A year long program in our organic dairy or garden gives you the practical farming skills and business background to explore a career in farming. We emphasize hard work, critical thinking, and appropriate technology for small farms. We are located on 120 acres of forest and pasture in Keene, NH. Our 30 Holstein and Brown Swiss cows, three acres of garden and three greenhouses are the perfect size to learn firsthand all aspects of farming. Students will operate our micro-pasteurizer, hydroponic fodder system, Cool-bot refrigeration and maple sugaring equipment on our four season farm.

The year long program starts in the fall. Tuition includes housing, a food stipend, and the potential to be a paid intern in the summer season.

For more information:
www.stonewallfarm.org
603.357.7278
jcline@stonewallfarm.org

My time in the garden at Stonewall Farm was a one of a kind learning experience; positive, fulfilling and fun!
-Mali, Garden Student
A year long program in our organic dairy or garden gives you the practical farming skills and business background to explore a career in farming. We emphasize hard work, critical thinking, and appropriate technology for small farms. We are located on 120 acres of forest and pasture in Keene, NH. Our 30 Holstein and Brown Swiss cows, three acres of garden and three greenhouses are the perfect size to learn firsthand all aspects of farming. Students will operate our micro-pasteurizer, hydroponic fodder system, Cool-bot refrigeration and maple sugaring equipment on our four season farm.

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jcline@stonewallfarm.org
STONEWALL FARM SCHOOL

A year with us and you’ll be outstanding in the field

THE FARM
STONEWALL Farm is a non-profit organization, established in 1994 to offer agricultural education. We operate an organic dairy herd, a three acre garden, three greenhouses, a CSA, a micropasteurizing plant, farmstore, sugar house, hydroponic barley fodder system, and an educational Learning Center. We welcome over 20,000 visitors per year, including primary schools, college students and the public. We offer a farm camp for children and major agriculturally themed events throughout the year.

The farm is located on 120 acres of pasture and forest in Keene, NH, the largest city in the southwestern region of the state.

THE SCHOOL
STONEWALL Farm School (SFS) offers a year-long program for those interested in small scale organic dairy and vegetable farming. Using decades of experience, the SFS incorporates farming skills, appropriate technology, business management, marketing, and education to provide a comprehensive background in all aspects of successful small scale farming.

OPTIONS
Students will learn business, marketing and education aspects of small scale agriculture. Options for a focus are dairy or garden, and both include all farm operations.

I. Dairy
Work with the dairy staff, from breeding to milking to pasture management and National Organic Practices, feed and hay production, homeopathic medicine, and farm equipment use. We operate a micropasteurizing plant, and students will learn how to produce value added dairy products. Our 30 Holstein and Brown Swiss ladies are milked at 4:30 am and pm daily.

II. Garden
Participate in collaborative, open book farming: see, learn, and do it all, start to finish, to run a year-round, small-scale CSA and market farm. Learn with the Garden Manager how to plan, plant, harvest, and store, bottle, or freeze year-round produce. Students will operate three different greenhouses, a CSA, and go to farmers’ markets in the region. Appropriate technology is integral to our garden operations.
STONEWALL FARM SCHOOL

CORE LEARNING AREAS

Dairy
- National Organic Practices
- Breeding
- Milking
- Sanitation
- Pasture management
- Haying
- Small grain production
- Hydroponic fodder
- Manure management
- Pasteurization & bottling
- Permitting

Farm Operations
- Greenhouse production
- Storage
- Farmers’ markets

Business & Marketing
- Banking
- Accounting
- Advertising
- Branding & labeling
- Education & Volunteers
- Grants & Loans
- Insurance
- Federal programs
- Collaborations & the community
- Special events
- Vendors

Garden
- Planning
- Planting
- Weeding
- Pest control
- Soil amendments
- Community Supported Agriculture
- Harvesting
- Soil management

THE REAL DEAL
Farming is by nature long days, hard work, and very satisfying. Expect to milk cows at 4:30 am and pm, pull endless weeds in the garden, lift 50 pound bags of compost, move hundreds of bales of hay, wonder how many rocks can be in a field, and get very dirty. Yet little can compare with the direct results of your hard work—delicious, healthy, sustainably produced food. The ebb and flow of work varies by the season. The table below left shows these changes over a year. Winter is a slower time, so students focus on business and marketing by developing a model farm plan. By the end of their year at SFS, students will have the practical experience and business knowledge to start their own operation. SFS will remain a mentor to students as they enter the farming world.

