

Seeds²
SUCCESS



VISION.

Global networks, long lasting & international experience, profound knowledge of markets and mentalities, fair conditions and a solid base of company's owner Ing. Ernst Topitschnig, MBA guarantee your business success.

Your sustainable yields are our goals! We offer high quality seeds licensed from European based breeders. You will find in our product range various species of seed varieties which are innovative and high-yielding products.

tec2trade - develops new markets for smaller European breeders.

tec2trade - is selecting seeds for sunflowers, maize, sorghums, chickpeas, lentils and more. We can offer even exclusivities to partners in markets of Central and Eastern Europe, including Turkey, Ukraine and Russia.

tec2trade - once again achieves Win-Win-Situations, true to its vision. Growers, producers, and consumers, as well as environment benefit from this concept.



Managing Director
Ing. Ernst Topitschnig, MBA

A Global Agribusiness Development Executive with over 25 Years Leadership Experience, Planning & Leading Comprehensive Corporate Strategies Focused on Delivering Innovative Technologies and Branding for Major Agriculture Firms. From Launching Innovative Probiotic Feed Additives for Pioneer/DuPont, to Establishing New Business Units for KWS, Nuseed & S&W, to Founding My Consultancy Business, *tec2trade*. Leveraged Deep Agriculture Experiences to Lead Renewable Bioenergy & Bioremediation Projects for NexSteppe, a Silicon Valley Seed Venture. Focused on Establishing Sustainable Value Chains that Covert Opportunity into Profitable Growth.

Ample International Network

He proofed his Endurance & Resilience in many Leadership functions, and as a consultant for companies based in Australia, China, Argentina and USA. His Strategic Thinking as well his Creativity and Problem Solving Skills enabled him to become a Founder and Leader of more than 10 successful subsidiaries all over Europe.

Values

Ernst Topitschnig banks on trust, respect, accountability, loyalty and honesty.

Besides abiding physical fitness through jogging, swimming and skiing he passionately plays Golf. According to Ernst "Playing Golf is one of best ways to get an impression of a person's character and personality within a few minutes."

Content

03-06

Sunflower varieties offers are reaching from lin-oleic to high-oleic acid, high oil yields and all up to date traits as imi and/or sulpho. Confectionaries large stripped and blacks for roasting and dehulling.

07-09

Maize THE fascinating crop. **Tec2trade** is offering excellent breeds for FAO 150 up to FAO 440. Either for grain or silage use, some are even proven to be outstanding for both major uses.

10-10

Sorghum is one of the growing future markets in Europe. Earlier maturities and Climate warming are drivers for growth in acreage of this low input requiring crop.

Soy varieties became a significant part of European protein crop strategy. Thanks to well adopted varieties soy growing surface is increasing significantly since years.

11

Chickpeas & Lentils Eating Habit and Life Styles are in a significant and ongoing change in requiring healthier food. Chickpeas, Lentils & Linseeds are just some examples of **tec2trade** availabilities to find seeds to produce superfoods.

SUNFLOWER

We take into account that sunflower markets of Ukraine, Russia, and Europe mainly Eastern Europe represent about 75 to 80 per cent of the global sunflower market. In other words, sunflower as a so-called cash crop is one of the major oil crops at these markets show growing trend. No wonder that the breeding focus maintains on yields, disease resistance and oil as well as oleic acids.

tec2trade is offering some of the best for sustainable growth and success.





ASU 1301 SU:

Homozygote SU resistant hybrid, non GMO, created in Romania.

- » It is a semi-early,
- » 170-175 cm high,
- » 45-49% oil content depending on cropping technology and weather conditions,
- » 3.2-4.5 to/ha yield,
- » broomrape resistant A-F,
- » downy mildew races 300-310-304.

INSTRUCTIONS FOR USE:

Tribenuron methyl resistance at 15 g a.i./ha applied one time at the 2-4 real pair of leaves. It can resist to double treatment if it is necessary (but the rate should be decreased like 10 g a.i./ha one time and the same 10 g a.i./ha second time).

Any brand with Tribenuron methyl only it is tolerated but you should correlate the rate per hectare in order not to overcome the maximum rate.

Don't apply in the same time tribenuron methyl together any grass herbicides which should be applied at 6-7 days difference. This recommendation is valid for all SU hybrids due to the extra stress generated to the small plants.

