







Winter Wheat Variety Trials 2023

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ountfair Farming is an agri-business specialising in contract farming and farm management services.

Managed by Jorin and Aidan Grimsdale, the brothers operate out of Mountfair Farm and Hilton Farm, managing more than 2,100 ha in the Scottish Borders and North Northumberland.

As a progressive and dynamic business, their aim is to maximise income and increase long-term productivity for the landowners while using a sustainable and environmental approach.

On the technical side, Jorin is responsible for the farm's management, while Aidan – a qualified mechanical



engineer – is Operations Director and takes responsibility for the daily operations, workshop and machinery maintenance. The workshop also undertakes fabrication projects.

Both Jorin and Aidan have key interests in soil health and understand how important it is. Operating a 12m/36M controlled traffic farming system, less than 20% of the fields are driven which is helping to improve soil structure across the business.

Mountfair operates a non-inversion cultivation system to enhance soil organisms which, coupled with importing compost, cattle manure and hen manure, aims to increase organic matter levels.







Trials Overview

This year we have drilled varieties on two separate dates to assess how drilling dates affected levels of disease in different varieties. Ten plots were drilled on September 5 and 20 plots on September 29, with 20 varieties in total. The winter wheat plots were drilled using a 3m combination drill into excellent seedbed conditions with an average soil temperature of 11.6°C.

The earlier drilled varieties established well after around 87mm of rain in September, with KWS Extase, LG Illuminate, and SY Insitor showing signs of early vigour. The later drilled varieties were followed by around 68mm of rain in October, which were slower to establish as expected, and went into winter with a smaller amount of biomass than the earlier drilled plots. Growth stages and timings differed greatly



between the different drilling dates.

To was applied at the beginning of April at GS 30, and the T1 was applied in the last week of April at GS 31. Then a T1.5 was applied at GS 37, including a PGR. The effects of PGR can be seen especially between the treated and untreated plots of LG Skyscraper. The T2 was applied in the last week of May at GS 39 and, finally, the T3 was applied the second week of June.

High levels of Septoria tritici have been particularly noticeable in the earlier drilled plots of Swallow, Saki, and LG Skyscraper. Yellow rust was seen in May in the early SY Insitor and Gleam, and high amounts in the later drilled plots, especially Gleam.







