



Lavender Cultivar Diversity: Bundles and Essential Oils

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Lavender Types

- *Lavandula angustifolia*
 - Showier flowers and buds (calyxes)
 - Earlier blooming
 - Shorter stems
 - High variability among cultivars
- *Lavandula x intermedia*
 - Later blooming
 - Taller stems
 - Branching can be an issue
 - Smaller corollas/duller calyxes



Lavender Cultivar Verification Trial

- Established in 2019 and on-going
- 4 plants per cultivar per source
- Sources:
 - Propagators
 - Garden centres
 - Big box stores
 - Previous cultivar trial (mostly Oregon)
- 39 cultivars with bundles/oil

Funding

- OMAFRA
- Ontario Lavender Association (OLA)
- Horticulture Crops Ontario
- Donation of plants from several members of OLA

Lavender Cultivar Verification Trial

- 2020 – cultivar mislabeling
- 2021 – bloom architecture
- 2022 Activities:
 - Bloom time assessment (1st flower, peak bloom, and 80% bloom)
 - Dried bundles
 - Dried in a greenhouse = some bleaching/browning
 - Essential oil
 - Glass still with 250 g flowers
 - Estimated oil yield
 - Oil samples for qualitative assessment
- Results are estimates only!!

Results – Cultivars 2020

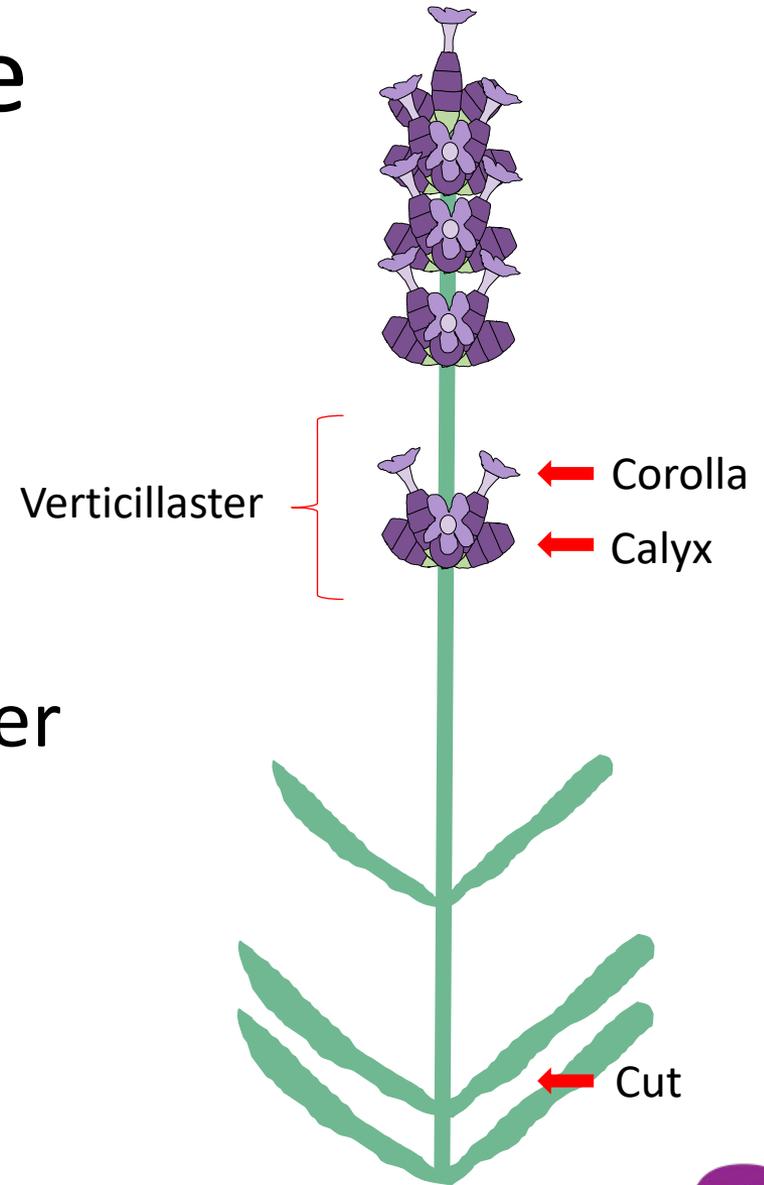
- 39 cultivars bloomed
- 29 had good comparisons and normal bloom
 - 14/29 had labelling issues
 - 15/29 correct
 - older cultivars tended to have most of the labelling issues
 - 49% of verified cultivar/source combinations were incorrect or drifted from the original