VALIN

Early maturity high-yielding hybrid with resistance to broomrape (A-H). One of the leaders in broomrape resistance in his group.

AGRONOMICAL CHARACTERISTICS

- » Vegetation period 90-94 days
- » Height of a plant is 150-160 cm
- » High oil content in seeds 48-52%
- » Tolerant to new, most aggressive races of broomrape
- » Resistant to lodging
- » Differs in high drought resistance.
- » Head position - Half curved
- » Good yield potential
- » It has high adaptability drought
- » tolerant to sunflower diseases

RECOMMENDED DENSITY

Sufficient soil moisture - 50-55 thousand plants / ha
Insufficient soil moistening - 45-50 thousand plants / ha

MAGURA (AGA 1701)

Medium maturity highly productive hybrid with maximum resistance to broomrape (A-H). Fast drydown.

AGRONOMICAL CHARACTERISTICS

- » Vegetation period 98-104 days
- » Plant height 175-185 cm
- » Oil content in seeds 48-52%
- » Highly productive for its group of ripeness
- » Resistant to lodging
- » Good development in the early stages of growth
- » Head position - fully curved
- » Very early flowering and ripening
- » Tolerant to broomrape (race AH)

RECOMMENDED DENSITY

Sufficient moisture - 52-58 thousand plants / ha
Insufficient moistening - 45-50 thousand plants / ha

Teknosun

Medium early hybrid designed for the ClearField® production system. Excellent yield potential and very high drought tolerance.

AGRONOMICAL CHARACTERISTICS

- » Vegetation period 102-107 days
- » Plant height 160-170 cm
- » Oil content 46-52%
- » Tolerant to Phomopsis
- » High tolerant to Downy Mildew
- » Very high level of auto-fertility
- » Weakly resistant to broomrape
- » Head position - semi-curved
- » High yield potential

RECOMMENDED DENSITY

Sufficient moisture - 60 - 67 thousand plants / ha
Insufficient moistening - 47-52 thousand plants / ha

RECOMMENDATIONS: Highly productive, drought-resistant hybrid of the intensive type. Very responsive to high levels of mineral nutrition.



CLEX

Hi-Tech hybrid IMI + SU + Orobanche + DMR tolerance

Medium early hybrid

IMI tolerant hybrid

Sulfonylurea (SU) / tribenuron-methyl tolerant hybrid

Excellent yield potential

AGRONOMICAL CHARACTERISTICS

- » Vegetation period 98 -102 days
- » Plant height 155-175 cm
- » Oil content 49-52%
- » Tolerant to Phomopsis
- » Tolerant to Downy Mildew
- » Very high level of auto-fertility
- » Good tolerance to races A - G of broomrape
- » Head position - semi-curved
- » Very good reaction to different soil and weather conditions
- » High yield potential

RECOMMENDED DENSITY

Sufficient moisture – 60 - 64 thousand plants / ha

Insufficient moistening – 52 - 57 thousand plants / ha

RECOMMENDATIONS: Highly productive, drought-resistant hybrid of the intensive type.

DIVNA

Medium early hybrid designed for the ClearField® production system. Excellent yield potential .

AGRONOMICAL CHARACTERISTICS

- » Vegetation period 98 -102 days
- » Plant height 175-185 cm
- » Oil content 49-52%
- » Tolerant to Phomopsis
- » Tolerant to Downy Mildew
- » Very high level of auto-fertility
- » Good tolerance to races A, B, C, D, E of broomrape
- » Head position - semi-curved
- » High yield potential

RECOMMENDED DENSITY

Sufficient moisture – 57 - 62 thousand plants / ha

Insufficient moistening - 45-50 thousand plants / ha

RECOMMENDATIONS: Highly productive, drought-resistant hybrid of the intensive type. Very responsive to high levels of mineral nutrition.

AGA 1703

A unique medium early hybrid combining high resistance to broomrape (A-G) and resistance to new races of downy powdery mildew. High resistance to stressful conditions and adaptation to soil and climatic conditions.