Crop Protection Report

TRIALS PLOTS 2023 W Wheat 1.00 ha Projected Harvest Date: 31/08/2023 EHD: No Restriction							
Activity Date / Timing	Operation	Product	Rate	Total	Reason	Water	Area
01/10/2022 (plan date) -1:Pre Emergence	Spray Plan #33	Clayton Aspect XL (19721) Flufenacet (400 g/l); Diflufenican (100 g/l)	0.450 lts/ha	0.450 lts	Weed Control	200.00 lts/ha	1.00 ha
		Hurricane SC (16027) Diflufenican (500 g/l)	0.100 lts/ha		Weed Control		
21/03/2023 (plan date) 24:4 tillers detectable	Spray Plan #34	Palio (18349) Pyroxsulam (7.1 % w/w); Florasulam (1.4 % w/w)	265.000 g/ha		Grassweed control	200.00 lts/ha	1.00 ha
		Bio Syl (ADJ0773) Polyoxyethylen-a-methyl-u-propylether (1 % w/w); Ethylene Oxide Condensate (32.67 % w/w)	1.000 lts/ha		Adjuvant		
04/04/2023 (plan date) 30:Ear 1 cm	Spray Plan #35	Clayton Tebucon 250 EW (17823) Tebuconazole (250 g/l)	0.500 lts/ha		T0 Disease Control	200.00 lts/ha	1.00 ha
		Belcocel 750 (19125) Chlormequat (750 g/l)	0.500 lts/ha		Plant Growth Regulator]	
		YaraVita Gramitrel (MBS646) copper (50 g/l); Zinc (80 g/l); Magnesium (250 g/l); nitrogen (64 g/l); Manganese (150 g/l)	1.000 lts/ha		Trace Element		
24/04/2023 (plan date) 31:1st node detectable	Spray Plan #36	Revystar XE (19250) Fluxapyroxad (47.5 g/l); Mefentrifluconazole (100 g/l)	1.000 lts/ha		T1 Disease Control	200.00 lts/ha	1.00 ha
		Stabilan 750 (09303) Chlormequat (750 g/l)	1.000 lts/ha	1.000 lts	Plant Growth Regulator]	
		Sonis (16891) Trinexapac-ethyl (250 g/l)	0.100 lts/ha		Plant Growth Regulator]	
		YaraVita Gramitrel (MBS646) copper (50 g/l); Zinc (80 g/l); Magnesium (250 g/l); nitrogen (64 g/l); Manganese (150 g/l)	1.000 lts/ha		Trace Element		
10/05/2023 (plan date) 37:Flag leaf visible	Spray Plan #37	Clayton Tebucon 250 EW (17823) Tebuconazole (250 g/l)	0.500 lts/ha		Disease Control	200.00 lts/ha	1.00 ha
		Arizona (15318) Folpet (500 g/l)	1.000 lts/ha		Disease Control]	
		Canopy (16314) Mepiquat chloride (300 g/l); Prohexadione- calcium (50 g/l)	0.350 lts/ha		Plant Growth Regulator		
22/05/2023 (plan date) 39:Flag leaf	Spray Plan #38	Univoq (19930) Fenpicoxamid (50 g/l); Prothioconazole (100 g/l)	1.250 lts/ha	1.250 lts	T2 Disease Control	200.00 lts/ha	1.00 ha
		Lybro 200 (19553) Pyraclostrobin (200 g/l)	0.300 lts/ha	0.300 lts	T2 Disease Control		
08/06/2023 (plan date) 55:50% of ears emerged	Spray Plan #39	Trinity 250 (19732) Prothioconazole (250 g/l)	0.400 lts/ha	0.400 lts	T3 Disease Control	200.00 lts/ha	1.00 ha
		Tesoro (20476) Tebuconazole (250 g/l)	0.500 lts/ha	0.500 lts]	
		Folex Mg (MBS435) Magnesium (9 % w/v); Sulphur (17.3 % w/v)	3.000 lts/ha		Trace Element		







KWS Extase

Breeder: KWS UK Ltd

Pedigree: Boisseau v Solheio

Status: AHDB RL Variety for UK since 2019

Market: UKFM Group 2, UK Bread Making, Export

Certified Seed Sales 2022 %: Eng & Wal 15.3 / Sco 5.4 Provisional Seed Area 2023 %: Eng & Wal 11.8 / Sco 5.6

Positives

Exceptionally high untreated yield (97) – still the highest on the Recommended List

Performs best on lighter soils

Very high Septoria tritici resistance (7.8)

Good yellow rust and mildew resistance

Early to mature; stiff straw

Superb grain quality – high specific weight and Hagberg

Negatives

Average north region treated yield

Unsuitable for early drilling due to vigorous growth habit

May be a risk with sterility in some areas and situations - not suitable for exposed sites or the northern half of Scotland

Tall variety, though responds well to PGR

Susceptible to orange wheat blossom midge and eyespot











KWS Palladium

Breeder: KWS UK Ltd

Pedigree: KWS Zyatt x KWS Trinity

Status: AHDB RL Variety for UK since 2022

Market: UKFM Group 2, UK Bread Making

Certified Seed Sales 2022 %: Eng & Wal 1.8 / Sco 0.8 Provisional Seed Area 2023 %: Eng & Wal 2.2 / Sco 0.0

Negatives

Average north region treated yield

Susceptible to orange wheat blossom midge

Poor brown rust resistance

Certified Seed Sales 2022 %: Fng & Wal

Positives

Similar to KWS Extase but with UK-bred parentage; increases stability and potentially reduces risk for northern growers

Very high untreated yield

Very high Septoria tritici resistance (7.4)

Good yellow rust, mildew & eyespot resistance

Early to mature (equal to KWS Extase); short stiff straw

V high Hagberg, potentially good milling quality

AHDB RL 2023 Treated Yield (UK): 100 AHDB RL 2023 Treated Yield (North Region): 99

