

Corteva™ Agriscience: A powerful dose of good news for Bulgarian agriculture in the 2025 season

Author(s): Емил Иванов

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We speak with Ivan Drazhev, Product Manager Seeds and Crop Protection for Bulgaria and Marketing Manager Balkans at Corteva™ Agriscience about the new range of maize and sunflower hybrids, and about the latest generation of pesticides and biostimulants that offer sustainable solutions in a dynamic and uncertain climatic and phytosanitary environment.

The spring campaign for preserving the health status of cereal crops is "knocking at the door". What is Corteva's response?

The herbicide **Quelex®** for the control of broadleaf weeds in all cereal crops has two active components with different modes of action (Arylex™ active and florasulam). Arylex™ is a completely new solution – a new active substance from a new chemical group with a new mode of action. **Quelex®** also destroys weeds resistant to other active substances (sulfonylureas and hormone-type herbicides), such as cleavers, corn poppy, cornflower, fumitory, Canadian fleabane. The built-in safener and the excellent selectivity are tools for achieving two objectives: safety/selectivity for the crop and a wide application "window" – from first leaf to flag leaf. And more. Low application rates: 3 g/ha in oats and 5 g/ha in other cereal crops, within a temperature range from 5°C to 25°C.

The combination **Palas® + Quelex®** has a strong impact against grass and broadleaf weeds in wheat. And one more fact. The herbicide **Quelex** is **tank-mix compatible** with the company's fungicides – **Univoq®** and **Verben®**.

Last year **Corteva™ Agriscience** positioned on the market a cutting-edge innovation – the two-component fungicide **Univoq®**. The product combines the strengths of the newest active substance Inatreg™ Active – a new class – *picolinamide*, a naturally derived molecule, and a new-generation triazole molecule – *prothioconazole*. The perfect synergy between the two active components provides a new standard for control of key diseases – rusts, septoria, various rots, fusarium. The unique I-Q4 formulation guarantees 100% leaf coverage. **Univoq®** is applied flexibly: with a herbicide at T1, at flag leaf emergence – T2, or before flowering – T3. In other words, **Univoq®** ensures preventive, curative and stopping action in all stages of pathogen development. Another advantage should not be underestimated: the application rate is from 120 ml/ha to 150 ml/ha.

Weed control in maize is of key importance for the future yield...

Exactly. **Corteva™ Agriscience** has raised the level of protection with its new three-component post-emergence, multifunctional herbicide (controlling annual and perennial grass and broadleaf weeds) **Principal® Gold**. The product is selective (its formulation includes a special safener with systemic action). The active components have different mechanisms of action, synergy and mutually complementary activity. Two of them control grass and some broadleaf weeds, while the third active substance controls only broadleaf weeds, including highly problematic ones – johnsongrass from rhizomes and Canada thistle. The herbicide can be applied from the 1st to the 9th leaf stage of the crop. **Principal® Gold** should be used at the most sensitive stage of the weeds in order to eliminate their competition; in my opinion this is from the 3rd to the 6th leaf stage of maize. Application at the 8th–9th leaf is under force majeure circumstances, due to objective impossibility for

application at earlier stages. We carried out a trial with **Principal® Gold** at the Agricultural University in Plovdiv, applying the herbicide at the 4th–5th leaf in one variant and at the 7th–8th leaf in a second variant, together with an untreated control, of course. The effect against weeds was perfect in both variants, but the yield from the variant sprayed at the 4th–5th leaf was about 150 kg/ha higher than the variant at the 7th–8th leaf. The reason is simple – the “late application” at the 7th–8th leaf allowed the weeds to “take up” more nutrients and water at the expense of the maize, resulting in a lower crop yield. **Principal® Gold** is suitable for growing maize without the use of a soil herbicide. The SX formulation of the granules ensures their rapid and easier dissolution, faster initial effect and stability of the spray solution.

Corteva created the ExpressSun™ technology for combating the weed association in sunflower, while there are also other technologies on the market. What are the latest news from the company's "headquarters" on this highly sensitive topic?

The scientific and discovery-based corporate engineering of **Corteva™ Agriscience** is opening the door to a new solution against the heavy broadleaf weed "army" in sunflower. The post-emergence herbicides **Helianthex™** and **Viballa®** contain the active component ARYLEX™ active from a new chemical group. It has a new mode of action against highly problematic broadleaf weeds – ragweed, common lambsquarters, black nightshade, abutilon, bindweed, cocklebur, wild mustard, hemp, amaranths. A discovery by the Bulgarian team of the company is the control of the weed *Canadian fleabane*. Both products can be used in all technologies for sunflower cultivation – ExpressSun™, Clearfield®, Clearfield® Plus, conventional.

Helianthex™ is a suspension concentrate (SC), suitable for post-emergence treatment from growth stage BBCH 14 (4th true leaf) to BBCH 30 (beginning of stem elongation) at a rate of 4.5 ml/ha + 0.1% Vivolt adjuvant. **Helianthex™** made its successful application debut in Bulgaria in 2024 on commercial fields.

Viballa® is an emulsifiable concentrate (EC) with a faster initial effect against weeds, due to an innovative built-in adjuvant. The product is applied at a rate of 100 ml/ha from growth stage BBCH 14 (4th true leaf) to BBCH 30 (beginning of stem elongation). Its application is recommended at high density of hemp and cocklebur. **Viballa®** is the standard for control of problematic broadleaf weeds in Hungary, Croatia, Serbia and Romania.