AGRONOMICAL CHARACTERISTICS

- » Vegetation period 95-103 days
- » Plant height 160-180 cm
- » Content of oil is 48%
- » Resistant to lodging
- » Good self pollinator
- » Resistant to shattering
- » Resistant to major economically significant diseases of sunflower
- » Head position - semi-curved
- » High productivity potential
- » Tolerance to broomrape (race A-G)

RECOMMENDED density at the time of cleaning

Sufficient moisture - 55-60 thousand rast. / Ha

Insufficient moistening - 45-50 thousand plants /

BRITAL

- » Late maturity group – like Armada may be later
- » Double stack hybrid –CL + DMR new races
- » Medium - short plant – 145-155 cm
- » Very good filling of center of head head.
- » Head position half turned down
- » Large head shape
- » High oil content .
- » Very good adaptation to all soil types
- » Tolerant to drought and stress conditions
- » High tolerance to new races of downy mildew

Performance Critereas	5	6	7	8	9	10
Yield						
Oil content						
Oil Yield						
Hektolitre						

Technical critereas	5	6	7	8	9	10
Vigor						
Earliness						
Maturity						
Tolerance to lodging						
Tolerance to stress						



CONFECTIONARY TYPES

NEXOR

- » Mid early maturity group – like AGA1701
- » Triple stack hybrid – OR6 + CL + DMR new races
- » Medium tall plant
- » Dark green color
- » Thin Shell of grain with very good filling.
- » Very good self pollination capability.
- » Head position half turned down
- » Very high oil content it is about 52%.
- » High tolerance to new races of downy mildew
- » Very high tolerance to known races of orobanche – to race F

Performance Critereas	5	6	7	8	9	10
Yield						
Oil content						
Oil Yield						
Hektolitres						

Technical criterreas	5	6	7	8	9	10
Vigor						
Earliness						
Maturity						
Tolerance to lodging						
Tolerance to stress						

SURIA

HYBRID DESCRIPTION

- » Romanian
- » Hybrid CLEARFIELD PLUS
- » SURIA is a modern, performant FAVORIT

Production

- » 5.000 kg/ha

Characteristics

- » Vegetation period: Mid-late (115-122 days)
- » Plant height: short (155 cm)
- » Head: large, thin and well fertilize
- » Head position: semi-erect at 45 degrees incline (
- » Foliage: rich, dark green
- » Roots system: very well developed, excellent for dry areas
- » High oil content: 48-51%
- » Very robust hybrid, also recommended for non-irrigated areas

Resistance

- » Excellent resistance to herbicide treatments with imidazolinone (both parents resistant to treatment)
- » Very good resistance to breakage and falling. Resistance to broomrape (races A-F)
- » Very good resistance to drought
- » High Tolerant to Peronospora (300, 304, 310, 704, 710, 714)
- » La Sclerotinia sclerotiorum, Phoma, Vericillium, Botrytis cinerea

Packing

- » Doses of 75.000 / 150.000 seeds

KERSOL

for sunflower de-hulling

Registered in Portugal in February 2016

VARIETY CHARACTERISTICS:

- » mid oleic hybrid
- » suitable for sunflower de-hulling
- » oleic content is over 60%
- » con-oil hybrid can produce quite big kernels

AGRONOMICAL CHARACTERISTICS:

- » long shaped kernels
- » resistant to Orobanche race F and maybe G
- » high yielding
- » recommendable for organic production in Orobanche areas (where CLEARFIELD IMI hybrids can not be planted)
- » the yield potential is high
- » the hybrid has a fast dry down
- » the kernels can be harvested at low moisture rates by natural field drying

PIPONERO XL & PIPONERO II

confection sunflower hybrid

EU - registered

VARIETY CHARACTERISTICS:

- » strong Orobanche resistance up to race F, race G as tested in 2015 in Bulgaria
- » no Clearfield treatment is needed in Orobanche areas – this can be very important for „organic producers“
- » the appearance is like CHS XL quality (Piponero II is equal Jarguar II; Piponero XL is equal CHS XL)
- » the self-compatibility is good in all places we tested up to now

AGRONOMICAL CHARACTERISTICS:

- » modest requirement for water supply
- » modest requirement on soil conditions
- » modest Nitrogen requirement

MAIZE

Maize is one of the most important cereal crops in the world agricultural economy both as food for man and feed for animals. It's a miracle crop with its high yield potential. This is because of its excellent climatic and geographic adaptability by intense breeding since almost 100 years of hybridization. **tec2trade** is proud to offer varieties from ultra-early maturity as FAO 150 up to late maturities of FAO 600. Popcorn seeds and other special maize hybrids can be offered as well.