AHDB RL 2023 Untreated Yield (UK): 94









KWS Barrel

Breeder: KWS UK Ltd

Pedigree: Bantam x Viscount

Status: Removed from AHDB RL in 2022

Market: UKFM Group 3, UK Biscuit, Export

Certified Seed Sales 2022 %: Eng & Wal 0.0 / Sco 4.6 Provisional Seed Area 2023 %: Eng & Wal 0.0 / Sco 1.8

Positives

High yielding consistent performer in north

Slow developer with prostrate growth habit in Autumn make it potentially suitable for early drilling

Short, stiff straw

High tillering capacity with good ear fertility

Robust grain quality

Negatives

Very low untreated yield

Poor overall disease resistance, particularly Septoria tritici; careful management required especially if drilling early

Rated 'Poor' for distilling

Generally poor as a second wheat

Variety no longer in multiplication and has been removed from Recommended List

AHDB RL 2023 Treated Yield (UK): N/A **AHDB RL 2023 Treated Yield (North Region): N/A** AHDB RL 2023 Untreated Yield (UK): N/A









LG Illuminate

Breeder: Limagrain Europe

Pedigree: (Cougar x Leeds) x Britannia

Status: AHDB RL Variety for UK since 2021

Market: UKFM Group 3, UK Biscuit, Distilling (Medium), Export

Certified Seed Sales 2022 %: Eng & Wal 0.4 / Sco 4.6 Provisional Seed Area 2023 %: Eng & Wal 1.3 / Sco 3.8

Positives

Decent yield in northern region

Suitable for both biscuit & distilling markets

Performs well when early sown

Versatile variety - good as a first and second wheat and on both light and heavy soils

Good sprouting resistance

Has proved popular locally as a potential successor to KWS Barrel in Group 3 market

Negatives

Septoria tritici rating is now fairly average

Relatively poor mildew resistance



AHDB RL 2023 Treated Yield (UK): 100

AHDB RL 2023 Untreated Yield (UK): 87

AHDB RL 2023 Treated Yield (North Region): 100







KWS Brium

Breeder: KWS UK Ltd

Pedigree: KWS Solo x KWS Basset

Status: AHDB RL Variety for UK since 2022

Market: UKFM Group 3, UK Biscuit, Distilling (Medium)

Certified Seed Sales 2022 %: Eng & Wal 0.0 / Sco 0.5 Provisional Seed Area 2023 %: Eng & Wal 0.1 / Sco 0.0 AHDB RL 2023 Treated Yield (UK): 100 AHDB RL 2023 Treated Yield (North Region): 100 AHDB RL 2023 Untreated Yield (UK): 83



Positives

Decent yield in northern region, similar to LG Illuminate

Growth habit makes it suitable for early drilling

Suitable for both biscuit & distilling markets

Good resistance to mildew, yellow rust & eyespot

High specific weight

Negatives

Average Septoria tritici resistance

Poor brown rust resistance

Tall strawed, although reasonably stiff

Susceptible to orange wheat blossom midge







LG Skyscraper

Breeder: Limagrain Europe

Pedigree: (Cassius x NAWW 29) x KWS Santiago

Status: AHDB RL Variety for UK since 2019

Market: Soft Group 4, Distilling (Medium), Feed

Provisional Seed Area 2023 %: Eng & Wal 6.8 / Sco 27.9

Certified Seed Sales 2022 %: Eng & Wal 6.2 / Sco 40.2

Positives

Market leading variety in Scotland

Performs well as both a first & second wheat

High yielding on both light and heavy land

Good resistance to mildew

Relatively early to mature

Negatives

Not suitable for early drilling

Resistance to Septoria tritici deteriorating year-on-year and now poor

Poor brown rust & eyespot resistance

Tall, relatively weak strawed but responds well to PGR











Elation

Breeder: Elsoms Wheat Ltd **Pedigree:** Cassius x Viscount

Status: AHDB RL Variety for North Region since 2018

Market: Soft Group 4, Distilling (Good), Export, Feed

Certified Seed Sales 2022 %: Eng & Wal 0.0 / Sco 1.9 Provisional Seed Area 2023 %: Eng & Wal 0.0 / Sco 0.8 AHDB RL 2023 Treated Yield (UK): 100 AHDB RL 2023 Treated Yield (North Region): 101 AHDB RL 2023 Untreated Yield (UK): 80



