



The author picking spinach for market on November 13th. Behind him are rutabagas, kale, broccoli, brussels sprouts, cauliflower—all still being harvested at this time.

Feeding Ourselves by Doug In The North Country Jones

INTRODUCTION

Until the early part of this century, most rural areas, including ours, were basically self-sufficient in their food supply. Today, the North Country imports 90% of its food from other areas. Much of it is highly-processed convenience food.

Even many of the dairy products on our supermarket shelves are processed elsewhere, and much of our beef and pork is western grown. Our farmers are also dependent on western-grown grain to feed their cattle.

We have come to a state of helpless dependency on distant farms and giant food corporations. How has this happened?

The rise of large-scale agribusiness, and the decline of small, diversified farms and local food systems will be discussed in greater detail in Part IV of this series. Essentially,

though, the story is one of cheap fossil-fuel energy and modern technology, which made large-scale farming, processing, and distribution more "efficient." But this efficiency is now appearing to be more and more superficial. It is an efficiency of *labor*—labor used per bushel or pound of food produced, or per acre worked. It requires less labor to do things on a large scale with machinery and chemicals.

The hidden costs of modern agribusiness are revealing themselves at an increasing pace, and the "bigger is better" rule is beginning to be broken by small-scale, energy-efficient, more human-centered enterprises. Waste of non-renewable energy (especially oil) is one of many hidden costs; other costs which are becoming more and more serious include unemployment, overcrowding of cities, decay of rural societies and institutions, chemical damage and other environmental and human health problems, lower quality of food and feedstuffs, and help-

less subservience to the whims of large, distant corporations. Farmer and consumer alike must sit by and watch food speculators, processors, and other middlemen take the bulk of the consumers' food-buying dollar.

The new popularity of home gardens, home livestock, and farmers' markets, however, makes it clear that people will no longer let agribusiness put all the food on their table. People are not only saving money, but they are eating better, and benefiting from the exercise and fascination of growing their own (and cooking meals from scratch). Small farmers can diversify their operation by catering to the popularity of locally-grown food. Diversity is sorely needed in an area like ours, where dependence on one product, milk, makes farmers vulnerable to the ups and downs of a market controlled by many complex factors and special interests in urban areas.

What about the North Country—are we really getting full use out of our growing season? Are we aware of all the crops that can be successfully grown in our climate? Are we taking advantage of the many possible methods for preserving the harvest for winter use? For most people, the answer to these questions is definitely *NO!*

This series of articles will present many practical methods and suggestions for becoming more self-sufficient in our food supply. PART I, which follows, will discuss in general the possibilities for stretching the growing season on many crops, through earlier plantings, later harvests, and succession plantings; also shown are the possibilities for food preservation.

PART ONE

Getting the Most out of the North Country Growing Season

Most people don't realize that the growing season lasts for over seven months in the North Country. Nor do they know that over seventy distinctly different vegetables and fruits can easily be grown here. Most gardeners do their planting at the end of May, around Memorial Day; then they harvest most of their

vegetables during a six-week period in August and September. Come the first killing frost, it's time to hang up the tools and go back to the supermarket for another ten months of machine-made food.

Even our dairy farmers buy most of their food at the supermarket. Their grandparents knew the art of providing their families with a year-round supply of diverse foods, grown either at home or on nearby farms

Unfortunately, regional specialization has become the rule, so that our farmers and agricultural advisors now generally believe that dairying is the only viable form of farming in the North Country. Certain economic and geographic factors have created this situation; but times are changing, and many crops are appearing on the horizon, as potentially viable and profitable alternatives to dairying.

This article intends to demonstrate how most of the vegetables and fruits which can be grown here are vastly underutilized by gardeners and farmers alike. The most promising areas for improvement include:

1. Cool-weather crops
2. Choosing varieties adapted to our climate.
3. Succession crops to make better use of land, tools and nutrients
4. Utilizing various food storage techniques
5. Stretching the season for warm-weather crops by using various tricks to get earlier starts and prolonged harvests.

The chart accompanying this article might surprise some people with the length of harvest season given for certain vegetables, but read on. Most of the information in the chart is based on the experience of our farm and several other local growers.

Note: the vegetables are divided into basic categories to simplify discussion. Some categories are based on botanical groupings, others on parts of the plants commonly used. Though drying is a reliable method of food preservation which is gaining in popularity, I have not included it in this chart due to my inexperience with it. It has, however, been used successfully on most vegetables and fruits.