JOY

S 150 | K 160

PROFILE

JOY is one of a new generation of ultra early maize. Based on a strong flint genetic, these hybrids are really fast in vegetation, flowering and cob filling. They have a very high content of starch, and because of that a strong forage quality. DSV ultraearly maize varieties have an outstanding youth development, also in cold areas.

- » Above average starch content
- » Wide leaves for high forage quality

GENERAL

Usage	Silage Energy
Silo mature	ultra early
Grain maturity	ultra early
Maturity forage	150
Maturity grain	160
Type of grain	flint
Hybrid	Single-cross
Sowing date	early 0 late

RESISTANCE TO DISEASES

Maize smut	++
Fusarium	+
Helminthosporium	+

SOWING

Forage	10 - 12 Plants/m ²
--------	-------------------------------



FORTARIS



FORTARIS has been specially selected for BIO cultivation. Fortaris has a high TKW and can therefore be sown deeper to prevent bird damage. FORTARIS forms deep roots and can recover well after hoeing. The sturdy stem makes FORTARIS also suitable for mixed cultivation with, for example, French green beans. Fortaris provides grains with a fast and easily digestible starch. A thinner sowing density of +/- 90,000 seeds / ha can give a higher cob share.

- » Robust 3-way hybrid thanks to a broad genetic background.
- » Earliness FAO 180.
- » Very good initial development, also under cold conditions. Quickly close the crop in line.
- » Firm, suitable maize variety for mixed cultivation with, for example, French green beans.
- » Average VEM and starch content.
- » Large seed promotes smooth germination and emergence. Deep sowing possible.
- » Vigorous against birds, wireworms and weeds, even under low phosphate availability.
- » Long-lasting leaf health/Stay-green.

Conventional and organic seeds are available from Fortaris.

Arion FAO 170



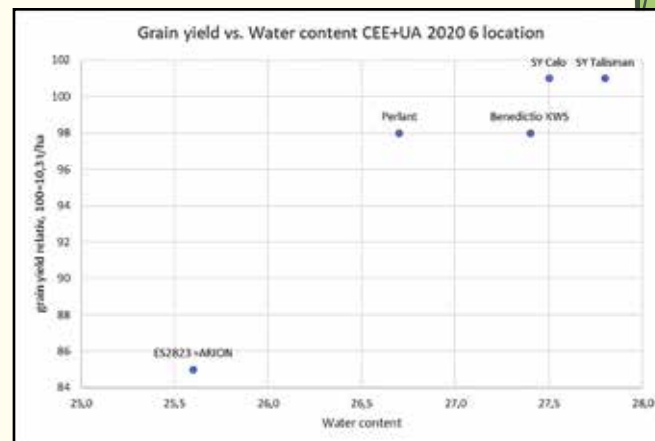
Strong in grain yields

ARION FAO 170 has been specially selected for grain production. Well adapted to very late planting, as second crop or for maize areas where very early hybrids are recommended.

Best results in Ukraine at six locations-

- » Type of hybrid: Single Cross
- » Type of grain: Dent genetic
- » Maturity group RM 78 (FAO 170) very early
- » Registered in Ukraine
- » Grain use recommended
- » Midshort architecture: 280 cm
- » Low ostrinia acceptance

Planting density: 8 to 10 plants / m²



ZE ZELSTAR



FULL PACKAGE OF PEAK PERFORMANCE

Type of hybrid: Single cross - Sc
FAO group: 330
Type of grain: dent
Maintainer: ZELSEED spol. s r. o., Slovakia
Features:

- » multi purpose hybrid offering top class yield regularity,
- » incredibly surpasses a yield level of even higher FAO ranges,
- » robust leafy plants earn an excellent energy intake per hectare,
- » huge cobs are loaded with high portion of rows,
- » rapid early vigour helps better cover the field from water loss shortly after drilling,
- » ability to reaching the greatest results even when using a lower seed population per hectare.
- » Optimal plant population (plants/ha)
- » grain 65–70 000
- » silage 72–75 000

ZE SLOVAKIA



STRONG IN GRAIN YIELDING PARAMETERS

Type of hybrid: Single cross – Sc

FAO group: 350

Type of grain: dent

Maintainer: ZELSEED spol. s r. o., Slovakia

Features:

- » mid-late universal hybrid suitable for both purposes grain and silage,
- » reacts outstandingly great to nutritious supply,
- » steadily great grain and silage yield,
- » mid-high to very high plants with strong root establishment,
- » remarkable starch content loaded from large cobs,
- » very healthy, with good protectiveness against major diseases,
- » superb drought tolerance.