Positives

Performs well as a second wheat

Short, stiff straw and relatively early maturing

Good yellow rust and mildew resistance

Rated 'Good' for distilling

Negatives

Becoming outclassed for yield

Poor untreated yield

Highly susceptible to Septoria tritici - lowest score on the Recommended List

Poor brown rust resistance







RGT Saki

Breeder: RAGT Seeds Ltd

Pedigree: Cougar x KWS Santiago

Status: AHDB RL Variety for UK since 2020

Market: Soft Group 4, Feed

Certified Seed Sales 2022 %: Eng & Wal 0.7 / Sco 3.0 Provisional Seed Area 2023 %: Eng & Wal 0.2 / Sco 0.7

Positives

Competitive yield, similar to LG Skyscraper

Good yellow rust resistance

Slow developing variety, particularly suitable for early drilling

Good as both a first and second wheat and

performs well on all soil types

Negatives

Average Septoria tritici rating

Late to mature

Relatively tall with average straw strength

Poor mildew resistance

Average grain quality – specific weight & Hagberg on the low side













Swallow

Breeder: Senova Ltd

Pedigree: KWS Gator x Cougar

Status: AHDB RL Variety for North Region since 2021

Market: Soft Group 4, Distilling (Good), Feed

Certified Seed Sales 2022 %: Eng & Wal 0.0 / Sco 3.8 Provisional Seed Area 2023 %: Eng & Wal 0.0 / Sco 3.8

Positives

Performs better in the north than in other regions

Best yields on lighter land

Short, very stiff variety with early maturity

Growth habit suits early drilling

Rated 'Good' for distilling with exceptionally high alcohol yield

Negatives

Yield just below the best soft wheat varieties

Poor untreated yield

Relatively poor Septoria tritici rating, but still better than LG Skyscraper

Very poor eyespot resistance

Relatively low sprouting resistance and specific weight











RGT Bairstow

Breeder: RAGT Seeds Ltd

Pedigree: (Revelation x KWS Santiago) x Cougar

Status: AHDB RL Variety for UK since 2022

Market: Soft Group 4, Distilling (Good)

Certified Seed Sales 2022 %: Eng & Wal 0.9 / Sco 2.0 Provisional Seed Area 2023 %: Eng & Wal 2.3 / Sco 7.6

Positives

Joint highest yielding soft wheat variety in the northern region

Consistent performer, very good as a first and second wheat & on light and heavy soils

Decent all-round disease resistance

Septoria tritici resistance above average

High tillering variety with good Autumn vigour, quick to get away in the Spring with early ear emergence

Rated 'Good' for distilling

Negatives

Not suited to very early drilling

Tall, relatively weak strawed, the same as LG Skyscraper – will need a PGR programme

Poor eyespot resistance

Specific weight on the low side

AHDB RL 2023 Treated Yield (UK): 103
AHDB RL 2023 Treated Yield (North Region): 103
AHDB RL 2023 Untreated Yield (UK): 87









RGT Stokes

Breeder: RAGT Seeds I td

Pedigree: (Cougar x KWS Santiago) x Revelation

Status: AHDB RL Variety for UK since 2022

Market: Soft Group 4, Distilling (Good)

Certified Seed Sales 2022 %: Eng & Wal 0.1 / Sco 1.9 Provisional Seed Area 2023 %: Eng & Wal 0.0 / Sco 7.2

Positives

Joint highest yielding soft wheat variety in the northern region

Performs well as a first and second wheat and is particularly high yielding on lighter land

Suitable for early drilling

Very high Septoria tritici resistance compared to other soft wheats

Rated 'Good' for distilling with the highest alcohol yield of all varieties in 2022

Negatives

Tall with average straw strength, although with PGR it is stiffer than LG Skyscraper

