

how to design and use a

Working Calendar

- Identify the benefits of using a detailed working calendar to manage farm work.
- Understand the components of a successful working calendar.
- Understand how to create a valuable working calendar.
- Learn how to use the calendar after it is created.

Learning objectives

Easy online tools for creating and sharing calendars:

<http://www.growingproduce.com/video/pest-control/v-nine-steps-to-creating-a-pest-management-calendar-for-your-farm/>

Starting out: See an example.

- The products of farming take time to grow and are often affected by seasonal conditions.
- The prudent farmer acts like the conductor of a symphony, setting the stage and encouraging the different players *at the right time* in order to convey a cohesive flow of produce.
- Just as the conductor consults a score, the farmer may consult a calendar in order to coordinate work.

Production takes time.

- A working calendar is a multi-functional tool. A calendar may prove useful in organization, record-keeping, and communication. Its benefit may be as tangible as a wheelbarrow’s mechanical advantage.
- Production goals give our calendar purpose. Considering these along with a working knowledge of natural processes, we lay out tasks over time.

		calendar		record-keeping				
production goals	>	relevant information	>	planned work	>	actual work	>	results

example:

harvest 10 lbs. of arugula in May	>	arugula* typically matures in five weeks given spring weather	>	prepare bed and seed arugula April 1, pull weeds mid-April, harvest early May.	>	prepare bed and seed arugula on April 1, weed on April 9 and 22, harvest May 3.	>	11 lbs. of arugula harvested on May 3
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*link is to Johnny’s Selected Seeds’ arugula seed, see “Growing Info” under purchase area.

- We would like to harvest spinach for as much of the year as possible. On what does this depend?

For starters, let's consider weather conditions, soil properties, the variety of spinach we're dealing with, and our labor. Pretend we have a plot of ideal soil near Niles, Michigan. We know the local climate and have a packet of spinach seeds with included variety detail (shown on following slide, and identically under "Growing Info" tab <http://www.johnnyseeds.com/p-7449-tyee-f1.aspx>) informing our planting.

Read the following slide and decide: what should be done.

Imagine we are growing spinach.



646G.54 MINIMUM 5000 SEEDS
HYBRID SPINACH,
SAVOYED LEAF

TYEE F1

40 DAYS

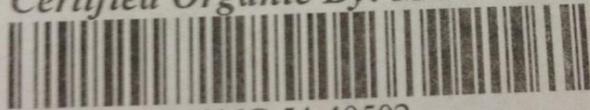
LOT 40502 SEED SIZE 7-9

Germ: 90%

Germ Date: 11/11

Lot: 40502

Certified Organic By: MOFGA



646G.54-40502

955 Benton Avenue, Winslow, Maine 04901
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SPINACH - *Spinacia oleracea*

SEED SPECS: Seeds/Oz.: 1550-3750 (avg. 2200).
Seeds/Lb.: 25,000-60,000 (avg. 35,000). **Avg. Direct**
Seeding Rate: *For bunching and full size:* 220'/oz.,
100'/1,000 seeds at 10 seeds/ft. *For salad mix:* 50'/oz.,
25'/1,000 seeds at 40 seeds/ft.

CULTURE: Spinach grows in a wide range of soils if moist and fertile, but is sensitive to acidity. pH should be at least 6.0, preferably 6.5-7.5. **Sowing Dates:** Spinach germinates best in cool soil. Begin sowing in early spring, as soon as the ground can be worked. Summer sowing in hot soil over 85°F (30°C) risks low or erratic germination! Sow late July into September for a fall crop. Spinach can also be planted from September until freeze-up for an early harvest the following spring; floating row covers offer effective winter protection.

PLANTING AND HARVEST: For bunching and full size: Sow about 9-10 seeds/ft., 1/2" deep in rows 12-18" apart. Harvest spinach early, as mature plants bolt to seed quickly, cutting just below root attachment for "rooted spinach," or cut higher for "clipped spinach." Since harvest season is brief, we advise harvesting entire plants rather than single leaves in the cut-and-come-again fashion. **For salad mix:** Sow in 2-4" wide bands, 3/4" apart, about 40 seeds/ft. Clip small leaves in 3-5 weeks, depending on time of year and speed of growth.

DISEASES AND PESTS: Prevent disease with crop rotation and good sanitation.

