

**EXCELLENCE
IN TOBACCO
SEED & BREEDING**



**2018
CATALOGUE**

**HIGH QUALITY
SEEDS**

**BREEDING
EXPERTISE**

**AGRONOMY
TECHNICAL SUPPORT**



BSB, PROFESSIONAL TOBACCO SEEDS & TECHNICAL EXPERTISE

Bergerac Seed & Breeding (BSB), was founded in 2015 on the scientific background of the historical Tobacco Institute of Bergerac. **BSB** is today fully committed to answering the challenge of leaf integrity and social responsibility. Its genuineness comes from the close relationship between researchers, development technicians and final users. They are all empowered to discover solutions best adapted to each individual local growing conditions.

BSB team is dedicated to the breeding, production and commercialisation of high quality tobacco seeds. Our seeds can be sent all over the world from **BSB** head office in Bergerac, South West of France.

BSB makes continuous investments in the improvement of the quality of its seeds, as well as the development of new hybrids with a higher yield and leaf quality potential, resistances to pests and diseases, and adaptation to various climatic conditions. Our Flue-cured, Burley and Dark tobacco varieties have proved to be adapted to different countries' conditions, in Asia, Africa, Europe and America.



R&D, PILLAR OF OUR STRATEGY



Tobacco breeding is the heart of BSB scientists' activities. Since 1927, top leaf quality with respect to end product is consistently the focus of Bergerac researchers. BSB breeding program is committed to this vision at all steps.

BSB hybrid pipeline is the result of a long and meticulous process of genetic improvements with conventional breeding methods, followed by an intensive experimentation work in all key areas of production leading to cultivars adapted to soil and climate conditions.

All our programs are supported by molecular marker and conventional genetic engineering.

Key aspects inherent to tobacco cultivation and products are carefully taken into account in our variety selection:

- Leaf body, colour and industrial processing properties
- Nicotine levels and sugar balance (Flue-cured)
- Yield and yield stability
- Plant general health and resistances to main tobacco pests and pathogens
- Plant architecture for easier sucker control and mechanical harvest

The BSB breeding team is active in the tobacco scientific community and collaborates with peers on these topics.