Poor mildew, brown rust & eyespot resistance

Susceptible to orange wheat blossom midge

Specific weight on the low side



AHDB RL 2023 Treated Yield (UK): 102

AHDB RL 2023 Untreated Yield (UK): 87

AHDB RL 2023 Treated Yield (North Region): 103







Corporation

LG Redwald

Breeder: Limagrain Europe

Pedigree: LG Sundance x LG Generation **Status:** AHDB RL Variety for UK since 2023

Market: Soft Group 4, Feed, Distilling (Medium)

Certified Seed Sales 2022 %: Eng & Wal 0.3 / Sco 0.0 Provisional Seed Area 2023 %: Eng & Wal 2.4 / Sco 1.2

Positives

Joint highest yielding soft wheat variety in the northern region

Highest untreated yield of any soft wheat

Exceptional yield potential in all situations – light or heavy ground, first or second cereal

Very good all-round disease resistance, including Septoria tritici (6.7)

Negatives

Late maturing but also unsuitable for early drilling due to very vigorous growth habit

Relatively tall with poor straw strength

Low specific weight so consideration needed around positioning on farm



AHDB RL 2023 Treated Yield (UK): 107

AHDB RL 2023 Untreated Yield (UK): 92

AHDB RL 2023 Treated Yield (North Region): [103]







KWS Zealum

Breeder: KWS UK Ltd

Pedigree: KWS Bassett x Reflection

Status: AHDB RL Variety for UK since 2023

Market: Soft Group 4, Distilling (Medium)

Certified Seed Sales 2022 %: Eng & Wal 0.1 / Sco 0.0 Provisional Seed Area 2023 %: Eng & Wal 1.1 / Sco 4.1

Positives

Decent northern yield similar to LG Skyscraper

Reasonably good untreated yield with good combined disease resistance

Well suited to early sowing

Performs better on heavy land & relatively well as a second wheat

Negatives

Septoria tritici resistance is average

Moderately susceptible to brown rust





AHDB RL 2023 Treated Yield (UK): 103

AHDB RL 2023 Untreated Yield (UK): 86

AHDB RL 2023 Treated Yield (North Region): [102]







Grafton

Breeder: KWS UK Ltd

Pedigree: Cordiale x CPBT W97

Status: Removed from AHDB RL in 2019

Market: Hard Group 4, Feed

Certified Seed Sales 2022 %: Eng & Wal 0.2 / Sco 0.6 Provisional Seed Area 2023 %: Eng & Wal 0.0 / Sco 1.5

Positives

Suitable for early drilling due to slow growth habit

Short, stiff and very early to mature

Good eyespot resistance

Very good grain quality, high specific weight and Hagberg

Negatives

Outclassed for yield

Poor untreated yield with yellow rust and Septoria tritici resistance below average

High input programme required

Susceptible to orange wheat blossom midge











Corporation

Graham

Breeder: Syngenta UK Ltd **Pedigree:** Premio x Expert

Status: AHDB RL Variety for UK since 2016

Market: Hard Group 4, Feed

Certified Seed Sales 2022 %: Eng & Wal 7.7 / Sco 2.7 Provisional Seed Area 2023 %: Eng & Wal 4.1 / Sco 1.7

Positives

Very high untreated yield

Performs best as a first wheat & on lighter soils

Suitable for early drilling

Above average resistance to the major diseases

Early to mature

Negatives

Northern yield below the top Hard Group 4 varieties

Poor resistance to brown rust & eyespot

Susceptible to orange wheat blossom midge

Potential ear fertility issues in the far north, with breeder not recommending the drilling of the variety north of the Forth

Relatively tall, although stiff strawed













Gleam

Breeder: Syngenta UK Ltd

Pedigree: Hereford x KWS Kielder

Status: AHDB RL Variety for UK since 2018

Market: Hard Group 4, Feed

Certified Seed Sales 2022 %: Eng & Wal 7.7 / Sco 1.8 Provisional Seed Area 2023 %: Eng & Wal 3.3 / Sco 0.0

Positives

Very popular hard wheat variety, high yielding and consistent

Excellent performance as a first and second wheat and on both light and heavy land

