

HopTastic®



**CHARLES
FARAM**

1865

Hops on the Horizon: An Expedition into
Experimental Flavours

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HOPTASTIC®

INTERACTIVE PANEL

& tasting



Warning!

HopTastic®

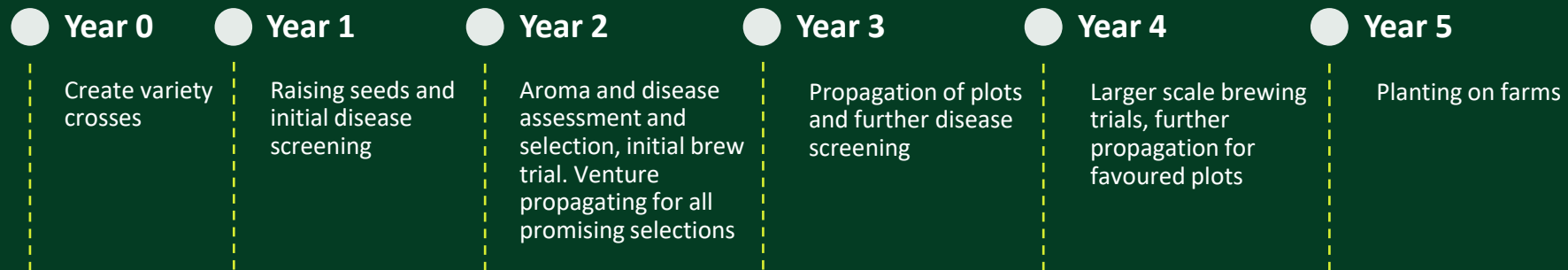
**You are about to taste beers
brewed with hops that have
never been brewed with
before.....**



CHARLES FARAM HOP DEVELOPMENT PROGRAM

- Started about 11 years ago
- Original target - new noble aroma hops
- Now looking for highly flavoured varieties to compete with imports
- Aim to get varieties more quickly to market
- Low trellis and tall hops
- Brewing quality and agronomics prioritised

HOW DOES OUR BREEDING PROGRAMME WORK?



IT'S A NUMBERS GAME – STAGE 1

Hop Seeds to seedling roots
(12k/year)

Collect cones from selected mothers (12),
winnow, clean & prepare seed.

Sowing chitted seed

Encourage even growth



IT'S A NUMBERS GAME – STAGE 1

Disease screening

Harvesting downy
spores



Some individuals
more tolerant than
others



Rescue only
10 to 15%



IT'S A NUMBERS GAME – STAGE 1

Pot up and plant out

Seedling plots planted out in field. Usually keep for only 3 or 4 years.



Pot and tray up seedlings



Powdery pressure August to October



SELECTING INDIVIDUALS – STAGE 2

All seedlings are individuals & nearly half are males

Differences in vigour



Identify males ~40%
and remove



Keep best ones
5%



SELECTING INDIVIDUALS – STAGE 2

Assessing females

A few
hermaphrodites as
many as 1 in 200



Good croppy
tall hop bine -
commercial
potential



SELECTING INDIVIDUALS – STAGE 2

Field tolerance to diseases

Deselect
intolerance
to downy mildew



Early powdery
mildew



Late powdery
mildew



SELECTING INDIVIDUALS – STAGE 2

Other cone issues

Large cones
but wind bruising not
disease



Dense cones but pointy
tips higher risk of cone tip
blight



Easy to protect with spray
but some plants very
sensitive to spray scorch



SELECTING INDIVIDUALS – STAGE 2

Lateral growth habits

Subtle differences in lateral habits



Small lateral leaf bunchy cones Godiva



SELECTING INDIVIDUALS – STAGE 2

Hop cones

Pluckability, bract stability, tight strig, lupulin, aroma



Good cones and aroma but not 'hopped down'

Assessing green hop aromas (66% detection rate)



SELECTING INDIVIDUALS – STAGE 2

Dried Hop Samples

Hand pick samples
(180-240/year)



Dry in commercial
kilns



AromaFest®
(12 in house)
Brewer judging is crucial



PROPOGATE & PLANT FIELD PLOTS – STAGE 3

Next Spring after selecting the hottest contenders

Mark seedling roots
for propagation



Tidy upright numerous
shoots



Prefer shoots not
prostrate or few



PROPOGATE & PLANT FIELD PLOTS – STAGE 3

Greenhouse Propagating

Nodal cuttings from shoots

Strike in pots (peat or glue plugs)

