

PRODUCT KNOWLEDGE · POTASH

VL-Potash Liquid

Potash 30% liquid · + P & B, pH-regulated

Liquid potash in three physical grades from one analysis — foliar, fertigation, and a low-salt ultra-low-volume grade for aerial application.

PS 5469-2020

Licence CM/L-2943/2023

1 L

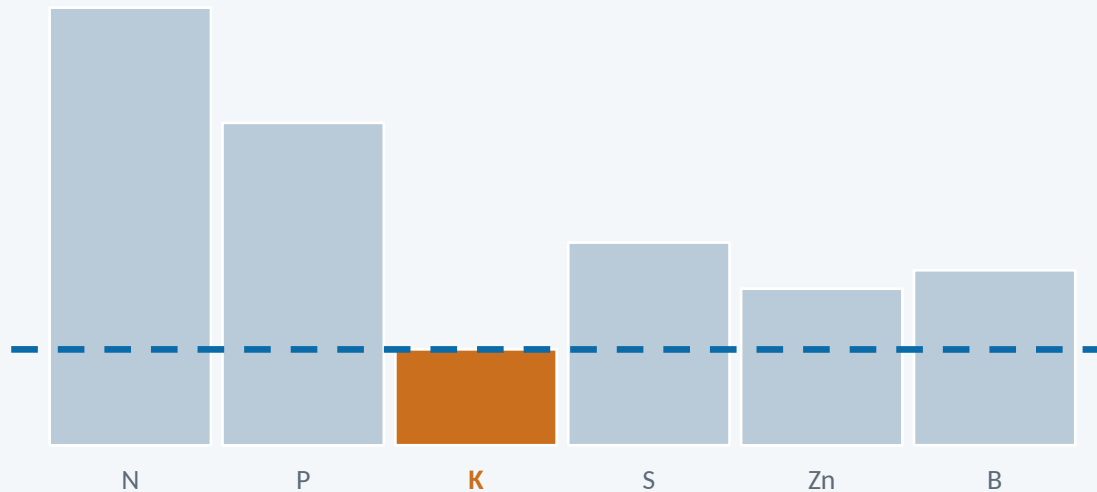
Three grades



LAW OF THE MINIMUM

The nutrient Pakistan is shortest of, delivered where the soil cannot interfere.

Carl Sprengel set the law out in 1840; Justus von Liebig made it famous.



— the water line — what the crop actually yields

83 : 1

Pakistan applies eighty-three tonnes of nitrogen for every one of potash. A liquid potash delivered to the leaf or through the irrigation puts potassium where the soil chemistry never gets a vote — which matters most on the calcareous ground that fixes everything else.

The staves show the shape of the national problem, not measured soil values. A soil test is what tells you your own — VAN Lab publishes its prices.

One analysis. Three physical specifications.

The grade is chosen by how the product will reach the crop, not by what is in it.

Foliar and fertigation

The two ground-applied grades. Same potash, different physical specification for the tank and the line.

- Foliar — for a fast correction onto the leaf
- Fertigation — through drip, sprinkler or pivot to the root zone
- Both fully soluble; no residue in an emitter
- Both carry the phosphorus and boron that regulate the pH of the solution

Ultra-low volume

A low-salt, low-pH grade for aerial application at a fraction of the water volume.

- High concentration in very little water — a drone carries about twenty litres
- Low salt index, so it is leaf-safe at that concentration
- ⚠ This grade is now named into the FoliarK Precise family
- A drone version of a VAN product does not take a suffix — it is renamed

⚠ NAMING, ruled 17 Aug 2026: FoliarK Precise Drone_ is its own family and it REPLACES the drone grades of parent products. Do not sell or print "VL-Potash Liquid Drone".

What is actually in the bottle.

One litre, one analysis, three physical grades.



VL-Potash Liquid — 1 L

POTASH

K₂O 30% w/v (300 g/L)

PHOSPHORUS & BORON

Added — for pH regulation of the solution

GRADES

Foliar · fertigation · ultra-low-volume (low-salt)

WHY PH-REGULATED

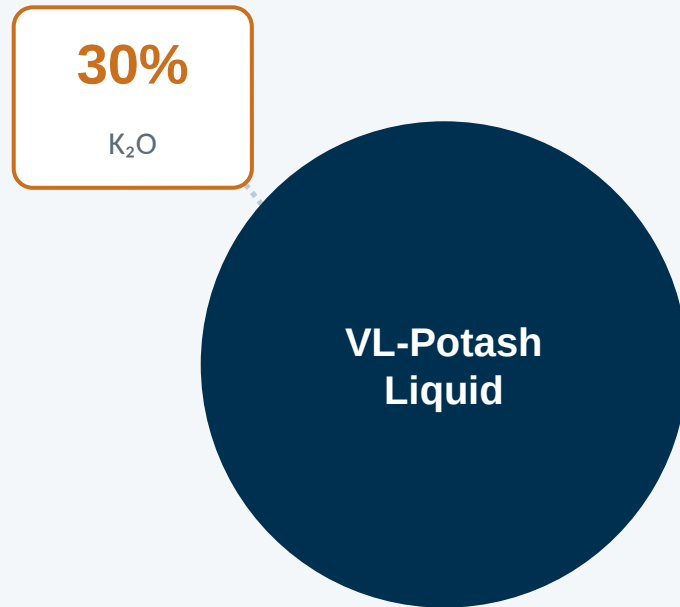
A potash solution that is not pH-controlled will not stay in solution in alkaline irrigation water

