Spraying and Spreading Settings Guide:

XAG P100 Pro

This resource has been developed by AutoSpray Systems to provide sample settings for products applied using the XAG P100 Pro equipped with RevoCast 3 and RevoSpray 3. As a growing resource, these settings are designed to offer a reliable starting point for pilots to achieve consistent results. To maximise operational efficiency, these settings are best utilised alongside the DroneFiller system, which serves as an optimised mixing and filling solution.

Operational Approach

The primary goal is to maintain a high work rate while ensuring application accuracy and minimising operator exposure to PPP's.

- Generally, you should fly as fast as the terrain and application rate will allow.
- Flight speed ranges provided are a guide only; pilots must balance speed to suit the wind, obstacles, target work rate, and terrain steepness.
- For new pilots, it is recommended to keep height and speed conservative until overlap and pattern checks are consistently even.

Important compliance notes:

- These settings are a good starting point only. Always calibrate output and verify swath/pattern on the day (product, weather/wind and crop stage change results). Always listen to the advice of the agronomist.
- Drone flight speed ranges are a guide only. You must balance this to suit the terrain steepness, obstacles, wind and target work rate.
- Spread/Swath width starting points will vary depending on the size, weight & density of the material being applied.
- Use only products that are permitted for your intended use in the UK and follow the product label / SDS. Keep records.
- Plant Protection Products (pesticides/PPPs) applied by drone are treated as aerial application and require the correct HSE permissions and label-compliant spray volumes. This document does not provide PPP application settings.
- For new pilots, a good rule of thumb is to keep height and speed conservative until your overlap and pattern checks are consistently even.
- Always check the product label and ensure that suitable PPE is worn at all times.

Key Principles

Successful application relies on understanding two fundamental controls:

- Swath Width: Controls the evenness of the pattern.
- Rate Calibration: Controls the total output volume.

Note:

Spread and swath width starting points will vary based on the size, weight, and density of the material being applied. Always perform a pattern-check for every new material.
This document does not provide PPP application settings.

Table 1 — Granular Materials (RevoCast 3)

Product	Used for	Screw feeder size	Flight speed (m/s)	Height above crop (m AGL)	Swath width start point (m)	Application rate per hectare	Notes for pilots
YaraBela Extran (34.5% N ammonium nitrate)	Top-dressing cereals / OSR / grass	Large or Extra Large	6-12	5-6	6	150–250 kg/ha (to nutrient plan)	Tray-test pattern; adjust swath for evenness before altering rate.
Nitram (34.5% N ammonium nitrate)	Top-dressing cereals / OSR / grass	Large or Extra Large	6-12	5-6	6	150–250 kg/ha (to nutrient plan)	Keep height consistent; reduce speed slightly in gusty winds.
Urea prills (46% N)	Nitrogen dressing where urea is appropriate	Large or Extra Large	6-12	5-6	6 (narrow to 5 if needed)	120–220 kg/ha (to nutrient plan)	Often a bit 'floatier' than AN—confirm width with trays.
Muriate of Potash (MOP 0-0-60)	Potash maintenance on arable/grass	Large or Extra Large	6-12	5-6	6	100–250 kg/ha (to nutrient plan)	Heavy granules can still pattern unevenly—tray test is essential.
Westerwolds / Italian ryegrass overseed mix (e.g., Germinal / DLF)	Overseeding / catch crop establishment	Large	6-13	5-6	4–5	15–30 kg/ha (per seed mix)	Start at 4 m swath; widen only after checking emergence lines.
White clover seed (e.g., Aber series / other UK clover varieties)	Clover stitching into grass swards	Small	6-13	5-6	4–5	2–5 kg/ha	Fine seed: keep height down; use narrower swath for consistency.
Small-seeded cover crops (e.g. cbrassica mix)	Undersowing or post-harvest cover crop establishment	Small	6-13	5-6	4–5	5-15 kg/ha	Fine seed: keep height down; use narrower swath for consistency.

Table 2 — Liquid materials (RevoSpray 3)

Product	Used for	Recommended droplet size (µm)	Flight speed (m/s)	Height above crop (m AGL)	Swath width start point (m)	Application rate per hectare	Notes for pilots
UAN liquid nitrogen (28–32% N)	Liquid N top-up where appropriate	250–350 (medium–coarse)	5–10	3.5	3-4	Product: 40–100 L/ha (to nutrient plan). Total spray: 40–150 L/ha depending on dilution.	Aim medium–coarse droplets to manage drift/scorch risk; avoid heat stress conditions.
Maxicrop Seaweed Extract (liquid)	Biostimulant / stress support	150–250 (fine–medium)	5–10	3.5	3-4	Product: 2–5 L/ha (label). Total spray: 80–150 L/ha.	Good training product: focus on coverage and overlap checks.
YaraVita Brassitrel Pro (or similar micronutrient foliar feed)	Foliar micronutrients (trace elements)	150–250 (fine–medium)	5–10	3.5	3-4	Product: 1–3 L/ha (label). Total spray: 50–120 L/ha.	Use water-sensitive paper to confirm canopy coverage before widening swath.
Foliar magnesium (e.g., magnesium nitrate solution or Epsom salt solution – foliar grade)	Mg correction in cereals/veg	200–300 (medium)	5–10	3.5	3-4	Follow product label. Total spray: typically 80–150 L/ha for good coverage.	Watch mixing order and filtration; viscosity changes can affect calibration.
Liquid boron fertiliser (foliar boron)	Boron support (e.g., OSR, sugar beet, veg)	150–250 (fine–medium)	5–10	3.5	3-4	Follow product label. Total spray: commonly 50–120 L/ha.	Maintain consistent recirculation/agitation while mixing and; re-check calibration if temperature changes.