The Cool-Weather Crops

Thirty-two degrees Fahrenheit is the great divider between the basically cool-weather plants and the warm-weather plants. But grouping plants according to their ability to survive freezing temperatures leads to many problems and illusions.

For example, many people plant their whole garden after frost danger is past, late in May, and that's it. At our farm, on the other hand, we begin planting indoor seedlings in March, and start planting hardy crops outdoors in April. Planting is heaviest from April 20 to June 10. By Memorial Day, our planting is perhaps 2/3 done, but we keep planting succession and fall crops right up to the middle of September, with the last plantings designed to winter over for spring harvest. There are only five months of the year when we are *not* planting.

On the other hand, people have the illusion that you harvest fresh vegetables mostly in August, with some in July and September. As the chart accompanying this article shows, certain fresh vegetables can be picked or dug up soon after the snow melts in the spring, right through the light snows of late November. That's an eight-month harvest season.

Another misconception involves the length of season for certain cool-weather crops. Most of them can actually be grown all summer long in our climate. Proper cultural methods and varieties are important to achieve this. Spinach and lettuce are good examples.

The three main tricks for successful spinach crops are: proper variety, high nitrogen and organic matter content of soil, and successive plantings. "Long-Standing Bloomsdale" seems best for all plantings subject to bolting (flowering or "going to seed")—this means any spinach you plant from April until July 15. The earliest plantings, of course, will yield over the longest period. If you plant April 20, you can get several cuttings from May 25 until June 25, when most of the plants will be bolted. With experience, you can time successive plantings so that they will provide a continuous harvest all summer and fall.

As the days begin to shorten in July, you can start planting crops that will not bolt at all. After July 15, start using "Winter Bloomsdale" or some other fall spinach. This will start yielding big leaves by September 1, and continue to produce lush crops until cold November weather slows it down. With a decent snow cover on well-drained soil, it should survive to give you a spring harvest in early May, (note asterisk on chart) quickly bolting by May 25, just when your new spring planting is ready to start cutting! Thus, late summer plantings on fertile ground will give you the greatest yield of spinach. Around September 15 we also plant a crop specifically for wintering over—it will peak about June 1st and start bolting a week later.

Bolting can be delayed not only by variety choice, but also by a fertile soil high in available nitrogen. We use composted manure (a little chicken manure will help) at a very heavy rate—about 2 tons per 1,000 square feet, or 80 tons per acre. This would be wasteful if you did not immediately plant a heavy feeding crop (corn, squash, cabbage, etc.) or cover crop after the spinach to take up the nutrients being released. Nitrogen prolongs the vegetative stage of a plant's growth, delaying reproduction (bolting).

Looseleaf lettuce, likewise, can be grown all summer long, using slow-bolting varieties on rich soil. The trick for keeping a sweet taste in warm weather is to keep it growing fast, with mulch or high soil organic matter supplying enough moisture, or watering the plants if necessary. Using a shady spot for mid-summer crops will help, but is not essential. The tremendous variety of delicious looseleaf and semi-head lettuces makes most gardeners shudder to think that most Americans equate the word "lettuce" with pale, tasteless, vitaminless "iceberg"—the only kind that keeps for long-distance shipping.