STANDARD & LICENCE

PS 5469-2020 · ⚠ CM/L-2943/2023, expires 30 September 2026

What the label declares.

As registered under PS 5469-2020 and as published on van.com.pk.



ADDED

P and B

for pH regulation of the solution, not as headline nutrients

GRADES

Three

foliar • fertigation • ULV low-salt

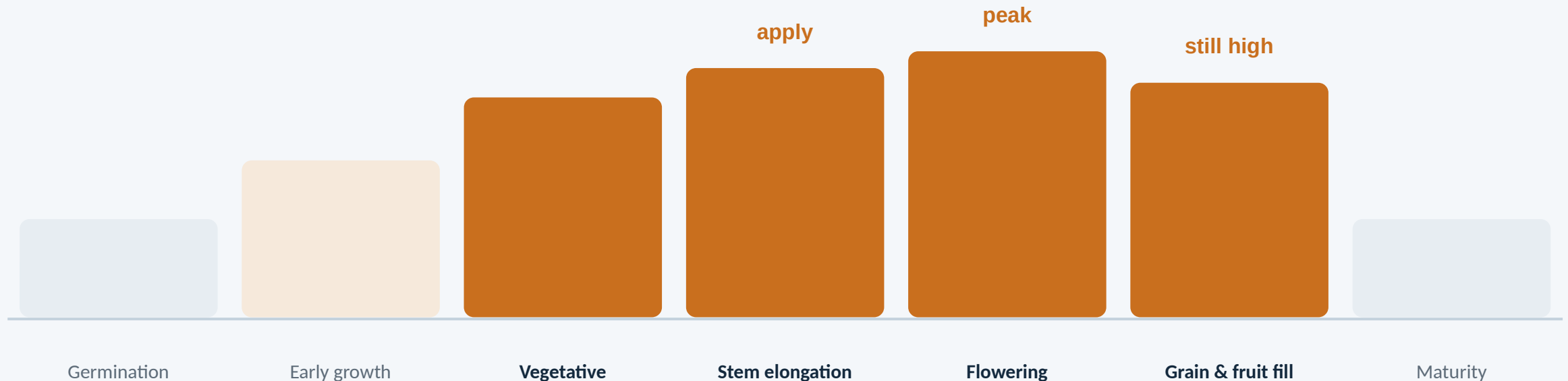
SALT INDEX

Low in ULV

which is what makes it leaf-safe at aerial concentration

Potassium peaks in the middle, and a liquid can be there for it.

Relative potassium demand across a season. The advantage of a liquid is that it can be applied at the moment of demand rather than months before it.



Applied through the peak rather than before it. A basal potash covers the base; this covers the demand as it happens, and can be repeated when the crop asks again.

The band shows the shape of demand, not measured uptake for a named crop.

Push potash hard and watch what it pushes down.

Established interactions between soil nutrients — after Mulder. These describe how nutrients behave with one another, not how VL-Potash Liquid performs.



Works with

Balanced potassium improves iron and manganese uptake

A pH-regulated solution keeps potassium available in alkaline irrigation water

Foliar delivery bypasses soil fixation entirely — the fastest route on calcareous ground

Potassium governs how efficiently the plant uses the nitrogen already applied



Competes with

Excess potassium suppresses calcium, magnesium and boron — the standing risk of any strong potash programme

Excess calcium suppresses potassium in return, which is why a calcareous soil needs the leaf route

Excess magnesium suppresses potassium as well; the two compete directly

Excess nitrogen suppresses potassium — the Pakistani programme in one line

If you run this hard, pair it with magnesium and calcium. VAN makes Cala-Mag V and V-Mag Essential for exactly that.

What potassium is actually doing in there.

Six functions, none of which the plant can perform without it.

1 Water regulation

Governs how much water the plant holds and how it is moved

2 Sugar transport

Moves sugars from leaf to grain, tuber, boll and fruit

3 Standing ability

Cell-wall stability and turgor; the crop resists lodging

4 Quality

Firmness, colour, sugar and shelf life — what a buyer pays for

5 Stress tolerance

Raises tolerance of drought, heat, cold and disease

6 Nitrogen efficiency

Governs how efficiently the plant uses the nitrogen already applied

Potassium moves the sugar. Phosphorus paid for making it.