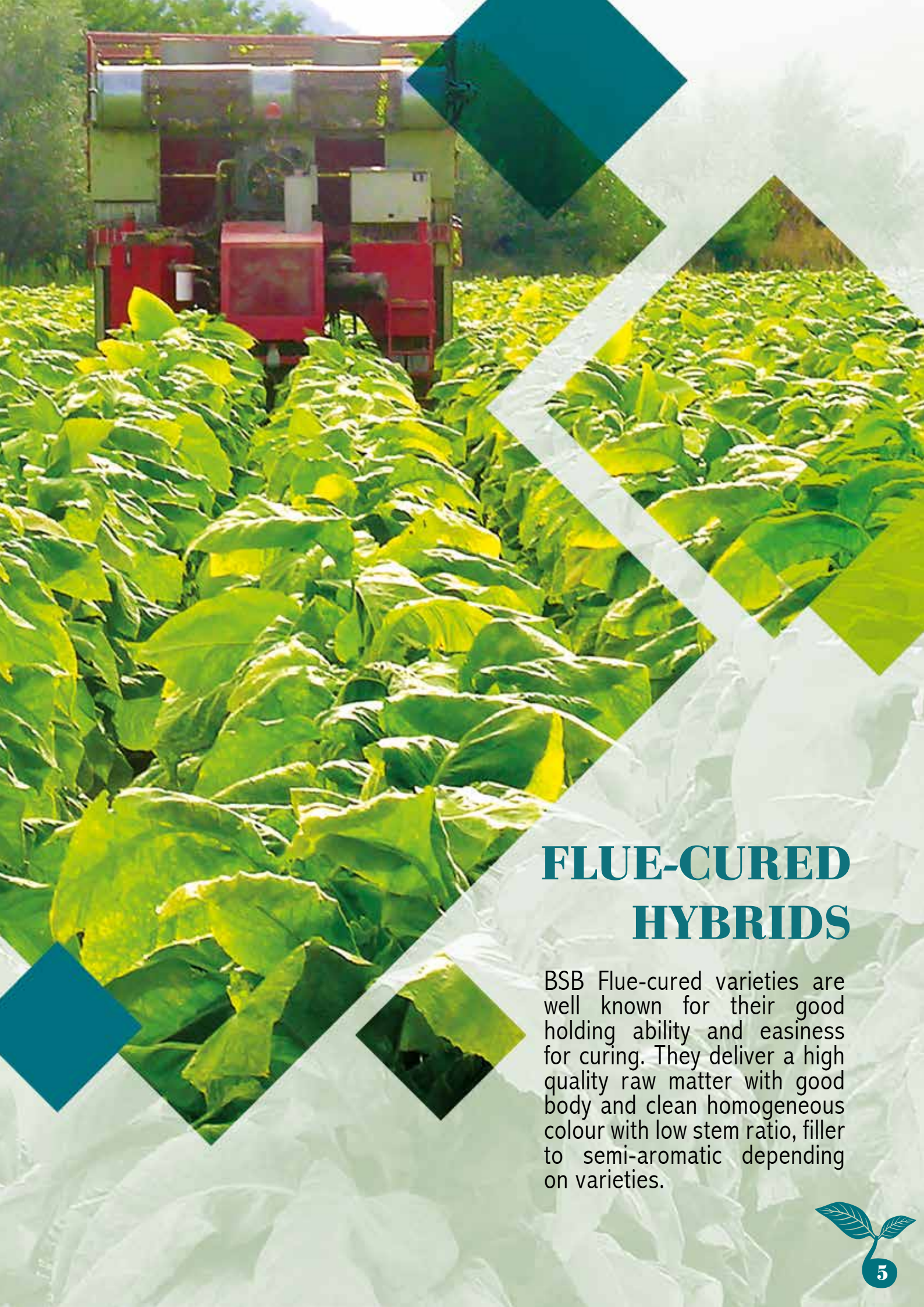


Type	Variety	Leaf Maturity	Yield	Pest and disease Resistances						Potential for leaf		Chemistry		Page N°	
				Black root-rot	PVY ^N	TMV	Nematodes <i>M.incognita</i>	Nematodes <i>M.arenaria</i>	Other	Tissue colour	Body quality	Nicotine	Reducing sugars		
FLUE-CURED	Early, filler	ITB 683	Very early	██████	R	R	S	S	S	EC	●	██████	███	███	p.6
		BSB 6191	Very early	██████	R	R	S	S	S	ORO	●	██████	███	███	p.6 NEW! Boomrape Tol.
		BSB 6201	Very early	██████	R	R	S	S	S	BM	●	██████	███	███	p.6 NEW! Blue mold Tol.
		BSB 6197	Early	██████	R	R	S	R	S		●	██████	███	███	p.6 NEW! Shisha Top Quality
		BSB 6198	Early	██████	R	R	R	R	S		●	██████	███	███	p.7 NEW! High Quality, TMV res.
		ITB 6184	Early	██████	R	R	R	R	S		●	██████	███	███	p.7
	Early, semi-aromatic	ITB 6180	Early	██████	R	R	S	S	S		●	██████	███	███	p.7
		ITB 6118	Early	██████	R	R	S	R	S		●●	██████	███	███	p.7
		ITB 689	Early	██████	R	R	R	R	S		●●	██████	███	███	p.8
		ITB 678	Early	██████	R	R	S	R	S		●●	██████	███	███	p.8
	Medium, semi-aromatic	ITB 609	Early	██████	R	R	S	S	S		●●	██████	███	███	p.8
		ITB 6164	Early	██████	R	R	R	R	S		●●	██████	███	███	p.8
		ITB 6179	Medium	██████	R	R	R	R	S		●●	██████	███	███	p.9
		ITB 6154	Medium	██████	R	R	R	R	S		●●	██████	███	███	p.9
	Late, filler to semi-aromatic	ITB 6178	Medium	██████	R	R	S	R	S		●●	██████	███	███	p.9
		BSB 6194	Medium	██████	R	R	R	R	T	NEM	●●	██████	███	███	p.9 NEW! Improved tolerance to <i>M. arenaria</i> nematodes
ITB 354		Late	██████	S	R	S	R	S		●●	██████	███	███	p.10	
ITB 6167		Late	██████	R	R	S	R	S		●●	██████	███	███	p.10	
BURLEY	Filler	ITB 5119	Very early	██████	R	R	S	S	S	BM	●	██████	-	-	p.12
		ITB 2604	Medium	██████	R	R	S	S	S		●	██████	-	-	p.12
	Aromatic	ITB 593	Early	██████	R	R	R	S	S		●	██████	-	-	p.12
		ITB 501	Early	██████	R	R	S	S	S		●	██████	-	-	p.12
		ITB 221	Early	██████	R	R	S	S	S		●	██████	-	-	p.13
		ITB 5109	Medium early	██████	R	R	S	S	S	BM	●	██████	-	-	p.13
		ITB 5118	Medium	██████	R	R	R	S	S	BM/EC	●	██████	-	-	p.13 NEW!
		ITB 562	Medium	██████	R	R	R	S	S		●	██████	-	-	p.13
		ITB 574	Medium	██████	R	R	R	S	S	BM/EC	●	██████	-	-	p.14
ITB 5107	Medium late	██████	R	R	R	S	S	BM	●	██████	-	-	p.14		
DARK	Paraguay	ITB 1000	Medium	██████	S	R	R	S	S	BM	●	██████	-	-	p.16
		ITB 420	Medium	██████	R	R	R	S	S	BM	●	██████	-	-	p.16
		ITB 1105	Medium	██████	S	S	R	S	S		●	██████	-	-	p.16
	Dark Kentucky	ITB 16410	Early	██████	R	R	R	S	S		●	██████	-	-	p.16
		ITB 446	Medium	██████	R	S	S	S	S		●	██████	-	-	p.17
	CW*	ITB 160	Medium late	██████	R	S	R	S	S		●	██████	-	-	p.17
		ITB 180	Medium	██████	S	S	-	S	S	BM	●	██████	-	-	p.17