TUITION
SFS is a full year program, beginning in the fall of each year. Tuition is $5,500, including housing (private room, shared bath, kitchen, washer/dryer), $20/week food allowance at the farm store, and 15% off products beyond that.

Pay Back
After 6-7 months of work, students become eligible for paid work at the farm. It is possible to earn up to as much as tuition payments. Actual amounts depend on timing of the school year and students’ abilities.

OUR QUALIFICATIONS

Farm Manager 30 years dairy farm experience, maple sugaring and teamster
Herdsperson 32 years dairy farming
Garden Manager 5 years management experience at farms up to $1.2 million in sales and 5 years teaching
Director 30 years non-profit business management, environmental education and graphic design
Education Director 13 years teaching in classrooms and with the public.

AWARDS (in 2013 alone):
- Organic Valley Gold Medal Award for milk quality (to 46 farms out of 1500)
- NH Commissioners Award for Excellence in Agricultural Promotion
- 20+ ribbons at the Cheshire County Fair (cows, hay, maple sugar)

For More Information
603.357.7278
www.stonewallfarm.org
jcline@stonewallfarm.org

STONEWALL FARM Land Here • Grow Roots • Cultivate Community
242 Chesterfield Road, Keene, NH, 03431 www.stonewallfarm.org 603.357.7278
STONEWALL FARM SCHOOL
A year with us and you’ll be outstanding in the field

APPLICATION

CONTACT INFORMATION

DATE

CURRENT MAILING ADDRESS

NAME

CURRENT MAILING ADDRESS

CITY

STATE

ZIP

PHONE

E-MAIL

EXPERIENCE

☐ Please attach a copy of your resume listing your education and previous work and/or volunteer experience.

REFERENCES

☐ Please provide 3 letters of reference and list the references below.

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ESSAY QUESTIONS

☐ On a separate sheet of paper, please answer the following questions. Limit yourself to two pages or less for all the questions. Read all the questions before writing so as not to be repetitive in your answers. We’re trying to get a feeling for who you are. Don’t say what we want to hear, say what you want to hear.

**MOTIVATION** What motivates you to apply to spend a full year training at Stonewall Farm?

**PHILOSOPHY** What is your philosophy of farming? How did it come about?

**EXPERIENCE** Tell us about past experiences – farm related or otherwise – that make you a good candidate for Stonewall Farm School.
STONEWALL FARM SCHOOL APPLICATION

LABOR Can you work 10 hours/day at repetitive manual labor? Lift 50 pounds? Do you mind getting dirty? What do you think about the smell of manure?

VALUES What are your most strongly held beliefs or values (not just agriculture)?

QUESTIONS What questions do you have for us?

FOCUS

Which farm focus are you interested in?

☐ Dairy Working with our certified organic dairy herd
☐ Garden Working with our three acre garden and three greenhouses

SFS begins in the fall, but we don’t use a specific date. When would you be available to start?

☐ Preferred starting date ___/___/___

THE REAL DEAL

“I’m glad I don’t have to make a living farming.
Too much hard work.
Too many variables you don’t have control over, like, is it going to rain?
All I can say is, god bless the real farmers out there.”

FUZZY ZOELLER

☐ It is important to understand what it means to attend our farm school. Farming is by nature a demanding job. For parts of a year, 10-12 hour days are not uncommon, as well as six day work weeks. The ebb and flow of farming revolves around the weather. Summer is busier than fall. Winter is slower than fall. Spring starts slow and get busy fast.

The chart below gives an idea of what an average year looks like. The darker the color, the more that needs to be done. Note that there is no time when nothing needs to be done, and times when everything needs to be done.