Results – Cultivars Often Mislabeled

- Munstead - 7 sources, all incorrect
- Hidcote/Hidcote Blue – 9 sources, mostly incorrect or close
- Twickel Purple
- Folgate (but mislabeled may be good)
- Maillette
- Sharon Roberts

Desired Architecture

- Long stem
- Thick stem?
- No branching
- Many verticillasters
- Many buds per verticillaster
- Minimal spacing between verticillaster
- Large calyx?

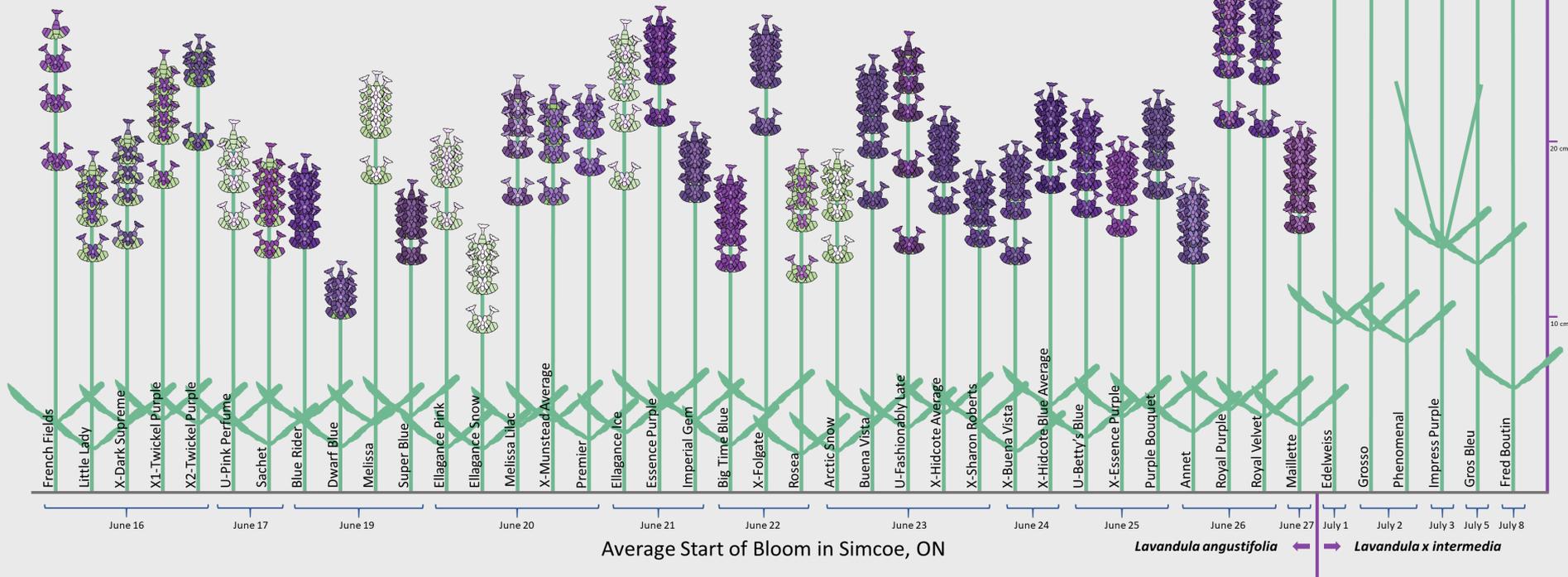


Lavender Cultivar Characteristics

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The cultivar characteristics shown below are life sized and based on measurements collected in a cultivar verification trial conducted from 2019 to 2021 at the Ontario Crops Research Centre – Simcoe. Measurements of flower dimensions and colour are based on harvest results in 2021. The start of bloom indicated below the diagram is based on the average of two years. Cultivars with an X in front of their name were determined to be incorrectly labelled and the actual identity is unknown. Although 'Folgate' did not match the original, it did match the North American version of 'Folgate'. For 'Hidcote', 'Hidcote Blue' and 'Munstead', there were several sources in the trial that were at least slightly different from the original due to genetic drift, and the average of all sources is shown. Cultivars with a U in front of their name could not be verified due to a lack of original descriptions but may be correctly labelled. Flowers were cut just above the second pair of leaves down the stem. The measurements used are based on the average of 50 stems for each cultivar for total height, length from bottom of the stem to the uppermost pair of leaves, length from the pair of leaves to the lowest verticillaster (whorl of flowers), length from the first to second verticillaster, and the number of verticillasters (rounded to the nearest whole number). The spacing of further verticillasters is estimated based on the normal narrowing of the gap between levels as height increases. The colours of the calyx (bud) and corolla (petals) for each cultivar are based on a visual comparison to the Royal Horticultural Society Colour Charts and the RGB codes assigned to each colour code. Colours should be considered an approximation since factors such as sunlight, hairiness, and translucence of corollas all influence the appearance in the field, and each printer or screen may affect the colours in the diagram. For illustrating the progression of colours in each calyx, the calyx is divided into four sections. This gives the calyx a striped look within the diagram, when there is actually a gradual progression of colour from the bottom to the top of the calyx. Calyx and corolla sizes are exaggerated in this diagram to illustrate the colours and normally vary from one cultivar to another. There are often more calyxes for each verticillaster than shown in the diagram. For cultivars with excessive branching, cut off branches are shown emerging from the leaves. This trial was funded by OMAFRA, Hort Crops Ontario and the Ontario Lavender Association.