*CW : Cigar Wrapper

Pathogens	Resistance described
Black root-rot	<i>Thielaviopsis basicola</i> (Chalara elegans)
PVY ^N	Potato virus Y, necrotic
TMV	Tobacco Mosaic Virus
Southern root-knot nematodes	<i>Meloidogyne arenaria</i>
Southern root-knot nematodes	<i>Meloidogyne incognita</i> races 1-3
EC, Powdery mildew	<i>Erysiphe cichoracearum</i> DC
BM, Blue mold	<i>Peronospora tabacina</i>
ORO, Broomrape	<i>Phelipanche ramosa</i> (<i>Orobancha ramosa</i>)

This information is provided for guidance for the users in typical situations of tobacco growing. Plant pathogens not cited in the above table may cause diseases on the aforementioned cultivars. New strains of the above cited pathogens, of which existence is not known or not published at printing of this brochure, may cause diseases on the aforementioned cultivars. Unusual agronomic techniques to grow, treat or feed tobacco plants, and / or unusual soil or climatic conditions, are not concerned by this information, which may become irrelevant in these unusual situations.



FLUE-CURED HYBRIDS

BSB Flue-cured varieties are well known for their good holding ability and easiness for curing. They deliver a high quality raw matter with good body and clean homogeneous colour with low stem ratio, filler to semi-aromatic depending on varieties.



FLUE-CURED EARLY FILLERS

Shisha Adapted



N°1 Shisha Reference

ITB 683

Nicotine R. Sugars **Very Early**

Resistances: Black root-rot, PVYⁿ, Powdery mildew

ITB 683 is a very early hybrid selected for curability and high yield potential. It produces a typically clean, sunny light lemon to lemon filler flue-cured tobacco profile with very good body, moderate nicotine and high sugar to nicotine ratio. Ridging is advised.



NEW! Broomrape tolerant

BSB 6191

Nicotine R. Sugars **Very Early**

Resistances: Black root-rot, PVYⁿ, Broomrape IR

BSB 6191 produces a very light lemon filler tobacco, on a very early and short cycle of production. Wait for typical maturity signs for harvesting (white mid-rib colour and leaves that detach easily). A good fertilization balance will support the broomrape tolerance.



NEW! Blue mold IR

BSB 6201

Nicotine R. Sugars **Very Early**

Resistances: Black root-rot, PVYⁿ

BSB 6201 is a very early variety improved for blue mold tolerance and quality. It produces lemon yellow and easy to cure leaves, with a very low stem ratio. This variety is suitable for organic production.



NEW!

BSB 6197

Nicotine R. Sugars **Early**

Resistances: Black root-rot, PVYⁿ, Southern root-knot nematodes

This variety has a high stable yield and quality potential. It produces luminous pale lemon colour matter with very good and hygroscopic tissue texture. Stand-up ability has been improved.



NEW!

