 5 p.m. \$150

**Draft Horse Basics: Michigan**  
22-24 9 - 5 p.m. \$425

**Blacksmithing I**  
23-24 9 - 5 p.m. \$305

**Draft Horse Training Seminar**  
30 9 - 5 p.m. \$150

**Knife Making**  
April 30-May 1 9 - 5 p.m. \$375

**Plow Day 2022: Public Welcomed**  
30 11 a.m. - 3 p.m. \$5

### May

**Identifying Wood for Advanced Woodworkers & Professionals**  
7 9 - 5 p.m. \$150

**Timber Framing & Raising**  
9-14 9 - 5 p.m. \$850

**Friction Folder Knife**  
14-15 9 - 5 p.m. \$375

**Intro to Hand Tools**  
18 9 - 5 p.m. \$150

**Blacksmithing I**  
21-22 9 - 5 p.m. \$305

**Basic Joinery**  
25 9 - 5 p.m. \$150

### June

**Wheelwrighting**  
4-5 9 - 5 p.m. \$375

**Knife Making with Ben Graber**  
11-12 9 - 5 p.m. \$375

**Making a Bow Saw**  
15 9 - 5 p.m. \$150

**Oxen Basics with Yoke Making**  
19-23 9 - 5 p.m. \$495

**Midwest Ox Drivers Association Gathering at Tillers International**  
24-26 9 - 5 p.m. Free

**Blacksmithing I**  
25-26 9 - 5 p.m. \$305

### July

**Horse Progress Days.com**  
1-2 Montgomery, IN

**Blacksmithing I**  
9-10 9 - 5 p.m. \$305

**Parent and Teen Blacksmithing**  
16-17 9 - 5 p.m. \$595

**Wooden Rakes**  
20 9 - 5 p.m. \$150

**Farming with Oxen & Horses**  
21-24 9 - 5 p.m. \$495

**Dove Tail Tool Box**  
29-30 9 - 5 p.m. \$375

### August

**Herb Walk & Medicine Making**  
6 9 a.m.- 12 p.m. \$75

6 1 p.m.- 4 p.m. \$75

**Blacksmithing I: Off-Grid**  
6-7 9 - 5 p.m. \$375

**Appalachian Brooms**  
13-14 9 - 5 p.m. \$375

**Basic Coppersmithing**  
13-14 9 - 5 p.m. \$375

**Oxen Basics**  
20-22 9 - 5 p.m. \$395

**Tinsmithing: Pattern Layout**  
20-21 9 - 5 p.m. \$305

**Blacksmithing II**  
27-28 9 - 5 p.m. \$375

**Coopering Buckets/Piggins**  
27-28 9 - 5 p.m. \$375

### September

**Wood Lathe Turning**  
7 9 - 5 p.m. \$150

**How to Make a Rocking Chair**  
9-11 9 - 5 p.m. \$450

**Windsor Chairs**  
13-17 9 - 5 p.m. \$650

**Stone Masonry**  
15-17 9 - 5 p.m. \$425

**Blacksmithing I**  
17-18 9 - 5 p.m. \$305

**Timber Framing & Raising**  
19-24 9 - 5 p.m. \$850

**Knife Making**  
24-25 9 - 5 p.m. \$375

### October

**Coopering Tankard**  
1-2 9 - 5 p.m. \$375

**Parent and Teen Blacksmithing**  
8-9 9 - 5 p.m. \$595

**Blacksmithing I**  
15-16 9 - 5 p.m. \$305

**Ox Training/Driving Clinic**  
15-16 9 - 5 p.m. \$375

**Blacksmithing: Betty Lamp**  
20-22 9 - 5 p.m. \$450

**Draft Horse Basics: New England**  
(This class is in Marathon, New York)

20-23 9 - 5 p.m. \$495

**Wooden Plane Making: Rabbet Plane and Coffin or Jack Plane**  
27-28 9 - 5 p.m. \$375

### November

**Intro to Hand Tools**  
2 9 - 5 p.m. \$150

**Tool Sharpening**  
8 6 p.m. - 9 p.m. \$75

**Squaring Rough Lumber with Hand Tools**  
10 6 p.m. - 9 p.m. \$75

**Basic Joinery**  
15 & 17 6 p.m. - 9 p.m. \$150

**Blacksmithing I**  
17-18 9 - 5 p.m. \$305

**Advanced Blacksmithing with John Sarge**  
19-20 9 - 5 p.m. \$375

### December

**Blacksmithing I**  
3-4 9 - 5 p.m. \$305

**Make a Shaving Horse**  
10-11 9 - 5 p.m. \$305



/CLASSES



/DONATE



/STORE



[800] 498.2700



**STURGIS**  
**BANK**  
 INVESTMENT INSURANCE TRUST

Built on a foundation of community service, we were established by local business people to help solve an area housing need as Sturgis Building and Loan in 1905. Today we continue our mission by helping to solve the needs of all the communities we serve. If you wish to own a company with a higher purpose, we invite you to become a stockholder. Our symbol is **STBI** and our stock is traded on **OTC Bulletin Board**.

Invest locally with Sturgis Bank & Trust.  
*Let's Grow Home.*

**WWW.STURGIS.BANK**



# Friends Caring for Your Friends



Our team is committed to educating our clients in how to keep your pets healthy year round, with good nutrition and exercise. We stay on top of the latest advances in veterinarian technology and above all, remember that all animals and pets need to be treated with loving care.