» Optimal plant population (plants/ha)

» grain 75 000

» silage 80 000

QUALITY INDICATORS

- » Starch % 35,20
- » Fiber content in whole plant % 20,42
- » NDF content in whole plant % 45,11
- » Digestible fiber in whole plant % 53,11
- » DNDf in whole plant % 52,80
- » Organic matter digestibility % 66,90
- » NEL MJ/kg 6,36

ZE KARUZEL



LATER MATURITY, SUPERB PROSPERITY

Type of hybrid: Single cross – Sc

FAO group: 420

Type of grain: dent

Maintainer: ZELSEED spol. s r. o., Slovakia

Features:

- » late, very showy hybrid, phenomenally performing in dual purpose, both grain and silage,
- » for grain yield responds very well to higher population sowed,
- » robust, leafy plants favourably affect high biomass production,
- » registered with excellent results of silage dry matter yield (21,2 ton per hectare),
- » regularly producing large cobs filled to the tip,
- » high concentration of energy content delivering higher milk production and biogas production possibility,
- » impressively adaptable to dry areas.

» Optimal plant population (plants/ha)

» grain 75 000

» silage 80 000

QUALITY INDICATORS

- » Starch % 35,35
- » Fiber content in whole plant % 20,42
- » NDF content in whole plant % 45,21
- » Digestible fiber in whole plant % 54,62
- » DNDf in whole plant % 54,01
- » Organic matter digestibility % 67,26
- » NEL MJ/kg 6,41

ZE ZEAMAX



MAXIMUM OUTPUT POWER

Type of hybrid: Single cross – Sc

FAO group: 420

Type of grain: dent

Maintainer: ZELSEED spol. s r. o., Slovakia

Features:

- » late, multi purpose hybrid outstandingly reacting on favourable growing circumstances,
- » even within fewer drilled seed population delivers magnificent grain and silage yields,
- » massive plant's mass display clearly offers a biogas use,
- » excellent results of dry matter yields whatever the year,
- » generating large cobs,
- » improved silage matter digestibility.

» Optimal plant population (plants/ha)

» grain 65 000

» silage 72 000

QUALITY INDICATORS

- » Starch % 35,46
- » Fiber content in whole plant % 20,33
- » NDF content in whole plant % 45,18
- » Digestible fiber in whole plant % 55,98
- » DNDf in whole plant % 54,48
- » Organic matter digestibility % 68,11
- » NEL MJ/kg 6,41



ZE ALBERTINA



HYBRID DESCRIPTION:

- » Single cross Hybrid, dent
- » Registration: 2018, Slovak Republic
- » **Positioning:** for later grain and silage production

CHARACTERISTICS:

- » **ZE ALBERTINA** is a dual-purpose hybrid with exceptionally high tonnage potential.
- » Very tall, massive and well foliated plants, with high nutrition value.
- » Mind size excellent pollinated ears.
- » Outstanding yield performance and standability.
- » Reliable proven performance over many environments and soil types.
- » Very variable hybrid, reaching good yield on different soil or climatic locations.

RECOMMENDATION FOR CULTIVATION:

- » Recommended plant number for harvest: 68.000 plants/ha for grain 75.000 plants/ha for silage

SORGHUM

Sorghum is the fifth most produced crop globally. Due to its inherent drought tolerance, short growing season, likes heat and relatively low cost of production, interest in growing the crop is increasing. Sorghum species offer a range of end uses including food as a grain or as sorghum molasses, feed for animals, and in the production of alcohol and biofuels.

tec2trade offers all types for grain and forage.



Argensor

Type: S.bicolor **Use:** Silage

FEATURES

- » **Cycle:** Mid-early (90 days)
- » **Plant length:** 1,80-2,20 m
- » **Number of cutting:** Single cut
- » **Number of leaves:** High
- » **Tannin content:** Absent

RESISTANCE

- » **Lodging:** Resistant
- » **Drought:** High Resistance

ADVICES

- » **Time of sowing:** As 1st or 2nd crop
- » **Densità di semina:** 30- 35 seeds /m²

Stem with high sugar content, grain type, high plant.