Potentially suited to early drilling, but with wide flexible drilling window

Decent resistance to mildew, and orange wheat blossom midge resistant

Relatively early to mature

High tillering variety

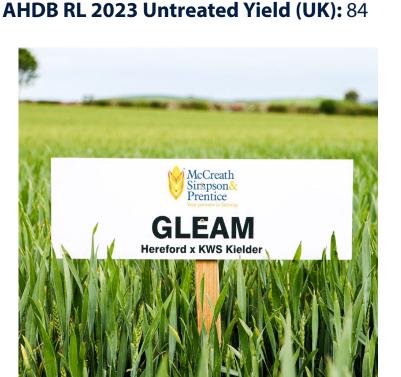
Negatives

Susceptible to yellow rust and eyespot

Potentially prone to sprouting in a bad year

Low Hagberg for a hard wheat

Now facing strong competition from Champion and KWS Dawsum in Hard Group 4 sector



AHDB RL 2023 Treated Yield (UK): 103

AHDB RL 2023 Treated Yield (North Region): 103







SY Insitor

Breeder: Syngenta UK Ltd

Pedigree: AB111-1011 x Hereford

Status: AHDB RL Variety for UK since 2020

Market: Hard Group 4, Feed

Certified Seed Sales 2022 %: Eng & Wal 2.3 / Sco 4.2 Provisional Seed Area 2023 %: Eng & Wal 2.5 / Sco 7.7

Positives

Joint highest yielding variety in the northern region

Excellent as both a first and second wheat

Performs well on all soil types with exceptional yield on light land

Above average Septoria tritici resistance

Good grain quality with high Hagberg and specific weight

Negatives

Relatively poor untreated yield

Susceptible to yellow rust, brown rust & eyespot

Not suitable for early drilling

Very tall with average straw strength – PGR programme will be required

Poor sprouting resistance



AHDB RL 2023 Treated Yield (UK): 104

AHDB RL 2023 Untreated Yield (UK): 82

AHDB RL 2023 Treated Yield (North Region): 105







KWS Dawsum

Breeder: KWS UK Ltd

Pedigree: KWS Kerrin x Costello

Status: AHDB RL Variety for UK since 2022

Market: Hard Group 4, Feed

Certified Seed Sales 2022 %: Eng & Wal 17.0 / Sco 7.0 Provisional Seed Area 2023 %: Eng & Wal 15.7 / Sco 11.6

Positives

Joint highest yielding variety in the north region

Very high untreated yield

Excellent as both a first and second wheat and on both heavy and especially lighter land

Very good resistance to mildew, yellow rust and brown rust

Well suited to early drilling

Short, relatively stiff strawed

Superb grain quality (*inherited from Costello parentage*), with very high Hagberg & specific weight

Negatives

Average resistance to Septoria tritici compared to other hard wheats

Susceptible to orange wheat blossom midge











Champion

Breeder: DSV Seeds

Pedigree: Reflection x DSV 20122

Status: AHDB RL Variety for UK since 2022

Market: Hard Group 4, Feed

Certified Seed Sales 2022 %: Eng & Wal 7.4 / Sco 1.7 Provisional Seed Area 2023 %: Eng & Wal 8.3 / Sco 0.0

Cortified Seed Sales 2022 %

Positives

Highest Septoria tritici resistance on RL (8.1)

Very high treated and untreated yields

Exceptional performance as both first & second wheat

Excellent performance on both light, and especially heavier land

Very good resistance to mildew and yellow rust

Early to mature

Negatives

Not suitable for early drilling due to very vigorous growth habit

Relatively tall with average straw strength but responds well to PGR

Poor brown rust & eyespot resistance

Low specific weight so consideration needed around positioning on farm



AHDB RL 2023 Treated Yield (UK): 106

AHDB RL 2023 Untreated Yield (UK): 93

AHDB RL 2023 Treated Yield (North Region): 102







RGT Grouse

Breeder: RAGT Seeds Ltd

Pedigree: RAGT PD Line x KWS Santiago

Status: RAGT Development Variety

Market: Hard Group 4, Feed

Certified Seed Sales 2022 %: Eng & Wal 0.0 / Sco 0.0 Provisional Seed Area 2023 %: Eng & Wal 0.2 / Sco 0.0