Pink Perfume



Premier



Purple Bouquet



Royal Purple



Royal Velvet



Sachet



Sharon Roberts*



Super Blue



Twickel Purple 33*



Twickel Purple 32*



Munstead 1*



Munstead 2*



Munstead 4*



Munstead 5*



Munstead 6*



Munstead 7*



Edelweiss



Gros Bleu



Grosso



Impress Purple



Phenomenal

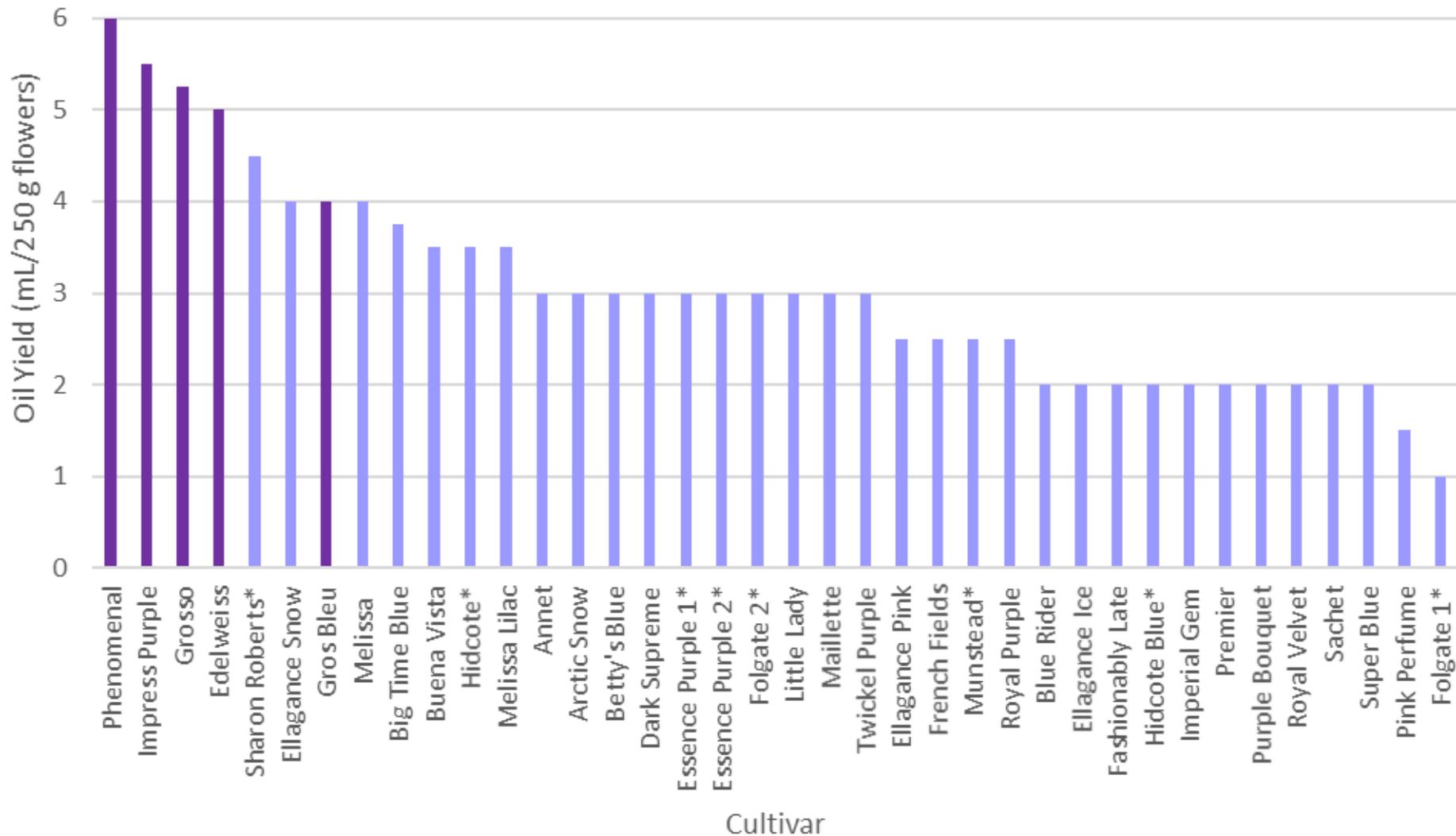
Bloom Time - Angustifolias

- Early (June 17-20 start – peak around July 3)
 - Super Blue, Big Time Blue, Blue Rider, Little Lady, Twickel Purple, French Fields, Premier, Dark Supreme, Essence Purple, Sachet, Forever Blue
- Mid (June 21-23 start – peak around July 6)
 - Ellagance Series, Folgate, Imperial Gem, Dwarf Blue, Pink Perfume, Most Munstead, Fashionably Late, Rosea, Melissa, Melissa Lilac, Essence Purple, Betty's Blue, Sharon Roberts, Arctic Snow, Annet
- Late (June 24-29 start – peak around July 10)
 - Most Hidcote, Purple Bouquet, Buena Vista, Royal Velvet, Royal Purple, Maillette (latest – June 29)