Every VAN potash carries something with it, and the reason is a nutrient interaction, not a marketing bundle.

1

They do different halves of one job

Phosphorus is the energy currency — it funds the reactions that build sugar. Potassium is the transport system that moves that sugar to the grain, the boll, the tuber and the cane. Short of either and the other is wasted work.

2

Balanced potassium improves phosphorus uptake

And balanced phosphorus improves the uptake of nitrogen and magnesium in turn. The interactions run both ways — which is why a single nutrient pushed hard on its own so often disappoints.

3

Push potash alone and you create three deficiencies

Excess potassium suppresses calcium, magnesium and boron as it is taken up. A potash that carries its own antidote is not adding features — it is preventing the deficiency it would otherwise cause.

4

So the range is built that way on purpose

VL-Potash Liquid carries phosphorus and boron and is pH-regulated. V-Potash Plus carries magnesium, boron and chelated iron. Fusion Potash carries sulfur. None of them is a straight potash, and none of them is by accident.

Potash pays twice in cane: once in tonnes, once in sucrose.

The crops where potassium is not a yield input but a quality input.

1

Sugarcane — tonnes and recovery

Potassium governs sugar transport out of the leaf and into the stalk. In cane that is not an abstraction: it is the difference between tonnage and recoverable sugar, and the mill pays for the second one.

2

Potato — the curve runs to the end

Tuber potassium accumulates at roughly 3.6 kg K₂O per hectare per day in late bulking while the leaf gives up only 0.8. The soil has to still be supplying it when the crop is nearly finished.

3

Banana and orchard fruit

Banana removes around 6.6 kg of potassium per tonne of fruit against 2.0 kg of nitrogen — more than three times as much. Peak demand sits around flowering, and most of the season's potassium should be in place before it.

4

Cotton, chili and fruiting vegetables

Boll fill and fruit fill are potassium events. A liquid reaches a demand peak faster than a soil application started weeks earlier can.

And one specification built for an aircraft, not a knapsack.

The ULV drone grade sits in this range but has its own deck.

1

Ultra-low volume changes everything

A drone carries a few litres per acre instead of two hundred. Concentration, particle size, viscosity and settling behaviour all have to be engineered for that — an ordinary foliar grade at drone concentration will scorch a leaf.

2

It is a different product, not a different rate

Which is exactly the principle this deck has been making all the way through: each stage and each application method has a different requirement, a different absorption route and a different uptake pattern.

3

Where to find the detail

The drone category on van.com.pk carries the specification and the FoliarK Precise range.

4

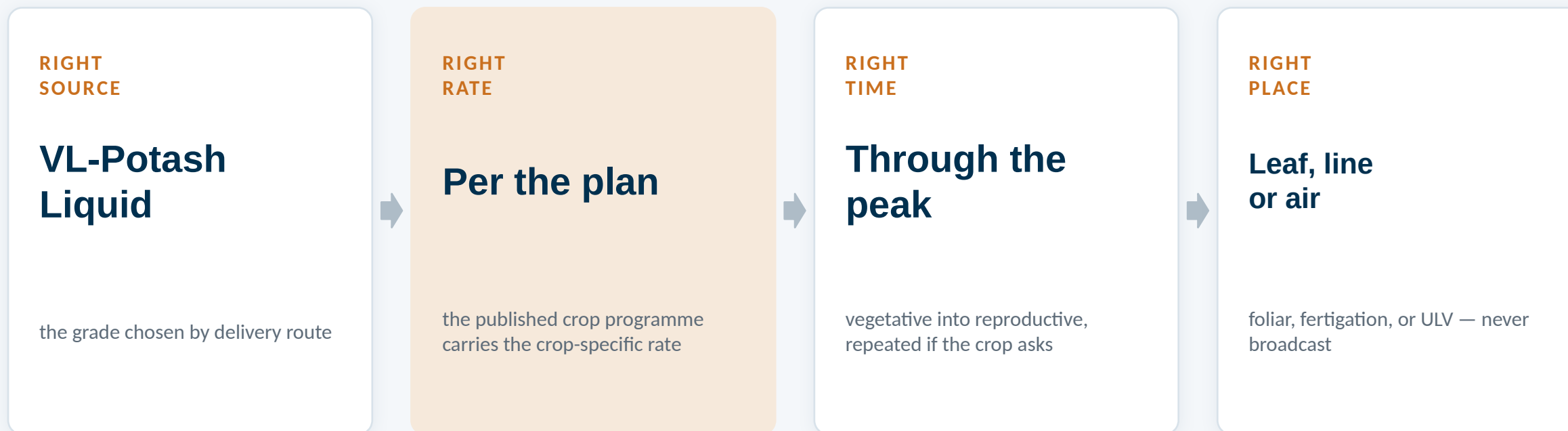


A separate deck is coming

VAN will publish a dedicated drone-grade potash deck rather than compress it into this one. Do not quote drone rates from this deck.