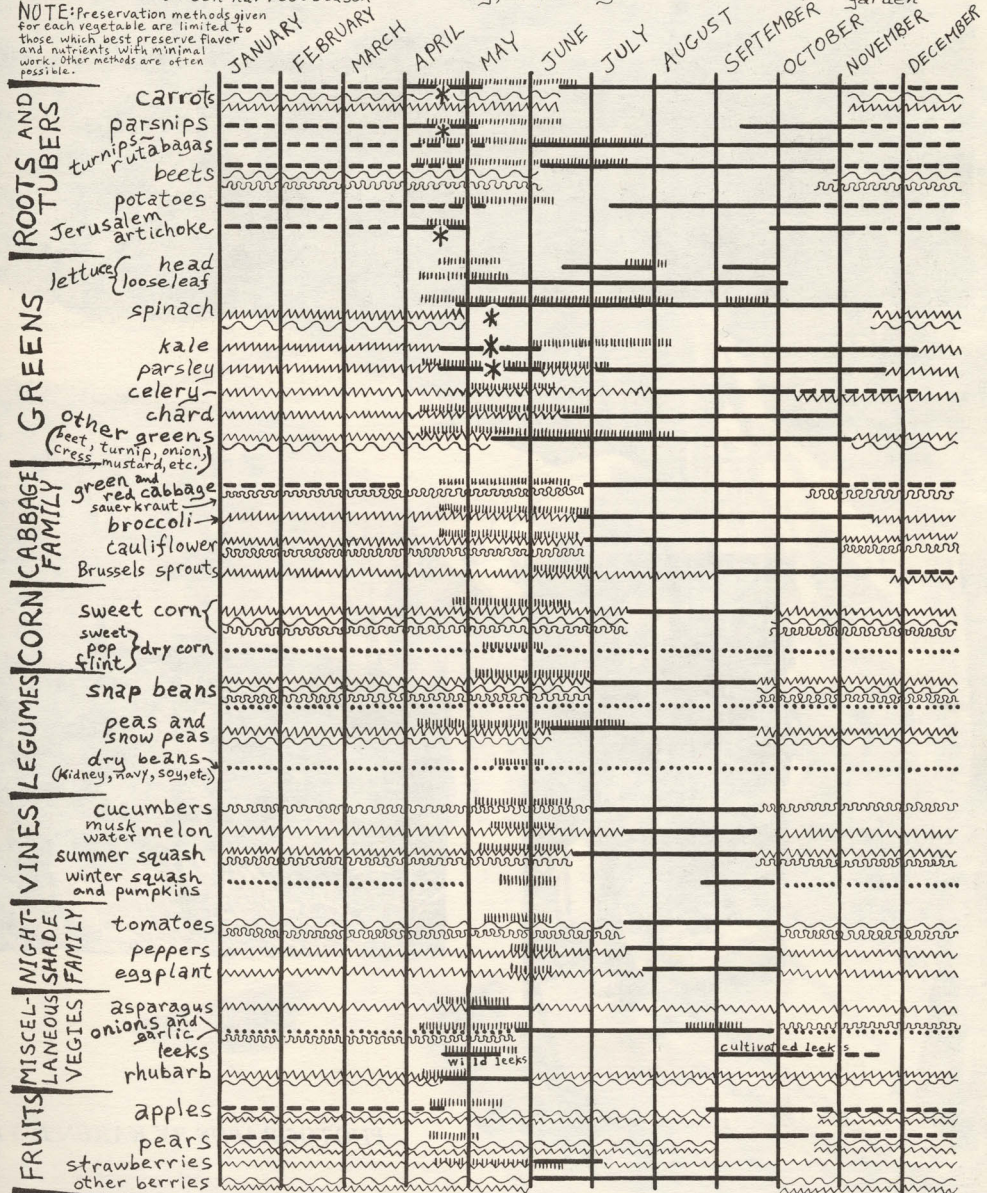
Though celery can only be eaten from the garden for about two months, it is definitely a worthwhile crop, not often attempted by gardeners. In our climate, it must be started in a seedflat no later than March 15, for transplanting in May. The dashed line on the chart for celery refers to the practice of "heeling in"—pulling or digging plants with roots and soil attached, then storing in a box in the root cellar,

GROWING SEASON AND STORAGE PERIOD FOR VEGETABLES AND FRUITS IN THE NORTH COUNTRY

Based on the past experience of the author (Doug Jones) and other local growers~

KEY planting season root cellar (humid) frozen pickled
 fresh harvest season dry, cool storage canned * overwintered in garden

NOTE: Preservation methods given for each vegetable are limited to those which best preserve flavor and nutrients with minimal work. Other methods are often possible.



NOTE~ Well-drained land, southern slope, frost-protection devices, and other techniques, are helpful in attaining the extremes given in this chart (see article)

with a sheet of plastic over them to retain moisture. Note the same dashed line for brussel sprouts, which work the same way.