Over the past few years Corteva™ Agriscience has opened a new page in its research and development project – it is actively creating and implementing biological products in agricultural practice. The

dynamics and innovations in this rapidly developing segment attract professional interest in precision agriculture.

Utrisha® N is a nitrogen fixer that provides crops with an additional dose of nitrogen from the atmosphere and incorporates it into plant nutrition. It accelerates photosynthesis and improves nutrition. **Utrisha® N** meets the requirements of Decision 1165/2021 on products approved for organic farming and is part of programmes for reducing fertilizer rates. It is included in the BFSA list for soil improvers and fertilizer rate reduction as a participant in the ecosystems under the new CAP.

Kinsidro™ Grow stimulates physiological processes and photosynthesis. It contributes to combating stress caused by biotic and abiotic factors in all field crops (including rice).

Bioforge® is a completely new biostimulant that improves the tolerance of all field and fruit crops to herbicide and abiotic stress. Its profile includes antioxidant action for natural reduction of ROS molecules and avoidance of production losses.

StarterMn™ Platinum is a biostimulant in chelated form. It improves the nutritional balance, supplies plants with essential micronutrients and increases natural disease resistance. Suitable for all field and fruit crops.



The maize and sunflower hybrids of Corteva™ Agriscience are offered under the well-established Pioneer® brand, which Bulgarian farmers know very well. There is not a gram of doubt that this portfolio also includes innovations...

For 2025 **Corteva™ Agriscience** is offering Bulgarian farmers 15 hybrids from the popular **Optimum AQUAmax** line, three of which will make their debut after special testing in the company's demonstration trial fields, located at about 130 sites across the country.

P8436 (FAO 240) is the newest early hybrid. Characteristics: suitable for areas with higher altitude, suitable as a second crop after barley, peas and rapeseed. Tolerant to emergence stress, excellent drought tolerance, high yield potential, large kernels of the dent type.

P9255 (FAO 340) has high yield potential, very good agronomic characteristics, a high level of drought tolerance, a robust plant with intensely green leaves and large dent-type kernels. Recommended plant population under non-irrigated conditions: 6,300–6,800 plants/ha.

P9975 (FAO 460) is the sixth maize hybrid in this group, an indication of the increased interest in the segment (FAO 400–499) from the top list of **Pioneer®**. **P9975** has high and stable yield potential in an unfavourable climatic environment. Excellent stay-green effect of the leaf mass, a powerful root system, fast grain dry-down. It was successfully introduced in 2024 in Serbia and Croatia. Suitable for cultivation in Northern Bulgaria.

The newest ExpressSun® **sunflower hybrid P64LE280** is convincing proof of the high standards of the **Pioneer®** brand in genetics. This is a medium-early linoleic hybrid with high yield potential under normal and limited moisture conditions. It contains a new gene for resistance to all identified races of downy mildew in sunflower in Bulgaria so far. The highest level of downy mildew control, including the newest virulent races, is achieved by combining genetic resistance with seed treatment with the fungicide **Lumiscena 200 FS**.

The hybrid is resistant to all broomrape races distributed so far in Bulgaria – **Pioneer® Protector**. Its profile is complemented by several more characteristics: strong and uniform start at emergence and early development; compact and uniform plant with a shorter and very robust habitus and large green leaves; high oil content; tolerant to drier conditions.



P64LE280 can be successfully grown in areas where there is combined infestation by downy mildew and broomrape, including the most virulent G+ races. It can also be grown on less fertile soils. Evidence: the very good performance in demonstration trials in semi-mountainous regions (for example, in the area of Dryanovo Municipality, Gabrovo District in 2023 and 2024).

The scale of the market presence of **Pioneer®** genetics can also be judged by the fact that the hybrid **P64LE280** will this year be introduced into practice simultaneously in all leading countries of the European sunflower "belt" – Bulgaria, Romania, Moldova, Hungary, Greece, France and Ukraine.

Mr. Drazhev, what are the visionary ambitions of the Bulgarian Corteva team for 2025?

A little more than 5 years ago the multinational company **Corteva™ Agriscience** was created following the historic merger of DuPont, DuPont Pioneer and Dow Chemical Company. This large-scale and highly powerful industry has a clear focus – AGRICULTURE! The short period of time has demonstrated beyond doubt that the excellently designed strategic plan is operating at high speed and gaining market share. The corporate research and discovery complex is changing the world of crop protection and breeding. It is creating conceptual models for sustainable and highly stable agricultural production under conditions of climatic and phytosanitary deficits and imbalances. **Corteva™ Agriscience** generates biosecurity!

Corteva™ Agriscience is a well-recognised brand in our agriculture. And in 2025, as I already noted, the commercial portfolio includes new, innovative, competitive products that are part of the modern, high-tech crop protection and breeding of **Corteva™ Agriscience**.

One of our ambitions is for all corporate innovations to reach, in the fastest possible way, the widest possible circle of farmers with the highest possible degree of accuracy and objectivity. Because the level of awareness determines the mathematics of influence. Because the high expertise and proven professionalism of our team turn innovation into information. With a sense of satisfaction I can state that we have formed a kind of social phenomenon – strong empathy between sales representatives and customers. This hard-to-explain "precedent" for our geographical latitudes works!

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