BSB 6198

Nicotine

R. Sugars

Early

Resistances: Black root-rot, PVY^N, TMV, Southern root-knot nematodes

BSB 6198 is a resistant variety under strong pressure of TMV with high quality and easy to cure tissues. Stand-up ability is good and it can show adaptation in many different climatic conditions.



TMV R and high yield

ITB 6184

Nicotine

R. Sugars

Early

Resistances: Black root-rot, PVY^N, TMV, Southern root-knot nematodes

ITB 6184 is a filler flue-cured hybrid with good stalk stand-up ability, an important trait for mechanical harvest. Yield and leaf body quality potential are high. This variety will easily produce a uniformly coloured filler flue-cured with high sugar to nicotine ratio.



High yield

ITB 6180

Nicotine

R. Sugars

Early

Resistances: Black root-rot, PVY^N

ITB 6180 is an early hybrid with very high yield potential. The plant is strong and will have to be managed accordingly. Tobacco produced is light lemon and homogeneous with a moderate nicotine level.

..... FLUE-CURED SEMI AROMATIC



ITB 6118

Nicotine

R. Sugars

Early

Resistances: Black root-rot, PVY^N, Southern root-knot nematodes

ITB 6118 is a hybrid combining potential for a semi-aromatic style of tobacco and very fast leaf maturity. The leaf colour is lemon to lemon orange, with a low sugar to nicotine ratio. The plant is short and adapted to mechanical harvest.





ITB 689

Nicotine R. Sugars

Early

Resistances: Black root-rot, PVYⁿ, TMV, Southern root-knot nematodes

ITB 689 is an early flue-cured variety, resistant to TMV, with good leaf body quality, recognised for its curing ability. ITB 689 produces tall plants, ridging is advised.



ITB 678

Nicotine R. Sugars

Early

Resistances: Black root-rot, PVYⁿ, Southern root-knot nematodes

ITB 678 is a semi-aromatic hybrid with early leaf maturity and good yield. Its good holding ability facilitates the success of flue-curing to deliver a homogeneous and high quality result, lemon to lemon-orange in colour.



ITB 609

Nicotine R. Sugars

Early

Resistances: Black root-rot, PVYⁿ

ITB 609 is a semi-aromatic hybrid, with early leaf maturity, adapted to short growing seasons, with good holding ability and potential for an evenly coloured, clean lemon semi-aromatic tobacco.



ITB 6164

Nicotine R. Sugars

Early

Resistances: Black root-rot, PVYⁿ, TMV, Southern root-knot nematodes

ITB 6164 is a hybrid with early leaf maturity and high quality potential. The tall plant has good root system and stalk stand-up ability. Nicotine content is moderate.



ITB 6179

Nicotine R. Sugars **Medium**

Resistances: Black root-rot, PVYⁿ, TMV, Southern root-knot nematodes

ITB 6179 has a strong potential for yield, combined with a good holding ability. It produces a lemon to lemon orange tobacco. Top leaves architecture is well adapted to mechanical harvest with wide and horizontal top leaves.



ITB 6154

Nicotine R. Sugars **Medium**

Resistances: Black root-rot, PVYⁿ, TMV, Southern root-knot nematodes

ITB 6154 is a semi-aromatic hybrid with high productivity. It shows a proven ability to produce high quality raw matter in different climatic conditions.



ITB 6178

Nicotine R. Sugars **Medium**

Resistances: Black root-rot, PVYⁿ, Southern root-knot nematodes

ITB 6178 has demonstrated a strong potential for a superior leaf quality and high yield, with good curing and holding quality. Top leaves of ITB 6178 are wide and horizontal, facilitating mechanical harvest.



BSB 6194

Nicotine R. Sugars **Medium**

Resistances: Black root-rot, PVYⁿ, TMV, Southern root-knot nematodes *M. incognita* & *M. arenaria*

BSB 6194 has been selected for its improved tolerance to gall nematodes *Meloidogyne arenaria*. It produces a clean and homogeneous lemon orange coloured flue-cured tobacco with good body and quality. Yield potential is medium.





FLUE-CURED LATE MATURITY



Easy sucker control

ITB 354

Nicotine R. Sugars

Late

Resistances: PVY^N, Southern root-knot nematodes

ITB 354 is a filler to semi-aromatic hybrid with a high yield potential. ITB 354 is easy to top and has a late sucker growth (relative to floral growth stages), which improves the efficiency of sucker control with contact products.