## Countryside

ANIMAL HOSPITAL  
 (419) 882-7688  
 Sylvania, OH

COUNTRYSIDE-AH.com

## MIDWEST OX DROVERS ASSOCIATION

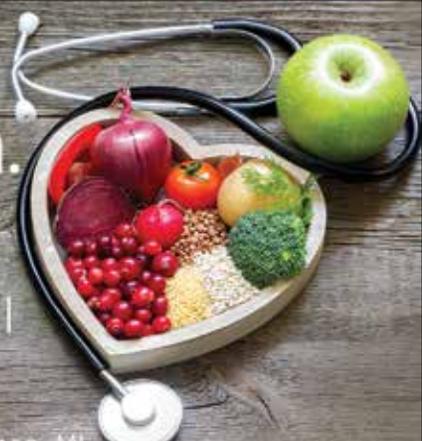
[WWW.MIDWESTOXDROVERS.COM](http://WWW.MIDWESTOXDROVERS.COM)



## Science. Tradition. Hope.

HowesNaturalHealth.com

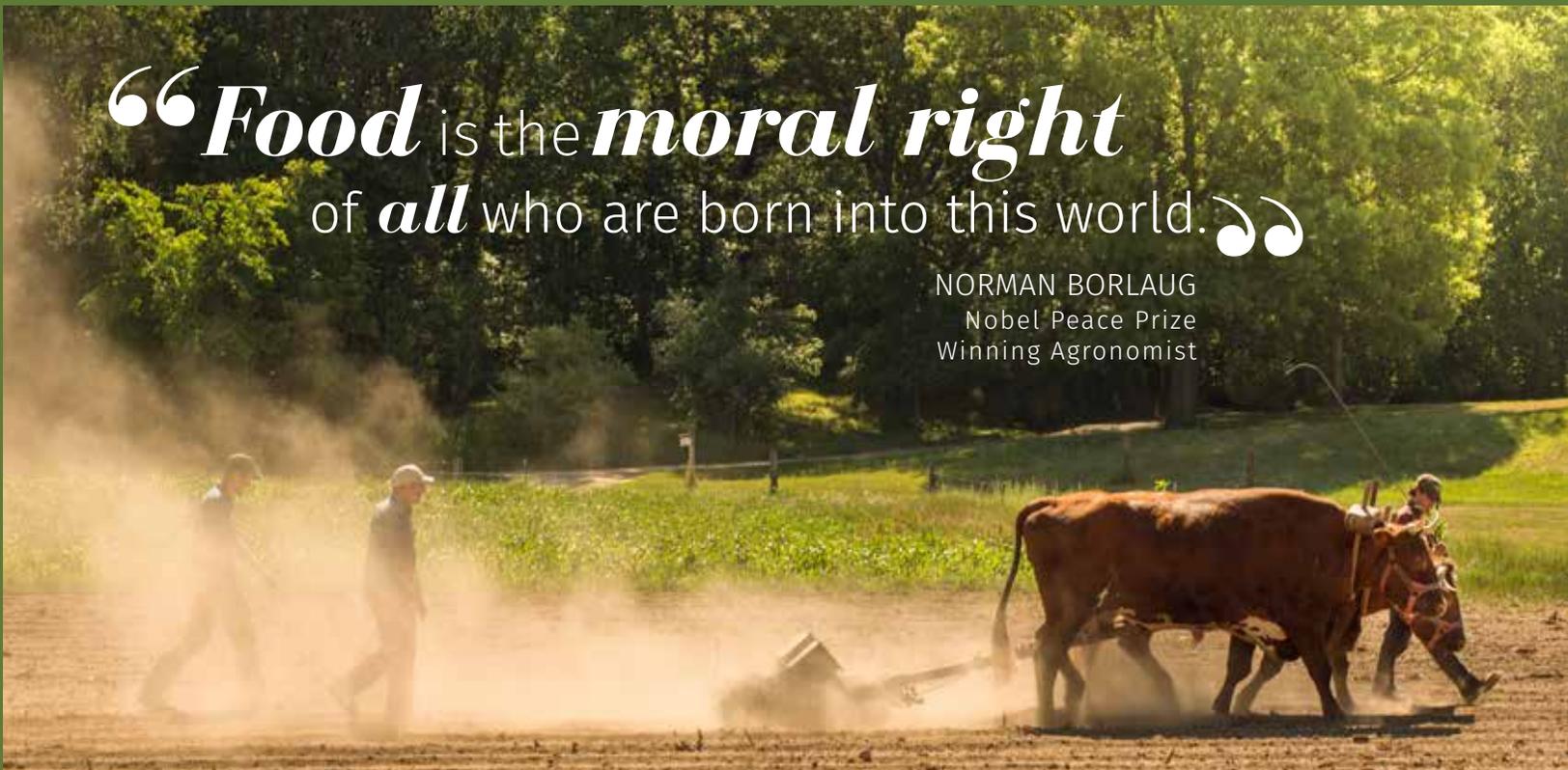
Dr. Kimberly Howes  
 (269) 216-3241 • Kalamazoo, MI



# TILLERS international

10515 East OP Ave.  
Scotts, MI USA  
49088

Non-Profit Organization  
U.S. Postage  
PAID  
Permit No. 112  
Kalamazoo, MI



“*Food* is the *moral right*  
of *all* who are born into this world.”

NORMAN BORLAUG  
Nobel Peace Prize  
Winning Agronomist

Tillers International staff testing a prototype of a draft-animal drawn planter during an exceptionally dry spring in Michigan. The planter was created in collaboration with farmers in Northern Haiti who will be making the final tools themselves. Skills in farming with draft animals, woodworking, blacksmithing, and creative problem solving - skills we teach in the U.S. and internationally - came together to make this tool possible. For some, these skills promote personal or professional development, but for others, in a different context, these same skills can lead to life-changing improvements. Your support helps us bring tools, abilities, and empowerment to these communities. Please consider making a donation, taking a class, becoming a sponsor, or telling a friend about what we do.