Mist controllers essential



PROPOGATE & PLANT FIELD PLOTS – STAGE 3

Growing new plants

Growing buds



Roots in 5-7 days



Mist bench 4k pots
96% strike rate



PROPOGATE & PLANT FIELD PLOTS – STAGE 3

Planting Out



Summer
planted
new field plots

(10 to 200
plants
per plot)



GROWING FIELD PLOTS – STAGE 4

Growing Commercial Brewing Samples

Next year –field plots of 30 plants for a 15kg brewing sample (further agronomic tests)



Need field tolerance to viruses



Need more Wilt testing



BREWING TRIALS – STAGE 5

36 brewing samples a year

12 from each of 3 seasons seedlings

1in1000 survival rate /seedling year

Tale of two sisters (CF212 & CF247)

Brewing trials (three dozen a year)





AROMAFEST®





BUXTON
BREWERY

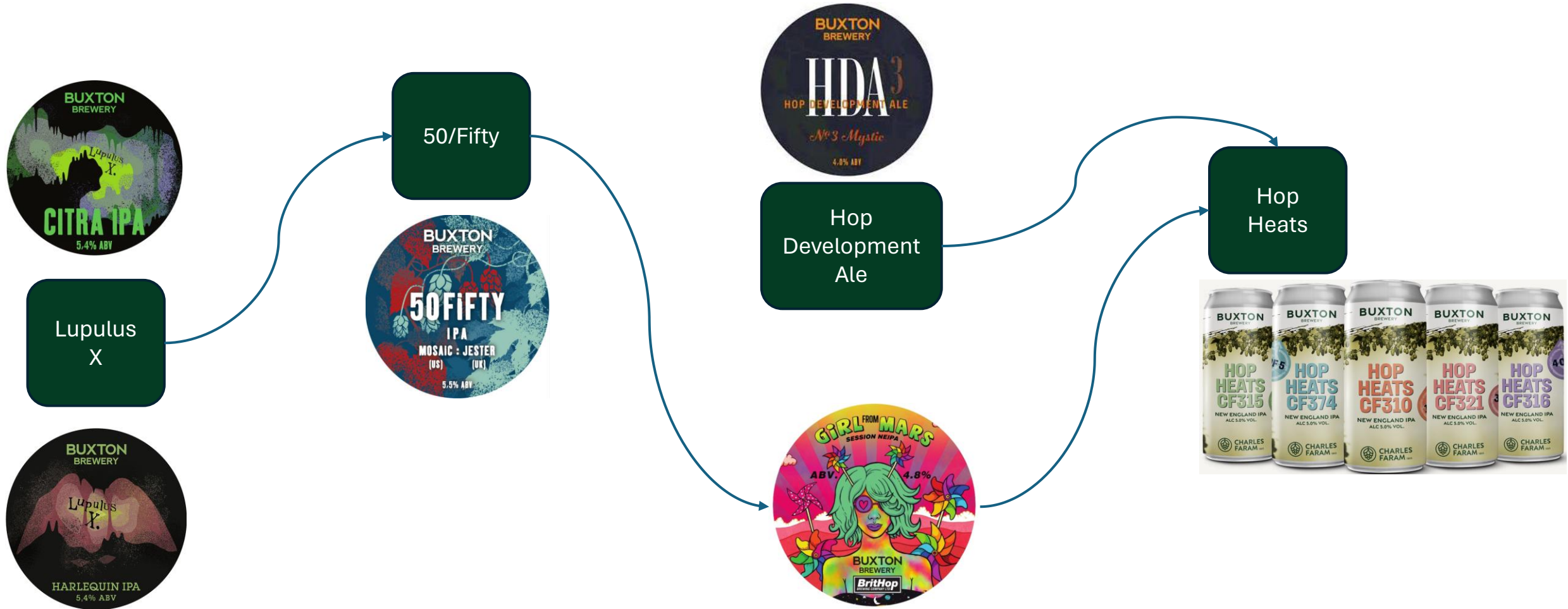


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HOP HEATS

CHARLES FARAM x BUXTON DEVELOPMENT HOPS PROGRAM

THE JOURNEY TO HOP HEATS



HOP YARD VISIT



**Where: Townend's
Farm, Herefordshire
(and M5 hard
shoulder...)**



THE CHOSEN ONES

**D10 /
CF310**

Strawberry / fresh
juicy red fruit /
berries, woody,
intense.