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The darker the color, the more work there is to be done.
STONEWALL FARM SCHOOL APPLICATION

As a student you will work alongside our farmers, and with our administrative and education staff. During the slower periods you will work on a farm business plan, learn about marketing, banking, grants, other training opportunities and quite a bit more. There will be vacation days, and days off. Mostly there will be long days of very satisfying work.

By signing below you acknowledge that you read and understood the application. If you have any questions, please contact us at your convenience.

_________________________________________  __________________
SIGNED                                      DATE

Please return the completed and signed application to:

STONEWALL FARM
242 CHESTERFIELD ROAD
KEENE, NH 03431

or e-mail to jcline@stonewallfarm.org
APPRENTICESHIP Experience & text circularly inform the other.
FAILING FORWARD Why you cannot have fear, your brain is a sponge, and there is no such thing as failure.
AUTODIDACTIC POLYMATH Longhand for farmer, or the need to be a quick-on-one's-feet life-long learner.
STEPPING STONES Why we’re only ready to learn what we’re ready to learn.
A SKELETON IS WHERE YOU HANG THE FLESH A considered approach to depth and breadth.
ITERATIVE LEARNING You can never read the same book twice.
FARMER AS STUDENT, FARM AS TEACHER
FARMING AS SECOND NATURE Farming not just as something we know, but as a continuous response to something we feel, and how to get there.

GEOLOGIC TIME ‘The eternal frontier’
‘SUSTAINABILITY’ Ecological footprinting, life-cycle analysis, embodied energy, end-use analysis, nested systems, and scales of perspective. That is, how many CSA members driving to pick-up on one day does it take to equal the amount of gas burnt by the tractor in one year?
‘ENOUGH’ (period)
LIVELIHOOD Why a farm is not a garden.
FARM ECOLOGY & UNSTABLE EQUILIBRIA Why a farm is not an island, but why it is.

WEATHER & CLIMATE
• Climate comparison
• Historical weather records
• On-farm weather stations
• Day length, annual temperature curves, frost free days, growing degree days & heat units, and why the details matter.
• Microclimates

SOILS
• Soil management plan
• Soil ecology & mineralogy: biota & abiotia
• Metrics & their use: NPK, trace elements, base saturation, conductivity, & SOM
• Surveys: federal, off-site, on-site
• Cover cropping
DISEASE
• Disease management plan
• What is disease, where does it come from?
• Conventional, organic, ‘beyond organic’ controls
• Cultural practices, variety selection, biological and chemical application

PESTS & WILDLIFE
• Pest management plan (IPM)
• Biologic time, co-evolution, mutation, and the origin of pests
• Range, life cycle, natural predators, organic control
• Perfection, balance, slippery slopes, and reality

WEEDS
• Weed management plan
• Just what is a weed, and where does it come from?
• Annual & perennial, cool & warm-weather niches
• How farming favors a particular variety of weeds
• Weed seed bank: deposits & withdrawals
• Critical weed free periods, canopy closure, crop spacing, intercropping, and total yields per unit area
• Tools of the trade

CROPS
• Crop history
• Phylogeny: families & lineage
• Requirements: water, temperature, nutrients
• Crop interactions: crop rotation, companion planting
• Tissue analysis

FUNDAMENTALS
• Vision, mission, long-range plans, short-term goals, a commitment to constant improvement
• Organization: time, tasks, labor, crops
• Time: pace, method, step-backs, and farming ‘smarter’
• Rules of the game: paying attention, reaction time, enaction time
• Constraints & limiting factors: space, time, money, equipment

LABOR, i.e., THE TEAM
• Communication
• Group and power dynamics
• Square and round pegs and holes: why fit is of the utmost importance.
• Motivation, incentive, reason: why they’re not really there to pick your beans.
• Morale
• Health & safety
CROP PLANNING
- Data organization: spreadsheets and databases; yours, mine, others.
- Crop & variety selection
- Timing, quantity, acreage, placement, and yield