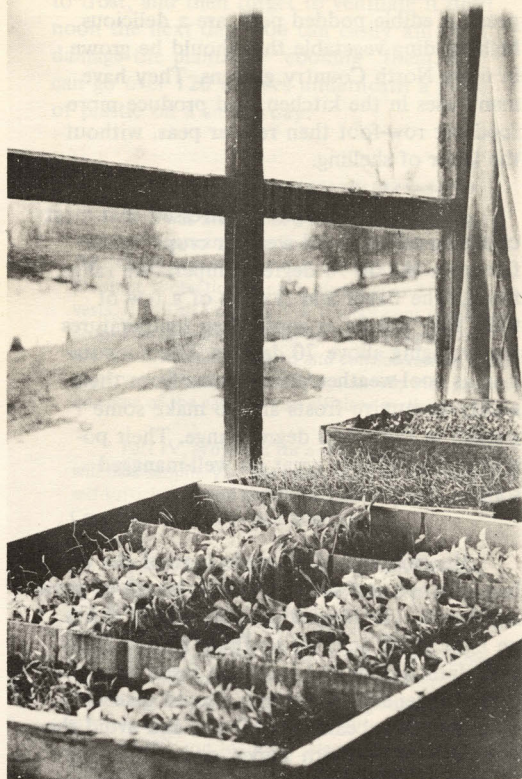
A *root cellar* is probably the most valuable and inexpensive tool for storing large quantities of certain vegetables in an essentially fresh condition. Part III of this series will go into detail on this method, which has so much potential for gardeners and also farmers wanting to diversify.

For certain roots, an alternative storage method is *overwintering* in the ground (note asterisks on chart). Parsnips and Jerusalem artichokes can be left in the ground as is, acquiring a sweeter taste by spring, according to many gardeners. Beets, potatoes, and rutagagas keep so long in a carefully-regulated root cellar that there is no point in leaving them in the ground over the winter, which is possible but requires a mulch of hay or leaves to keep the ground (and the crop) from freezing.

Carrots, if they are broadcast-planted in a raised bed 15-25 inches wide, will produce a large quantity of roots in a small space. This makes it worthwhile to mulch a part of the bed to overwinter them. The heavy mulch keeps the ground from freezing over the winter, then keeps it cool in April to delay sprouting. The last batch can be dug out May 1 and kept in the refrigerator a few more weeks. By late June, a spring planting of a quick-growing variety will be producing usable roots. Thus, using a root cellar and overwintering, carrots can be eaten fresh all but about one month of the year—a versatile plant!

The cabbage family seems to be one of the most neglected groups of vegetables in the North Country. They are another group which many people mistakenly believe can't be harvested in midsummer in our area. Actually, they may slow down some in very hot weather, but most summer days in the North Country don't get that hot. September is definitely their big month for lush growth.

By starting seedlings indoors, in cold frames, or some other protected nursery bed



Seed flats in a window in early April. In the foreground: lettuce, some for immediate consumption, some for transplanting to protected beds in the garden. Next flat: spanish onions, which must be started by March to mature by September. Far right: early broccoli and cauliflower for late April transplanting.

set-up, early varieties of cabbage, cauliflower and broccoli will begin heading in late June. Many varieties of broccoli will then continue to produce smaller side sprouts for four more months.

Using timed plantings of early, midseason, and late varieties of cabbage and cauliflower will also provide a continuous four month harvest. Late varieties should be transplanted to their final place in the garden no later than June 10. Brussel sprouts should be timed for September-October harvesting, which means planting them in June only. They are extremely hardy and can be picked well into November.

Garden peas and snow peas, planted in April, are two of the first vegetables of the season, coming in not too long after the various greens. They are well suited to succession plantings, and some people have done well during the hot months with heat-resistant

varieties like "Wando" and "Lincoln." Snow peas, or edible podded peas, are a delicious, high-yielding vegetable that should be grown in more North Country gardens. They have many uses in the kitchen, and produce more food per row-foot than regular peas, without the labor of shelling.

In general, it should be stressed that most of the so-called "cool weather crops" grow fastest in the 60-70 degree temperature range, though the flavor and texture of a few of them may not be as good when temperatures are averaging above 70 degrees. Their reputation as cool-weather plants stems from their ability to survive frosts and to make some growth in the 40-60 degree range. Their potential is obviously great on well-managed soils in the North Country.

Mention should be made here of the effect of slope and soil texture on length of growing season. The longest growing season exists on light sandy soils on southern slopes. Light soils drain earlier and warm up faster than clay soils. Gardeners and farmers should take note of where their "early spots" are, and avoid the wet spots or northern slopes, saving them for summer crops. Clay soils can be made lighter by continually building up their organic matter content, using manure, green manure (see my article in Spring 1978 *ROOTDRINKER*), various mulches turned under, or crops with large amounts of residue to turn under.