Very high starch content (7-9 t/ha of grain)

Argensil

Type: S.bicolor **Use:** Silage

FEATURES

- » **Cycle:** Medium (95 days)
- » **Plant length:** 2,20-2,60 m
- » **Number of cutting:** Single cut
- » **Number of leaves:** High
- » **Tannin content:** Absent

RESISTANCE

- » **Lodging:** Mid-resistant
- » **Drought:** Resistant

ADVICES

- » **Time of sowing:** As 1° and 2° crop
- » **Sowing density:** 25 - 30 seeds/m²

Stem with high sugar content, grain type, very high plant (2,20-2,60 m).

Best balance among yield and quality.

SOY VARIETIES

In 2021 the cultivation of more than 4.3 Mio ha in Europe resulted in the production of 10 Mio tons of GM free soya beans. Soy can play an increasing role in providing a sustainable protein supply in Europe. Soy is already grown in many parts of Europe, Russia, Ukraine and Turkey. **tec2trade** is in liaison with Italian, Argentinian and Swiss genetic providers.





CHICKPEAS, LENTILS & MORE

ELSA

Lentil, Variety Description:

Registration: Italy 2012

Cycle: medium late

CHARACTERISTICS:

- » **External seed colour:** from green to marbled green
- » **Internal seed colour:** yellow
- » **Seed size:** big
- » **Plant type:** semi-erect
- » **Plant height:** 45-48 cm
- » **Seeds per pod:** 1
- » Medium resistance to cold and water stress
- » Resistant to dehiscence

QUANTITATIVE AND QUALITATIVE TRAITS:

- » 1.000 seeds weight: 40-45 g
- » Proteins: 24-26%

LENTIL - Itaca

Medium – late cycle; orange seed; big seed; pink colour

CHARACTERISTICS:

- » **Bearing:** high
- » **N° of branches:** 2,5 – 2,8
- » **Pods per plant:** 57 – 60
- » **Seeds per pod:** 1,2 – 1,5
- » **Dehiscence:** resistant
- » **Size (plant's height):** 35 – 37 cm
- » **Cold:** average resistance
- » **Drought:** resistant
- » **Productivity:** 1.200 – 1.500 kg/ha
- » **TGW:** 32 – 34 gr
- » **Proteins:** 24 – 26%

SOWING

Seeds germinate/m ²	Jan	Feb	March	April
North Italy	-	220-250	250-300	250-300
Centre Italy	-	270-300	300-330	300-330
South Italy	220-250	220-250	250-300	-

Superfoods – Chickpeas, lentils and linseeds are a valued crops and provide nutritious food for an expanding world population and will become increasingly important with climate change. The nutritional value of these crops in terms of nutrition and body health has been recently emphasized frequently by nutritionists in health and food area. Natural grown superfoods are fulfilling basic nutritional requirements but are also trendy and following the lifestyle and demands of vegetarians and vegans.

tec2trade offers them all.



SULTANO

Chick pea > Medium cycle

- » Fair seed, smooth, medium caliber
- » Resistant to Ascochyta Rabiei
- » Rotation
- » Suitable for the whole of Italy

FEATURES

- » **Flower's colour:** fair
- » **Bearing:** high
- » **Size (plant's height):** 70-75 cm
- » **Dehiscence:** resistant
- » **Cold:** average resistance
- » **Drought:** resistant
- » **Lodging:** resistant
- » **1.000 seeds weight:** 360-400 gr

SOWING

Seeds germinate/m ²	Oct.	Nov.	Dec.	Jan.	Feb.	March
North Italy	-	-	-	-	40-45	45-50
Centre Italy	-	-	-	40-45	40-45	45-50
South Italy	-	30-35	30-35	35-40	40-45	40-45

Impressum

Ing. Ernst Topitschnig MBA tec2trade
TechnologyTransfer&Consulting

Krottenseestrasse 47
A-4810 Gmunden, Austria

T +43 664 111 42 99

Skype: ernst.topitschnig

E e.topitschnig@tec2trade.com

I www.tec2trade.com