TOOLS & EQUIPMENT
- Tool as interface between farmer and farm; your tool as your 'farming'
- A Philosophy of tools: a tool vs. a machine
- Time & energy: mechanical advantage, simple machines, kilocalories, and time in the day
- Design, history, care, safety, use, and comparison

BED PREPARATION
- Location options: orientation & aspect
- Row/bed systems & crop spacing
- Tillage options

SEEDING & TRANSPLANTING
- Rationale: transplant or direct seed
- Predilections: depth, temperature, time, and water
- Potting media
- Seedling systems: soil-blocks, plug trays, seedling troughs

IRRIGATION
- System types; their pros and cons: rain-only, drip, overhead.
- Water usage calculations: pressure, flow-rate, viscosity losses, and volume.
- Crop water requirements & development stages

HARVESTING
- Tools & tips

POST-HARVEST HANDLING
- Washing
- Storage
- Preservation
- Value-added options

SEASON EXTENSION: COLD WEATHER GROWING
- Tunnels as an exception to the farm-scale rules: matter, energy, and time sinks
- Greenhouse/tunnel: design, construction, upkeep, use
- Rowcover, caterpillars, overwintering varieties

COMPOST
- Composting
- Vermicomposting
- Actively aerated compost teas
- Farm-grown amendments
SEED SAVING

MARKETING
- Market options & considerations: CSA, farm stand, farmers' market, chef, and wholesale
- Market analysis
- Online presence: farmer-friendly options
- Advertising

CAPSTONES - FARM SYSTEMS & FARMERS: A MACHINE IS MORE THAN JUST THE PIECES
- A history of farming, recent and long
- Historical Asian agriculture (F.H. King)
- Native American agriculture (Buffalo Bird Woman’s Guide)
- Conventional no-till
- California 'big' organic
- New England organic (Eliot Coleman)
- New England season extension (Eliot Coleman)
- Plasticulture, certified organic
- Bio-intensive (Chadwick, Jeavons, Ecology Action)
- Bio-extensive (The Nordells)
- Water scarce farming (Solomon)
- Self-fertilizing (Tolhurst)
- Organic no-till (Morse & Moyer)
- Living mulch (Atthowe)
- Permaculture (Temperate: Hemenway & Whitefield)

BOOKS
Ashworth, S. Seed to Seed.
Deppe, C. The Resilient Gardener.
Flanner, F. The Eternal Frontier: An Ecological History of North America and its Peoples.
Grubinger, V. Sustainable Vegetable Production From Start-up to Market.
Jeavons, J. How to Grow More Vegetables ....
King, F.H. Farmers of Forty Centuries: Organic Farming in China, Korea, and Japan.
Kubik, Rick. How to Keep Your Tractor Running.
Lowenfels, J & Lewis, W. Teaming with Microbes.
Moyer, J. Organic No-Till Farming.
SARE NRAES. Crop Rotation on Organic Farms.
SARE. Managing Cover Crops Profitably.
SARE. Steel in the Field.
Solomon, S. Gardening When it Counts.
Tolhurst, I. Growing Green.
There is no gardening without humility. Nature is constantly sending even its oldest scholars to the bottom of the class for some egregious blunder.

**ALFRED AUSTIN**

**THE REAL DEAL**

Farming is by nature long days, hard work, and very satisfying. Expect to pull endless weeds in the garden, lift 50 pound bags of compost, wonder how many rocks can be in a field, and get very dirty. Yet little can compare with the direct results of your hard work—delicious, healthy, sustainably produced food. The ebb and flow of work varies by the season. The table below shows these changes over a year. Winter is a slower time, so students focus on business and marketing by developing a model farm plan. By the end of their year at SFS, students will have the practical experience and business knowledge to start their own operation. SFS will remain a mentor to students as they enter the farming world.

**NEWSLETTERS**

Growing for Market
HortIdeas


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**Gardening always has been an art, essentially.**

**ROBERT IRWIN**
Milk may only be labeled “organic” if specific USDA regulations are followed. Conventionally produced milk and organically produced milk differ in how they are produced on the farm. Organic milk can bring in as much as 50% more income, but is much more expensive to produce. What practices and procedures must you follow to insure that your milk may be sold as “organic?” Is producing organic a viable economic option?