Also worthy of note is the usefulness of various plastic tents, cold-frames, hot-caps, and other protective devices, to get an extra early start with certain cool-weather crops. Our experiments with these have given good results, especially with quick-growing crops that can be densely spaced in raised beds.

The Warm-Weather Crops

Zucchini squash by June 25th? Cukes on the 4th of July? Corn and tomatoes by July 20th? This is not a southern New Jersey vegetable report—this is a harvest season easily possible in Northern New York, if you know the tricks. A greenhouse need not be one of them, either.

First of all, it is important to note that

a frost is not necessarily fatal to certain warm-weather crops. Probably more early corn plantings are destroyed by seed rot or bird thefts than frosts, for though a moderate frost in May will kill the more exposed leaves of a corn plant, the inner core of the young plant will usually survive. Thus, on southern-sloping, well-drained land, it is worth taking a risk on planting an early variety of corn, such as "Earlivee" or "Sprite", starting as early as the last week of April, unless the weather is cold and/or wet. Beans, too, will often survive a light frost. Likewise, late crops of sweet corn will withstand fairly heavy fall frosts without damage to the ears.

Many warm-weather vegetables can benefit greatly from various techniques which will be detailed in Part II of this series. These include planting pre-sprouted seeds; planting in raised beds (which drain better and warm up faster); and use of any number of devices to



protect young plants from frost and provide a greenhouse-like environment that is warm and humid.

Extension of the harvest season beyond the first killing frost in the fall is also possible, mainly through the use of sheets of plastic, old blankets, etc., that hold enough ground heat around the plants to keep them above 32 degrees. This is especially worthwhile with tomatoes, peppers, eggplants, or cukes, if many unripe fruits still beg to be spared a few more weeks. We even plant our late varieties of tomatoes in patterns conducive to covering in September with standard ten-inch clear plastic. Here again you can get the double effect of frost protection at night and quicker ripening due to the heat that builds up under the plastic during the day, a result of the greenhouse effect.

Actually "late variety" is a misnomer—in our climate, it usually doesn't pay to grow a late variety of tomatoes, peppers, eggplants, melons, or winter squash. Not only should you stick with early varieties, but you and your gardening friends can also save and trade seeds of some open-pollinated varieties, selecting for early maturity. Beans, corn, peas, tomatoes, and peppers all lend themselves to seed-saving. Develop your own locally-adapted varieties!

A very promising new tool for getting earlier and better harvests is foliar spraying with seaweed or fish emulsion. Seaweed contains high levels of certain plant hormones which can stimulate other plants to flower and set fruit earlier than usual. It also provides a wealth of micronutrients to prevent deficiencies. Storage qualities are reportedly also improved through use of seaweed on the plants at certain stages of growth. Fish emulsion can provide some of the major nutrients that plants have trouble obtaining from cold soil in spring.

These possibilities for stretching the season present a challenge to the vegetable grower. Some techniques, while requiring little in the way of monetary investment, are very demanding in terms of daily, conscientious attending to adjustments and details. For example, overheating can do as much damage as a frost—if you tighten down a cold frame or plastic tent on a clear evening which threatens

to frost, and then forget to ventilate it until noon the next day, you can easily kill or damage the plants by "cooking" them. If can go over 120 degrees underneath a piece of plastic on a sunny day.

This was the first of a four-part series. Part II, which will appear in the Spring 1979 issue of **ROOT-DRINKER**, will cover specific methods for early planting, protection of early plantings and late harvests. It will also discuss how to plan your succession crops and annual rotations. In Part III, slated for the Summer Issue, the pros and cons of various food preservation techniques will be covered, with specifics on some of the easier, more efficient methods.

Part IV, projected for either Fall or Winter '79, will be a summary of the latest ideas on regional food self-sufficiency, and my own ideas on how the North Country can move in that direction.

In the meantime, plan your garden carefully and order your seeds early. I would be glad to answer any questions on specific seed varieties or any of the growing techniques we have experimented with. I highly recommend the following two seed catalogs, both of which specialize in seeds for northern areas, and take great pains to educate the gardener on cultural methods: Stokes Seeds, Inc., Box 548, Buffalo, N.Y. 14240; and Johnny's Selected Seeds, Albion, Maine 04910. You can contact me at Birdfoot Farm, Star Route, Canton, New York 13617.

Django's

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-E.N.E.

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