

## KALE AND LETTUCE – TERRY BATT AND JENNY GOHL.

### INTRODUCTION

Dr Royann Petrell has talked about the Seed Amassing Plan in her presentations on tomatoes and squash. The Penguins, a subgroup of the Seed Bank, is trying to find and amass the best seeds for the Comox Valley and to prepare for climate change by collecting large numbers of these “All Comox Valley Winners.” These would be vegetables that can grow well in all areas of the valley and would grow well under conditions of wet, heat and drought. They would also have other characteristics such as disease resistance, good flavour and good yield.

Today we're going to be talking about kale and lettuce. Vulcan Lettuce and Improved Siberian Kale have already been selected as “2015 All Comox Valley Winners,” and we are looking for suggestions of other varieties to consider for other years. A good winter variety of lettuce would be especially appreciated. If you have suggestions, you can let us know and we will put them on our list.

We are looking for volunteer growers from all parts of the valley. Some people have already signed up to grow tomatoes and squash for the program. Today during the break and after the meeting we will be signing people up to grow kale and lettuce. Seeds or seedlings and growing instructions will be provided. Appropriate isolation techniques will need to be followed, and we will tell you about those. You will need space to grow 10-15 plants for seed, but you will need to start with more in order to be able to select your best. The plants should be 18 inches apart for kale and 8-10 inches apart for lettuce. We will ask you to save your best seed from your best plants and to report back to us with your seeds at the end of the season. We will want to know how the crops grew in your area, how the flavour and yield were, and any signs of disease you noted. We need 1000 seeds total from each crop; the number we will need from each grower will depend on how many volunteer growers sign up.

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### KALE

The most common varieties of kale we grow here in the Comox Valley are;

Curly or Scots Kale,

Lacinato or Dinosaur Kale – with the long thin dark leaves, purple kale and the Sibero-Russian Kales – Red Russian and Siberian kale.

All the curly kales and the lacinato belong to the brassica oleracea species. They will cross with each other and with many other crucifers – cabbage, broccoli, brussel sprouts, cauliflower and collard greens.

The Red Russian and Siberian kales belong to brassica napus species and will cross with each other but not with the other kales. They will also cross with rutabagas, rape and canola. It seems that the napus variety can self pollinate without suffering from inbreeding depression and also it does not have a self incompatibility mechanism which so many plants do.

These facts are not very widely known but make a huge difference for seed saving.

Last year I had a beautiful curly purple kale from seed my brother sent me from Britain. I also had a very tender leaved Siberian and I wanted seeds from both of them. My garden is small so isolation distance was out of the question. Kales are insect pollinated and bees can fly huge distances.

The purple kale flowered first so I let the bees and other insects pollinate at will. When the Siberian wanted to flower I cut them off and ate them until I thought I had enough purple pollinated. I sewed some big muslin bags and covered two of my best branches. Then I let the Siberian flower.

Now, I know that they wouldn't have crossed but it was good practice.

### **Isolation**

To isolate we can use

1. distance – over 1.5 kilometres from other napus
2. bagging – as I've described
3. Timing. alternate years is good with biannuals. This year we would like you to grow out the Improved Siberian Kale which will flower next year. If you already have Red Russian you can let it flower this year as well as your curly kales. If you'd like to try the purple kale you can plant that this year too.

Timing in the same year is difficult because kales keep flowering for so long.

**Qualities of Improved Siberian Kale.** Why is it our chosen kale for the seed amassing program and All Comox Valley Winner for this year?

- More tender than other kales.
- Milder flavour and therefore good for salads when the leaves are young and always superb as a cooked vegetable when the leaves are fully mature.
- Good for sprouting and microgreens over winter.
- Vigorous
- Very hardy – better winter survival than most of the other kales. Arzeena says that her Scottish kale and lacinato are nearly all gone while the Siberian is chugging along.

### **Growing**

To get the strongest plants for overwintering, kale should best be planted in the early spring. Seeds may be started indoors or in a greenhouse six weeks ahead, then hardened off and transplanted out into the garden. You can, however, plant kale as late as late June or early July, and the plants will still grow large enough to overwinter and produce seed in the spring. As I have a very small backyard garden and like to grow as many vegetables as I can, I plant my kale in 4-inch pots by early July, then transplant them in August when some space has opened up for them. This seems to work well for me. Mature plants need at least 18 inches between them, but you can plant more densely and eat the thinnings. Remember not to plant kale where Brassicas grew the previous year. In the fall, I usually mulch my kale plants with straw or leaves for overwintering – this protects the soil from relentless winter rains and gives some protection from the freeze-thaw cycle.

**The qualities** to look for when you select kale plants for seed saving are:

- dense foliage
- true to type leaf shape
- a strong central stalk of medium length
- good flavour
- good yield / lots of leaves

Choose 10-15 of your best plants according to these qualities and mark them for seed-saving.

### **Collecting the seeds.**

The spring warm weather will have the kale producing new leaves. These one can harvest for the table and leave the main stem alone for seeds where they are the most viable. It will grow up to 4 or 5 feet tall and have masses of yellow flowers attracting a humming crowd of bees and other flying insects. Its a wonderful sight and sound as you're working in your garden.