SPIN

- Using the information we can harvest spinach for most of the spring, summer and fall if we plant beds in two-week intervals from late April through early October with a break during the hottest part of summer. We will water, spray compost tea, and weed the beds occasionally during growth. We build the following calendar for **April Spinach Planting:**

	M	Tu	W	Th	F	Sa	Su
April		1 Planting #1	2	3	4	5	6
	7	8	9 Compost Tea and Weed All Spinach	10	11	12	13
	14	15 Planting #2	16 Compost Tea and Weed All Spinach	17	18	19	20
	21	22	23 Compost Tea and Weed All Spinach	24	25	26	27
	28	29 Planting #3 Check P#1 for insect pressure	30 Compost Tea and Weed All Spinach				

So our **May Spinach Calendar** would look like this:

	M	Tu	W	Th	F	Sa	Su
				1	2	3	4
May	5	6	7 Compost Tea and Weed All Spinach except the planting to be harvested this week	8	9	10 Begin Harvest Planting #1	11
	12	13	14 Compost Tea and Weed All Spinach except the planting to be harvested this week	15	16	17	18
	19	20	21 Compost Tea and Weed All Spinach except the planting to be harvested this week	22	23	24 Begin Harvest Planting #2	25
	26	27	28 Compost Tea and Weed All Spinach except the planting to be harvested this week	29	30		

Making a like calendar for each crop family makes it easy to collate monthly work calendars giving farmer and employees an overview of all work, monthly, weekly and daily(slide 16).

- What are your production goals? What factors affect their fulfillment? What labor will be required of you, and when should each task be performed? This is the first step to building a calendar, and might involve quite a bit of thought and research.

Now, imagine your own farm.

Common factors relevant to growing food, with related research sources, include:

- crop and breed characteristics
 - [Rodale Institute's organic transition module](#) (click "Crops" on left navigation bar)
 - [USDA plants database](#) (hint: to view only edible plants, use the advanced search's "human palatable" filter at bottom of criteria list)
 - [Purdue's breakout map of U.S. Agriculture Census crops](#)
 - [Johnny's Selected Seeds' planting calculators](#)
 - [Heritage breed animal information](#)
- soil quality
 - [Johnny's Selected Seeds' soil primer](#) (article includes further links)
 - [Rodale Institute's organic transition module](#) (click "Soils" on left navigation bar)
 - [USDA/NRCS soil education hub](#)
 - [Building Soils for Better Crops](#) (free download)
- local climate
 - [interactive map of major U.S. climate organizations](#)
 - [Midwestern Regional Climate Center](#)
 - [Indiana State Climate Office's hub for normal climate data by region](#)

Do your research.

Common farming work involves:

- **soil** testing, amendment, and cultivation
- **compost** development and application
- **plant** seeding, transplanting, pruning, and spraying
- **plant bed** irrigation, weeding, and mulching
- **season extension** as through greenhouse use
- **produce** harvest, washing, storage, and transportation
- **regulation** of production as through staggered plantings
- **animal** housing, watering, feeding, herding, and treatment
- **tool and workspace** construction, cleaning, and organization
- **workforce** cycling and growth
- **sourcing** supplies

Consider your work.

- With an idea of the conditions and work it will take to yield your food, you may consider your calendar's specifications.
- What is a useful timeframe for your calendar? Animals are often fed twice daily, plants take weeks or months to grow, crop rotation occurs over the course of a year or years, and soil-building may take decades. What are you trying to accomplish and how might one or more calendars be scaled to help?
- What form will your calendar take? Shared online documents, month-by-day whiteboards, and penciled list arrangements are some of the possibilities. Tasks may be assigned to workers within the calendar. What is most useful to you and your workforce?
- See <http://youtu.be/lik8MRqr7Kk> for information on online calendars.

Design your calendar.

- What items will your calendar include? How will these items be categorized and organized?
- In placing tasks, you might work back in time from desired outcomes or forward from landmarks such as the year's expected final day of freezing weather.
- How far in advance will you fill your calendar? How will you update your calendar? Commonly, farmers do more planning in winter and reacting in summer.

Design your calendar.

- Once you have built a calendar, consult it as often as is necessary to direct your labors. Like any tool, it might need maintenance to remain useful.
- When you feel like change is in store, evaluate your calendar's performance and change it accordingly.
- After years your calendar will be a finely tuned tool.

Work with your calendar.