**4806 /
CF374**

Berry fruit, woody,
pine.

**3982 /
CF321**

Deep pine, mixed
fruit, stonefruit –
oily!

**F8 /
CF316**

Lemon / Lime,
fresh, zesty
sherbet

**F52 /
CF315**

Apricot, Peach,
summer fruits

THE BEER

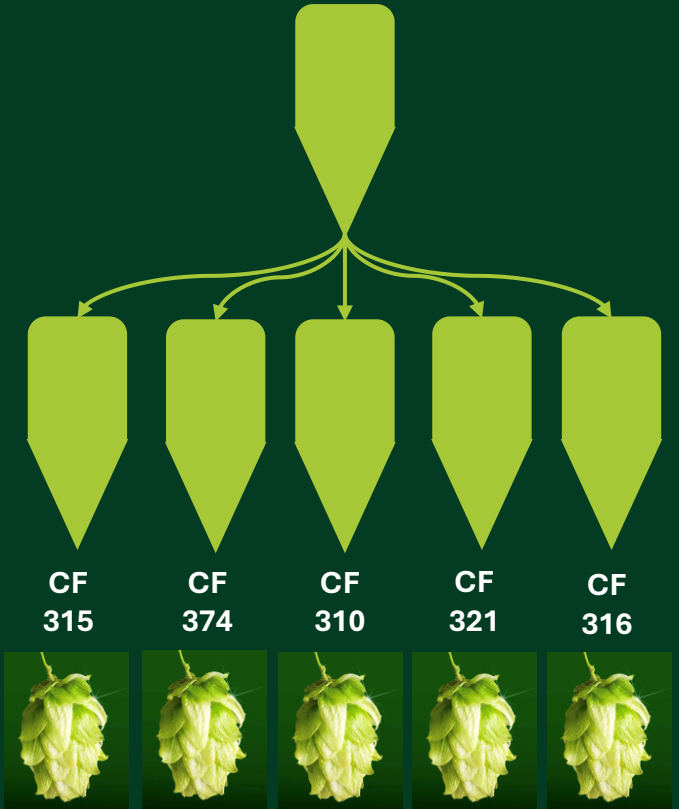


- Based on Girl From Mars – single hop Harlequin NEIPA taken as the building block.
- NEIPA style base – 5.0%, 18 IBU.
- Crisp Extra Pale Ale malt, Rolled Oats, Wheat malt.
- Small addition of Harlequin in whirlpool / cool pool at 80C.
- Verdant yeast – ferment at 20C for 4-5 days.



DRY HOPPING

- Base beer split into 5 tanks.
- Beer cooled from 20C to 14C to drop yeast and prep for dry hop addition.
- Yeast cropped prior to DH.
- Dry hop dose rate at 7g/L.
- Held 48hrs at 14C, roused daily with CO2 to ensure good mixing.
- Chilled to 1C to drop out hops and prepped for pack.



HOP HEATS NUMBER 1 – CF310

- Plot: D10
- Breeding: Grand-daughter of a wild hop given to us by a brewer.
- Status: Advanced Tall Plot
- Hop selection notes: Strawberry/fresh juicy red fruit/berries, slight woody, intense.



HOP HEATS NUMBER 2 – CF374

- Plot: 4806
- Breeding: High resin Grand-daughter of Mystic.
- Status: Tall plot
- Hop selection notes: Moderate berry, woody, sl pine.



HOP HEATS NUMBER 3 – CF321

Plot: 3982

Breeding: Daughter of Harlequin®

Status: Advanced Tall plot

Hop selection notes: Deep pine, mixed fruit, stonefruit, oily.



HOP HEATS NUMBER 4 – CF316

- Plot: F8
- Breeding: Daughter of Harlequin®
- Status: Tall plot
- Hop selection notes: Lemon/lime (sprite!) fresh, zesty, sherbet, low intensity.



HOP HEATS NUMBER 5 – CF315

Plot: F52

Breeding: Daughter of Harlequin®

Status: Tall plot

Hop selection notes: Apricot, peach, summer fruits.





PODCAST PODCAST

SPREADING HOPPINESS

LISTEN ONLINE NOW