The plant will probably need some firm stakes as it gets very heavy when the branches are full of ripening seeds.

First the seed pods are long and green and gradually they dry and turn brown. Ideally you want to harvest them before they burst open and scatter seeds but each branch will have a mixture of mature and immature.

I hold a bucket under the branch and harvest the mature seed pods but later when a good percentage are dry I'll cut the whole branch and store it in a brown paper bag.

After a few weeks in a warm dry place with good air flow they will be dry and you can rub them together and all the seeds will fall to the bottom of the bag.

Cleaning is easy. Remove the big pieces by hand and blow away the small debris.

### **Save seeds.**

You will have a large ammount of seeds. Give some to the seed bank, some for Seedy Saturday, some to grow yourself and some for sprouts and microgreens.

### **Seeds to distribute.**

We have kale seeds for those of you that would like to promise seeds for the seed bank. We'd like at very least 4 growers for 30 plants each of Improved Siberian Kale.

### **Companion Planting.**

Don't grow kale next to your beans or tomatoes, nor your strawberries. They don't like each other.

Do grow kale near beets, celery, onions, potatoes and aromatic herbs.

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## **LETTUCE**

**Vulcan lettuce**, which is a leaf lettuce, has been selected for the Seed Amassing Program because:

- It is a robust plant.
- It is crisp, flavourful, and doesn't get bitter.
- It is drought, cold and heat tolerant.
- It is disease resistant (and also Royann said it did not get eaten by wire worms in her garden, whereas other varieties did.)
- It is late-bolting.
- It has some red colour, indicating the presence of anthocyanin pigments, which are antioxidants and may provide some defence against cancer.
- Its is a beautiful lettuce with its red and green leaves.

You may be wondering why lettuce was selected at all, as it may not seem like a very

important crop. But everyone eats lettuce – what would summer be without it? And, eaten fresh from the garden, it provides good nutrition, unlike the lettuce that travels thousands of miles to the grocery store shelves.

### **Growing.**

Lettuce may be direct seeded in very early spring. Or seeds may be started indoors or in a greenhouse four to six weeks early, then hardened off and transplanted out into the garden. When growing lettuce for seed, it is important to give it as early a start as possible, since we want the seeds to ripen in the driest period of the growing season. An early start is especially important for “slow to bolt” varieties like Vulcan, since it will take them longer to begin producing seed. Mature leaf lettuce plants will need to be spaced about 10 inches apart. Again, you can plant more densely and eat the thinnings. You may eat the outer leaves of the lettuce plants, leaving the inner leaves to continue growing, but it is best not to take too many from the ones you will be saving seed from.

**The qualities** to look for when you select lettuce plants for seed-saving are:

- robust, healthy plants
- typical leaf shape, colour and size (for Vulcan, this includes the red anthocyanins)
- good flavour
- drought, cold or heat tolerance
- resistance to downy mildew and other diseases
- late-bolting

Choose 10 of your “best” lettuce plants according to these qualities, and mark them with sticks or other markers. These 10 are the ones you intend to save seed from. If one of them bolts early, it will not be suitable to collect seed from, as we don't want early-bolting genes included. So if this happens, just choose another plant instead.

### **Isolation**

Lettuce is annual and self pollinating. This means that we don't have to have huge isolation distances as with insect or wind pollinated plants. Some suggest 20 feet but for those of us with very small gardens even this is too much so probably best to just save seeds from one type of lettuce each year or stagger the flowering. Or bag the seed head you want to save as extremely pure.

#### **Flowering**

After approximately 2 to 3 months lettuce starts to bolt; the central stalk starts to grow tall and the leaves become smaller, tougher and bitter. It is no longer edible.

It produces many flower heads that look like those of dandelions but smaller. They have the same feathery parachute for wind distribution.

Flowering continues for 3 to 4 weeks.

Flowers usually open in the morning and close in the evening. Sometimes they open for as little time as 30 minutes.

During this short period pollination occurs. The anthers are fused together into a little cone that completely surrounds the stigma and style. The style is pushed up through another cone and is coated with its own pollen.

### **Harvesting**

Seed ripening starts in 11 to 13 days after opening of the flower head.

As the heads of flowers are all maturing at different times it's impossible to make a big harvest all at once.

Shake the ripened flowers into a bag or bucket every few days. This way if the weather turns

wet you have some good seeds.

Or wait until a good proportion is ready – maybe 50% and then harvest the whole plant and store them in a warm dry place out of direct sunlight.

If rain is forecast and your seeds are almost ready cover them with a tarp or plastic and try and keep them dry to prevent fungus from infecting the plant and seed heads.

## **Companions.**

Lettuce likes almost everything;

- grow among your onions – each time you pull an onion, plant a lettuce.
- carrots have long roots and lettuce shallow so alternate a row of carrots with lettuce
- lettuce makes summer radishes tender
- lettuce loves strawberries, cucumbers, beans, beets.