MONTH: MAY		Work for Food Bertrand Farm					YEAR: 2011	
MAY		Turn Compost Harvest					YEAR: 2011	
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	MESSAGES	
Sun 9 Workshop II 1-5 Workshop II →	Mon 10 Workshop II Strawberries transplant Peas to cells Compost Tea Spray PM	Tue 11 Lettuce Radish, Carrots Beets, Turnips More Propagatus	Wed 12 Mulch Pot & Peas (back) Rain/Water Chicken Fertilizers / PM Shakes PM Module / Blog	Thu 13 garlic	Fri 14 PIGS MOVE Harvest AM	Sat 15 Clean Barn	TO DO: Finish pruning build chicken tractors (2) Harvest chard	
Sun 16 → Fruit - at Prime / Chen Arrows - track - time & observation -> Improved kale? -> Chard -> Fungicide + Fertilizer	Mon 17 Greens Spinach -> Aerial maturation -> side-tracks -> shot his him Chard	Tue 18 Beans 2 rows Afternoon Research 7-9pm Strawberry Workshop	Wed 19 Seed about fall garden bed starting	Thu 20 More hot pigs Harvest AM -> Beets - on finish - compost - cover -> Carrots	Fri 21 Beets / Carrots Radish / Chard			
Sun 25 →	Mon 26 Beans →	Tue 27 Beans 2 rows Radish Carrots Beets, Turnips	Wed 28 Beans 2 rows →	Thu 29 →	Fri 30 →	Sat 31 →		



Check out some calendars.

Garden To-Do List

- plant more beans + cukes
- pick potato flowers

Silva

- newspaper + mulch basil ✓
- weed control peppers + tomatoes ✓
- trellis tomatoes *
- re-plant cukes = 2 ✓

Albus

- weed control on herbs ✓
- plant spearmint.
- Tie asparagus to fence ^{water}

* Daily Garden Chores

- water greenhouse
- water 3 boxes in Horton (kale, cct)
- pm. turn on drip lines
- * water + thin pae choy box

Horton

- plant rows formerly lettuce
- weed + mulch dry beans
- weed new carrots
- mulch watermelons
- re-plant dry beans in gap
- plant leeks in kale boxes
- plant radishes or beets in middle new kale
- pull up seeding beats plant more satisfy
- empty places

Other

- compost tea?
- coffee grounds on tomato plants
- spot weed everywhere esp pepper + cucumber rows. Careful not to pull up plants in middle of double tomato row.
- weed eat outside fences.

Anna
740-323-6

Nofarm Farm 2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Greenhouse			start brassicas and tomatoes	shoots	shoots	shoots	shoots	shoots	clean and repair			
East Field			mow and till	transplant brassicas	cultivate	harvest	harvest	clear to carrots	cultivate	cultivate		
North Field				mow and till	transplant tomatoes	cultivate	harvest	harvest	clear to buckwheat			
West Field				mow and till	start corn	cultivate	cultivate	harvest	clear to buckwheat			
Boxes				clean and compost	plant greens	plant greens	plant and harvest	harvest	harvest	clean and repair		
Pasture				graze birds	cut	graze birds	cut	graze birds	cut			
Compost	fill and turn	fill and turn	fill and turn	fill and turn, apply	fill and turn, apply	fill and turn, apply	fill and turn	fill and turn	fill and turn	fill and turn	fill and turn	fill and turn
Tools		clean and sharpen		clean and sharpen		clean and sharpen		clean and sharpen			repair	
House	misc. work	misc. work	clean and repair				ferment cabbage	dry corn and tomatoes		knit	clean and repair	misc. work

Check out some calendars.

- Calendars have myriad forms and uses. Consider the spectrum.
- A task-list is a calendar aggregating work items for a given timeframe.
 - Consider a temporary checklist of the day's goals.
 - Consider a relatively permanent display of work that can always be done. This could prove useful when volunteer labor shows up or as a reminder and inspiration.
- A calendar can serve as a data collection tool. Interesting data (perhaps on temperature, rainfall, germination, harvesting, pests) recorded by date may inform future farming endeavors.
- On a related note, a working calendar that is complete and adhered to is a reliable account of farm activity. This may be useful in all sorts of analysis.

Consider the possibilities.

1. How are seed packets and crop information critical to developing a working calendar?
2. In what ways can calendars be a useful communication tool among farm workers?
3. How can a working calendar help farmers meet their production goals?

Self-Review Questions

- [Greenhorns' free publications library](#)
- [National Sustainable Agriculture Information Service \(ATTRA\)](#)
- [USDA / AFSIC on organic production](#)
- Johnny's Seeds

Resources