To keep milk production at its optimum level, cows must be calving to produce milk. Cows should have 305 milking days with a two-month resting period. Artificial insemination (AI) is often used to keep dairy cows on this schedule. How does one manage breeding and a breeding schedule for optimum milk production? How do you choose the genetics for AI? What is the seasonality of milk production and how does that impact breeding? How do you plan for bull calves, or unhealthy births in total herd size?

Organic practices require the use of homeopathic medicine practices (no antibiotics). How are cow diseases treated without conventional veterinary practices? How is herd health maintained with pasture management, type and quantity of feed, sanitation, and managing cow personalities?

Stonewall Farm has won many awards for the quality of its milk, meaning that bacteria levels are kept low. Following best practices in milking helps insure premium milk quality and higher dairy profits. Best practices reduce the incidence of mastitis and other harmful and/or communicable diseases. What are these best practices?

In order to be sold for pasteurization, milk must be sold as Grade A standard. What standards of sanitation must be followed in order to achieve Grade A compliance, and to insure our micro-pasteurization plant meets state and federal regulations?

Well-managed pastures are key in assuring a productive and healthy herd. Poor management including over grazing and poor plant growth can lead to poor reproductive performance and reduced milk production. Soil analysis, pasture rotation, fertilizing, re-seeding are some management techniques. Proper supplemental feeding and over-winter feeding are also essential to the health of the herd.

**Haying**

All hay is not equal. There are significant differences in the nutritional quality of various varieties of grasses and legumes. Weather, cultivation, fertilization, re-seeding, harvesting methods and storage procedures affect the ultimate quality of the feed.
Small grain production
Growing grain for fodder production or direct feeding of the herd can be profitable for the small dairy farmer. Determining the profitability requires assessing many factors including but not limited to site availability and quality, time required to manage production and equipment needs. How are these assessment made?

Hydroponic fodder
Unstable weather patterns mean the cost of feed can increase dramatically in a single growing season. Modern hydroponic fodder systems can yield a dependable cost effective animal feed at a high turnover rate. Unstable weather patterns mean the cost of feed can increase dramatically in a single growing season. Producing fodder for the herd on site can mitigate concerns related to water shortage issues that affect hay production and the quality and availability of animal feed. When does the use of on-farm hydroponic fodder systems, (e.g. their scale, management and impact on milk production), make sense?

Waste management is a complex environmental issue for dairy farms. Stewardship of farm lands and surrounding lands, water bodies and local air quality demand prudent management of all farm-based waste. We compost and sell our manure as well as use it for fertilizer on gardens and pastures. What are the best practices and options when dealing with dairy herd manure?

“American milk and dairy products are among the safest and most highly regulated foods in the world.” (Dairy Council Digest, 2007) Federal regulatory standards including the Pasteurized Milk Ordinance (PMO) are used to ensure these quality standards. When does it make economic sense to pasteurize and bottle on site? What are the pros and cons of selling raw milk?

Yogurt, cheese, ice cream, butter, etc. are value added product (VAP) options that require more labor but can bring a much higher income per volume of milk than selling wholesale. Should value added products be sold wholesale or retail? What does it cost in dollars, space and time for the infrastructure to produce VAP? Should value added products be sold wholesale or retail?

Permitting requirements vary depending upon the location of the dairy, size of the dairy and the ultimate intended sales distribution outlet. State and federal licensing is required in most cases. What are permits are required and when? How does one make application for these permits?
Farming is by nature long days, hard work, and very satisfying. Expect to milk cows at 4:30 am and pm, move hundreds of bales of hay, transport tons of manure, and get very dirty. Yet little can compare with the direct results of your hard work—delicious, healthy, sustainably produced food. The ebb and flow of work varies by the season. The table below shows these changes over a year. Winter is a slower time, so students focus on business and marketing by developing a model farm plan. By the end of their year at SFS, students will have the practical experience and business knowledge to start their own operation. SFS will remain a mentor to students as they enter the farming world.

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