

MOLES SEEDS

Oriental Vegetables

Cultural Leaflet: ZZ530

The umbrella term of oriental vegetables covers a range of diverse species which have been developed in the East, particularly in China, over many centuries. The varieties we offer are better adapted for temperate climates and are more uniform and stable.

They are hugely popular in the UK, with both pak choi and Chinese cabbage readily available in the supermarkets, and of course many are used in seedlin form in bagged salad mixtures. Moles Seeds offer many of these plus a much wider range incorporating crunchy and nutritious greens such as mizuna (a mild peppery taste), chopsuey greens (a member of the chrysanthemum family), komatsuna (a spinach-like leaf), mustards and Okahijiki (known as 'seaweed on land').

For retail plant sales, Chinese cabbage and pak choi can be sown directly into cell packs for Spring sales. In addition, we offer a wide range of seed mixtures for direct sowing into pots and packs and sold after two to three weeks.

Position

Most Oriental vegetables are members of the brassica family so it is best to keep them with other brassicas in a crop rotation, as all these plants will prefer the same soil and protection from pests.

As many of these leafy vegetables can be prone to bolting under stress (eg, high temperatures or drought) it is best to avoid the hottest part of the year. Sowing Spring or late Summer / early Autumn tends to give the best results.

These quick-growing vegetables prefer a site in full sun. Make sure they receive one with an open aspect, free from shading by their neighbours. This will give slugs fewer hiding places and make it easier to keep them under control. Late sown crops suffer less from problems like flea beetle.

Beds should be prepared in spring by digging in a dressing of manure or compost, which is then allowed to settle. If you are following your Oriental vegetables on from a previous crop then fork over the soil and apply a general purpose organic fertilizer before raking down to a fine tilth. Suitable options include blood, fish and bone or concentrated chicken manure pellets, which will encourage the lush, leafy growth you are looking for in most of these vegetables.

Soil type is not critical, although good levels of fertility are required as with other leafy crops such as spinach.

Programming the Crop

Most varieties can be grown by direct drilling in situ, although transplanting from modules may be preferred in some situations. Crop timing will depend upon stage of maturity required, temperature and time of year. Most are surprisingly hardy and will grow throughout a UK winter in unheated glass or poly tunnel.

Oriental vegetables can be harvested at varying stages of maturity:

- Salad leaf stage - both leafy and flowering vegetables can be

harvested as baby leaf stage, generally 3-4 weeks from sowing, at 5-10cm tall, to give tender leaves and stems that are ideal for mixed salad packs / eating raw.

- Stir-fry stage - semi-mature vegetables are cut at 15-20cm to give bulky material for stir frying or steaming. Traditionally, such product would be presented in bunches but such tender stems wilt quickly and modern pre-packs or pillow packs in conjunction with cool chain marketing greatly improve shelf life.
- Mature heads - with the exception of Chinese cabbage and pak choi, there seems little opportunity for marketing whole mature heads due to their limited shelf life. Mizuna and Tah Tsai have some potential as alternatives to endive, but the mature product can become fibrous and more bitter tasting.

Varieties

Chinese Cabbage

This Oriental brassica is both fast growing and highly productive if given the right conditions.

It requires an open situation with fertile, well-drained, moisture-retentive soil (pH 6.5 or 5.8 on peaty soils). Being fast-growing the soil must be rich in organic matter and high in nitrogen.

Temperature during propagation should be 18°C minimum, then when planting out in modules at the 2-3 leaf stage.

Problems

It is susceptible to excessive salt concentrations, and never does well in poor, dry soil. Being generally shallow-rooted, water is important so water little and often.

Chinese cabbage is very temperature-sensitive, especially in relation to bolting, but improved F1 cultivars and crop management should minimise this risk.

Propagation and Growing-on

Sow from June. Minimum germination temperature is 18°C, with an optimum of 20-25°C (300 seeds per gram). Sow into modules - do not transplant bare-root seedlings. Germination should take about 7-12 days.