Right source, right rate, right time, right place.

The grade is the fourth R in disguise: choosing foliar, fertigation or ULV is choosing the right place.

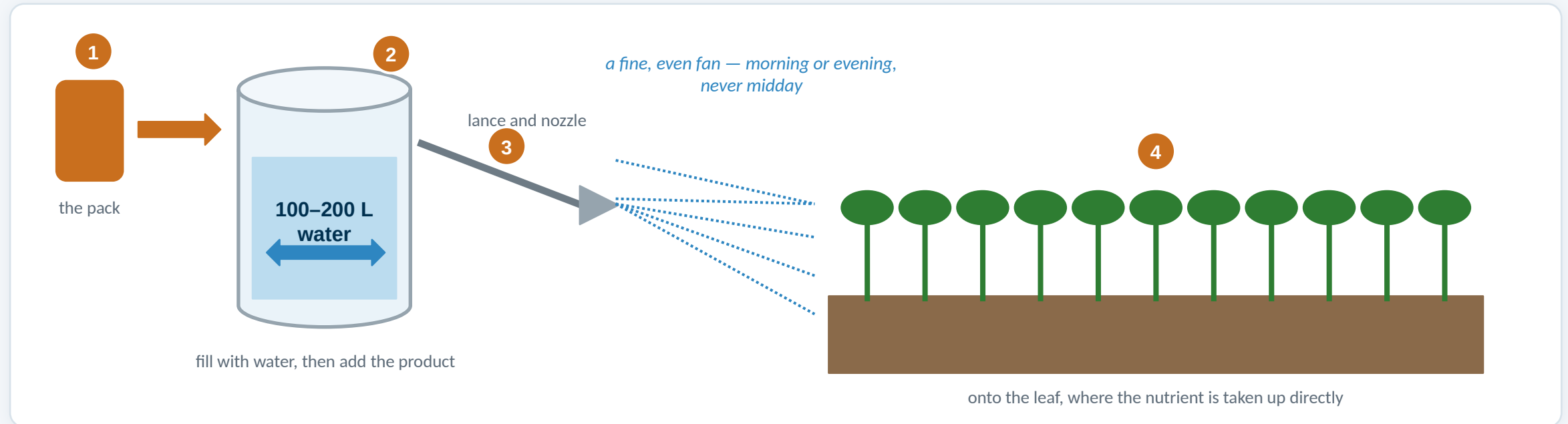


⚠ The ULV grade is sold under the FoliarK Precise family name, not as a VL-Potash variant.

HOW IT IS APPLIED

Water first, product second — never the other way round.

A liquid potash meets a demand peak faster than a soil application can.



1 Water first

100–200 L of clean water in the tank. Always water first, product second — never the other way round.

2 Add and keep agitating

Per the published crop plan. A tank that settles sprays the last acre at a different rate from the first.

3 A fine, even fan

Cover the leaf without running off it. Morning or evening — midday is the wrong half of the day.

4 At the right stage

Through the peak potassium window.

Doses are per acre, from VAN agronomy. The dilution is part of the rate: cutting the water to save a pass doubles the concentration on the leaf.

SOURCES

Where every figure in this deck came from.

Potassium × phosphorus

After Mulder's chart — balanced potassium improves phosphorus uptake and balanced phosphorus improves nitrogen and magnesium uptake in turn

Banana removal

Yara Australia nutritional summary — ≈6.6 kg K against 2.0 kg N per tonne of fruit; peak demand around flowering. Manufacturer literature

Potato late demand

Heard, J. (2004), Manitoba Soil Science Society — tuber K accumulating 3.6 kg K₂O/ha/day in late bulking against 0.8 given up by the leaf

Drone grade

van.com.pk drone category and the FoliarK Precise range — a separate deck is to follow; do not quote drone rates from this one

Analysis, standard, licence

van.com.pk — VL-Potash Liquid, K₂O 30% + P & B (pH-regulated), PS 5469-2020, CM/L-2943/2023

Three grades

Confirmed by VAN, July 2026 — foliar, fertigation, drone ULV low-salt

⚠ Drone naming

VAN, 17 Aug 2026 — FoliarK Precise Drone_ is its own family and replaces the drone grades of parent products

National nutrient ratio

van.com.pk — 3,808,775 t nitrogen against 45,735 t potash, 2023

Nutrient interactions

After Mulder's chart — established relationships

⚠ Licence expiry

30 September 2026 — one of four VAN licences flagged for a September check

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For information only. VAN may change a product's composition at any stage for agronomic, efficiency or upgrade reasons.