Positives

Follows on from RGT Wolverine as the next step in RAGT's breeding programme for BYDV resistant wheat

Slow speed of development and prostrate growth habit make it suitable for early sowing, when BYDV risk is high

BYDV resistant varieties reduce the need for foliar applied insecticide sprays – benefiting management and environmental considerations

Negatives

Very little data available on the variety at present



AHDB RL 2023 Treated Yield (North Region): N/A



AHDB RL 2023 Treated Yield (UK): N/A

AHDB RL 2023 Untreated Yield (UK): N/A

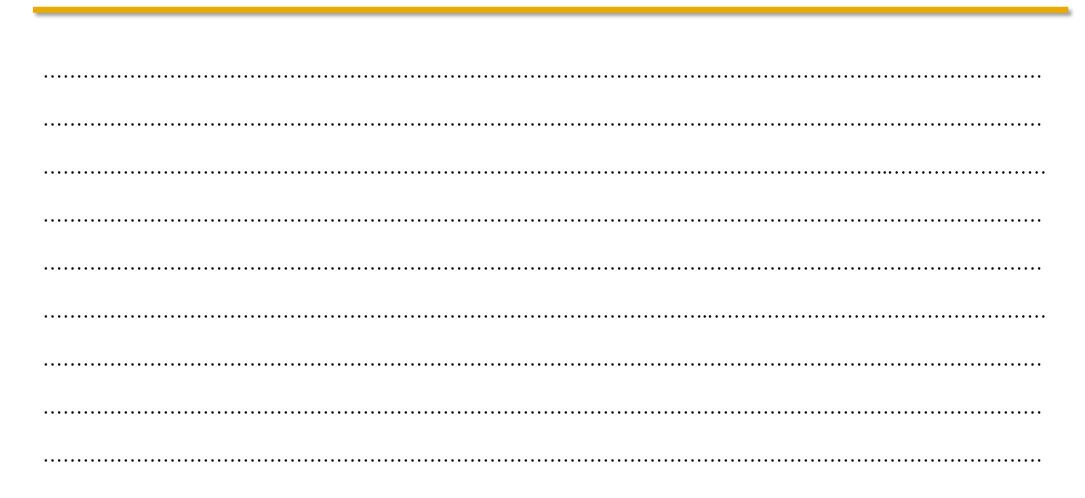








Notes



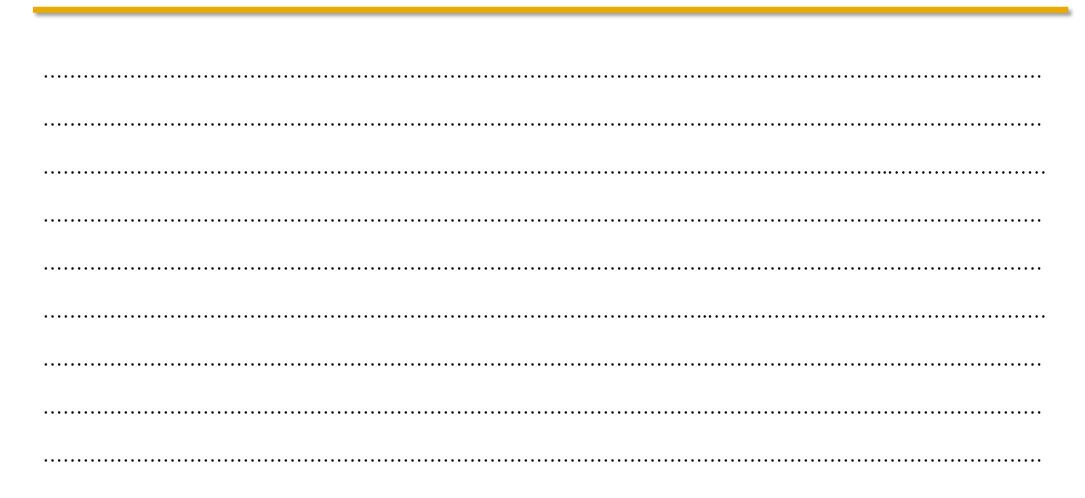








Notes













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