Plant up the young plants at the 2-3 leaf stage, at approx 30cm apart and 30-40cm between rows. A minimum of 7°C is required. The crop matures around 8-10 weeks after sowing. The crop can be stored in a cold store at 1°C and 90-95% R.H. for 2-3 weeks.



Pak Choi

This group is closely related to the Chinese cabbage, with a thick fleshy leaf petiole which provides the 'crunch factor' in stir fries. Moles Seeds offers several varieties such as F1 Joi Choi, a vigorous white stemmed variety producing large heavy heads of about 1kg. One of the most bolt tolerant available and has good head and cold tolerance for both poly tunnel or open field cropping.

Depending upon your requirements, some varieties of Pak Choi are more suited to baby leaf or semi mature production, others are more adapted to temperatures or later sowing.

Propagation and Growing-on

Crop July to November. Germinate at 18-22°C (300 seeds per gram) in modules to delay bolting in early season crops. Matures 40-60 days from transplanting.

To avoid damage when packing mature heads, they can be allowed to wilt slightly before boxing up, then revived by hydro-cooling or ice bank.

Tatsoi

Suitable as both a baby leaf and whole head production, with good cold tolerance and therefore potential for winter cropping in a cold poly tunnel.

Propagation and Growing-on

Sow April onwards for baby leaf and sow June-August for whole heads to mature into winter (400 seeds per gram).

For baby leaf, space at 10x15cm and for heads, space 30-40cm apart. Matures 40-60 days from transplanting.

Mustard

Some such as Mustard Giant (840 seeds per gram) can be cut at baby leaf stage or left to mature to 40-45cm. Others such as Mustard Streaks (500 seeds per gram) have a finely dissected leaf and a good texture for baby leaf and salad packs.

Various

Flowering pak choi, such as Choy Sum, have been developed for their flower stems, which are generally harvested at 15-20cm long just as the first flowers are beginning to open. Stalks are fleshy and ideal for stir fry. Three or four successive harvests are possible if plants are top dressed. Matures 40-60 days. 450 sds/gram.

Chopsuey Greens is a member of the Chrysanthemum family, with deeply incised, bright green foliage, and tasty aromatic flavour. Harvest at baby or teen leaf stage. Can be eaten raw, lightly fried or boiled. 420 sds/gram.

Kailaan Kichi is also known as Chinese Broccoli. A uniform variety with large blue green waxy leaves. With excellent stem and bud eating quality. Later maturing type with good holding ability. Some resistance to Downy Mildew. Normally harvested when coming into flower. 400 sds/gram.

Komatsuna is often described as mustard spinach, it has a flavour which could be described as a combination of mustard and cabbage with a hint of spinach. Uniform, quick growing hybrid with light green leaf stems which are juicy and tender. Leaves are dark green and glossy. Can be used in salads and stir-fry. Cold tolerant. Suited to autumn, winter and spring crops. 475 sds/gram.

Mibuna is a strong, fast growing brassica with strap-like leaves, densely packed heads. Mild flavour. 350 sds/gram.

Closely related to Mibuna, Mizuna has pencil-thin white stalks with serrated, dark green leaves and a stronger taste than Mibuna. A very prolific cropper which will reform after cutting. 350 sds/gram.

Okahijiki is often known as 'Seaweed on Land', this salad item has intricately branched spikes of fleshy, bright green, slender, crunchy 'leaf stems'. An unusual item best harvested when young. 280 sds/gram.

Pest and Disease

In general the crop is subject to the same range of pests and diseases as western brassicas:

- Damping off
- Clubroot
- White rust
- Wire-stem
- Downy and powdery mildew
- Cabbage aphid
- Cabbage root fly
- Caterpillars
- Pigeons
- Slugs and Snails
- Flea beetle

Information provided for guidance only, as cultural practices and climatic circumstances vary.

(01/16)