Good Choices for Winter Storage and Northern Food Production

These numbers are possible calories produced per 100 sq ft at optimum growth.

Potatoes	275,000
Leeks	265,000
Parsnips	160,000
Garlic	160,000
Jerusalem Artichoke	160,000
Salsify	150,000
Beets	150,000
Rutabagas	130,000
Onions	100,000
Burdock	100,000
Carrots	80,000
Swiss Chard	70,000
Kohlrabi	35,000 - (70,000 Giant Varieties)
Asian Radishes (Storable)	50,000
Cabbage	45,000
Tomatoes (@18 lb/plant)	40,000
Peas (More with Snap Peas)	40,000
Kale	35,000
Mustards	32,000
Herbs	30,000
Rhubarb	26,000
Peppers	25,000
Sunflower Seeds	25,000
Salad Greens (Leaf lettuce higher yielding)	25,000 - 45,000
Spinach	22,000
Grains (24 lbs)	20,000 (Quinoa 50,000)
Pumpkins and other Squash	20,000 - 30,000
Beans (Fava higher yielding)	15,000 - 30,000
Broccoli	7000 (Leaves have more food value! 13,000)

Starting Early

Number of Weeks for Starting Early Prior to your Average Last Spring Frost

9 to 10 Weeks	Leeks[#], Peppers[%], Celery[%], Celeriac[%], Parsley[#]
7 to 8 Weeks	Onions[#] Tomato[%] Eggplant[%]
4 to 6 Weeks	Broccoli[#], Cabbage[#], Rutabagas[#], Cauliflower, Lettuce[#], Brussels Sprouts[#], Spinach[#], Mustards[#]
3 to 4 Weeks	*Beets[#], Kohlrabi[#], Kale[#], *Peas[#]
1 to 2 Weeks	*Pumpkins[%], *Cucumbers[%], *Squash[%], *Melons[%]

*These do best with newspaper pots. [#]Can be planted two weeks or more before last spring frost.
[%]Plant up to two weeks AFTER last spring frost.

Seeds that can be plants as soon as the soil is bare of snow and not frozen

In Hay River this could be May 7 to 14th

➔ Carrots, parsnips, salsify, lettuce, peas, fava beans, radish, spinach, kale, onions, turnips.

Potting Soil Mix

- ➔ 30 units peat
- ➔ 1/8 unit lime or wood ash
- ➔ 20 units coarse sand
- ➔ 3/4 organic fertilizer
- ➔ 10 units soil
- ➔ 20 units compost

- ➔ 3 buckets brown peat moss or local peaty top soil
- ➔ ½ cup lime or wood ashes
- ➔ 2 buckets coarse sand
- ➔ 3 cups organic fertilizer
- ➔ 1 bucket outdoor soil
- ➔ 2 buckets compost

*Bio-char can replace a portion of the peat, sand, outdoor soil or compost.
*University studies show that finished compost serves as a disease suppressing ingredient in soil mixes.

Temperature Minimum for Plant Growth to Occur

Strawberries	4.5˚C	Lettuce	4.5˚C	Lima beans	10˚C
Asparagus	4.5˚C	Squash	7˚C	Beans	10˚C
Beets	4.5˚C	Onions	7˚C	Pumpkin	10˚C
Fava beans	4.5˚C	Leeks	7˚C	Squash	10˚C
Cabbage	4.5˚C	Garlic	7˚C	Peppers	15˚C
Parsnips	4.5˚C	Salsify	7˚C	Tomatoes	15˚C
Radish	4.5˚C	Chicory	7˚C	Cucumbers	15˚C
Rutabaga	4.5˚C	Chives	7˚C	Melons	15˚C
Turnips	4.5˚C	Carrots	7˚C	Eggplant	18˚C
Spinach	4.5˚C	Cauliflower	7˚C	Okra	18˚C
Broccoli	4.5˚C	Celery	7˚C	Sweet potato	18˚C
Collards	4.5˚C	Celeriac	7˚C	Watermelon	18˚C
Peas	4.5˚C	Mustards	7˚C	Hot peppers	18˚C
Kohlrabi	4.5˚C	Potatoes	7˚C		
Brussels Sprouts	4.5˚C	Corn	10˚C		

Growing degrees (GDs) is defined as the number of temperature degrees above a certain threshold base temperature, which varies among crop species. The base temperature is that temperature below which plant growth is zero. GDs are calculated each day as maximum temperature plus the minimum temperature divided by 2 (or the mean temperature), minus the base temperature. GDUs are accumulated by adding each day's GDs contribution as the season progresses.

Germination Temperatures for Vegetables and Special Crops

	Minimum (˚C)	Preferred (˚C)
Bean	8-10	16-30
Beet	4	10-30
Cabbage	4	7-35
Carrot	4	7-30
Cauliflower	4	7-30
Celery	4	15-21
Corn	10	16-32
Cucumber	16	16-35
Eggplant	16	24-32
Lettuce	2	4-27
Onion	2	10-35

	Minimum (˚C)	Preferred (˚C)
Parsley	4	10-30
Parsnip	2	10-21
Pea	4	4-24
Pepper	16	18-35
Pumpkin	16	21-32
Radish	4	7-32
Rutabaga	4	16-30
Spinach	2	7-24
Squash	16	21-35
Tomato	10	16-30