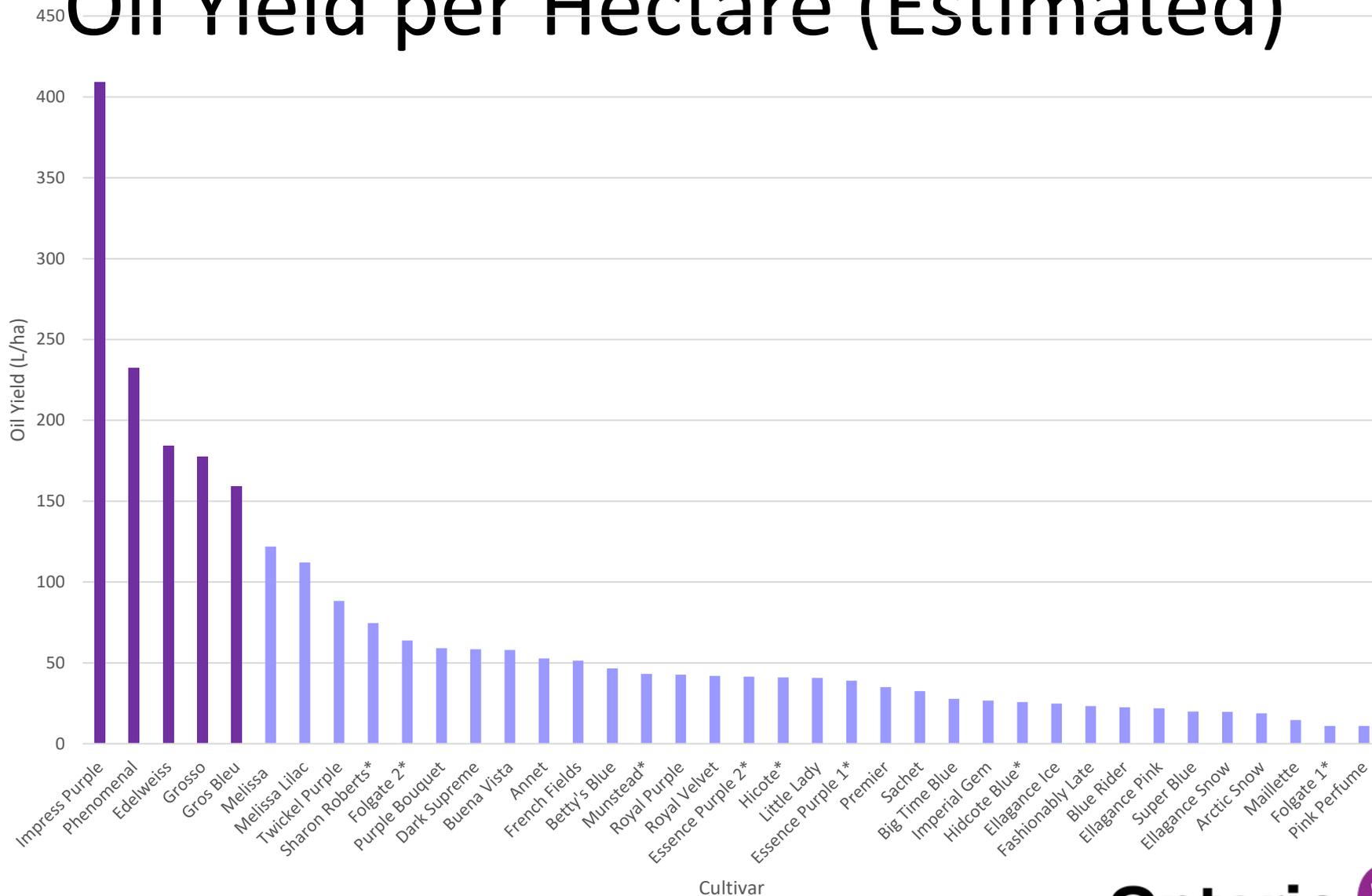
Bloom Time - Lavandins

- Phenomenal – June 28-July 29 (July 20 peak)
- Grosso – July 3-July 29 (July 20 peak)
- Edelweiss – July 4-July 31 (July 18 peak)
- Gros Bleu – July 4-Aug. 2 (July 24 peak)
- Impress Purple – July 6-Aug. 3 (July 24 peak)

Oil Yield per 250 g Flowers (Estimated)



Oil Yield per Hectare (Estimated)





Questions?

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Essential Oil Assessment

- Turn vial over so lid is exposed to oil
- Unscrew vial
- Smell the lid
- Securely tighten lid back on and pass on
- Smell coffee grounds between vials to reset
- Fill in assessment sheet as best you can
 - 1st rating – how characteristic of lavender is it
 - 2nd rating – overall impression