ITB 6167

Nicotine R. Sugars

Late

Resistances: Black root-rot, PVY^N, Southern root-knot nematodes

ITB 6167 is a hybrid with intermediate to late leaf maturity and high productivity. It produces a clean and homogeneous raw matter, evenly lemon to lemon orange coloured with a high sugar / nicotine ratio. Stalk stand-up ability is good and facilitates mechanical harvest.



ITB 6176

Nicotine R. Sugars

Late

Resistances: Black root-rot, PVY^N, Southern root-knot nematodes

ITB 6176 is a hybrid with late leaf maturity, comparable to standard K326. It produces an evenly lemon to lemon orange coloured flue-cured tobacco with good body and quality, moderate nicotine content, and a high sugar / nicotine ratio. Yield potential is very high.



ITB 6148

Nicotine R. Sugars

Late

Resistances: Black root-rot, PVY^N, Southern root-knot nematodes

ITB 6148 is a late maturity flue-cured hybrid, filler to semi-aromatic, with potential for leaf quality and good productivity. ITB 6148 shows a good holding and curing ability.

BURLEY HYBRIDS

BSB Burley varieties have potential for producing top quality aromatic Burley style and fast maturity.



BURLEY HYBRIDS



NEW!
Blue mold IR

ITB 5119

Nicotine

Early

Resistances: Black root-rot, PVY^N, Blue mold IR

ITB 5119 is a filler to semi-aromatic Burley hybrid, selected for early leaf maturity and adaptation to limiting temperatures at spring. It is suitable for stalk and leaf harvesting and curing.



ITB 2604

Nicotine

Medium

Resistances: Black root-rot, PVY^N

ITB 2604 is a filler to semi-aromatic Burley hybrid with a high yield potential and medium leaf maturity, suitable for stalk and leaf harvesting and curing.



ITB 593

Nicotine

Early

Resistances: Black root-rot, PVY^N, TMV

ITB 593 is an aromatic Burley hybrid with very early, uniform from bottom to top leaf maturity, good yield and strong potential for tan and brown aromatic leaves. The short erect shaped plant is suitable for mechanical harvest.



ITB 501

Nicotine

Early

Resistances: Black root-rot, PVY^N

ITB 501 is an aromatic Burley hybrid with early leaf maturity and high quality potential. Top leaves are well developed and tan brown coloured. The short erect shaped plant is suitable for mechanical harvest.



Easy sucker control

ITB 221

Nicotine  **Early**

Resistances: Black root-rot, PVY^N

ITB 221 is an aromatic Burley with strong potential for high quality tan brown coloured tobacco. Top leaves are well developed. Sucker emission is late relative to floral growth, which facilitates their control with contact products.



NEW!
Blue mold IR

ITB 5109

Nicotine  **Medium-Early**

Resistances: Black root-rot, PVY^N, Blue mold IR

ITB 5109 is a new, medium-early maturing aromatic Burley hybrid combining high blue mold intermediate resistance with good leaf quality potential. The plant shape is short with erect leaves, facilitating stalk harvesting by either mechanical or manual means and curing. ITB 5109 should not be stalk-cut too late to avoid higher nicotine levels.



NEW!
Improved blue mold IR

ITB 5118

Nicotine  **Medium**

Resistances: Black root-rot, PVY^N, TMV, Blue mold IR, Powdery Mildew

ITB 5118 is a medium maturity aromatic Burley hybrid combining high blue mold intermediate resistance with good leaf quality potential. Leaf maturity is homogeneous from bottom to top, yield potential is high.



ITB 562

Nicotine  **Medium**

Resistances : Black root-rot, PVY^N, TMV

ITB 562 is an aromatic Burley hybrid combining a good potential for leaf quality, high yield and moderate nicotine content. It tends to reaching floral growth 3-5 days later than TN 90LC. The plant size is close to TN 90LC. The total nitrogen content of ITB 562 leaves tends to be lower than other aromatic Burley varieties.



ITB 574

Nicotine 

Medium

Resistances: Black root-rot, PVYⁿ, TMV, Blue mold IR, Powdery mildew

ITB 574 is a medium maturing hybrid with a multiple disease resistance package and a proven ability to produce a high quality aromatic style of Burley. The plant shape is cylindrical with erect leaves, the size is close to TN 90LC. It is well suited for stalk harvesting and curing. Good results are also obtained with leaf harvesting.



High yield

ITB 5107

Nicotine 

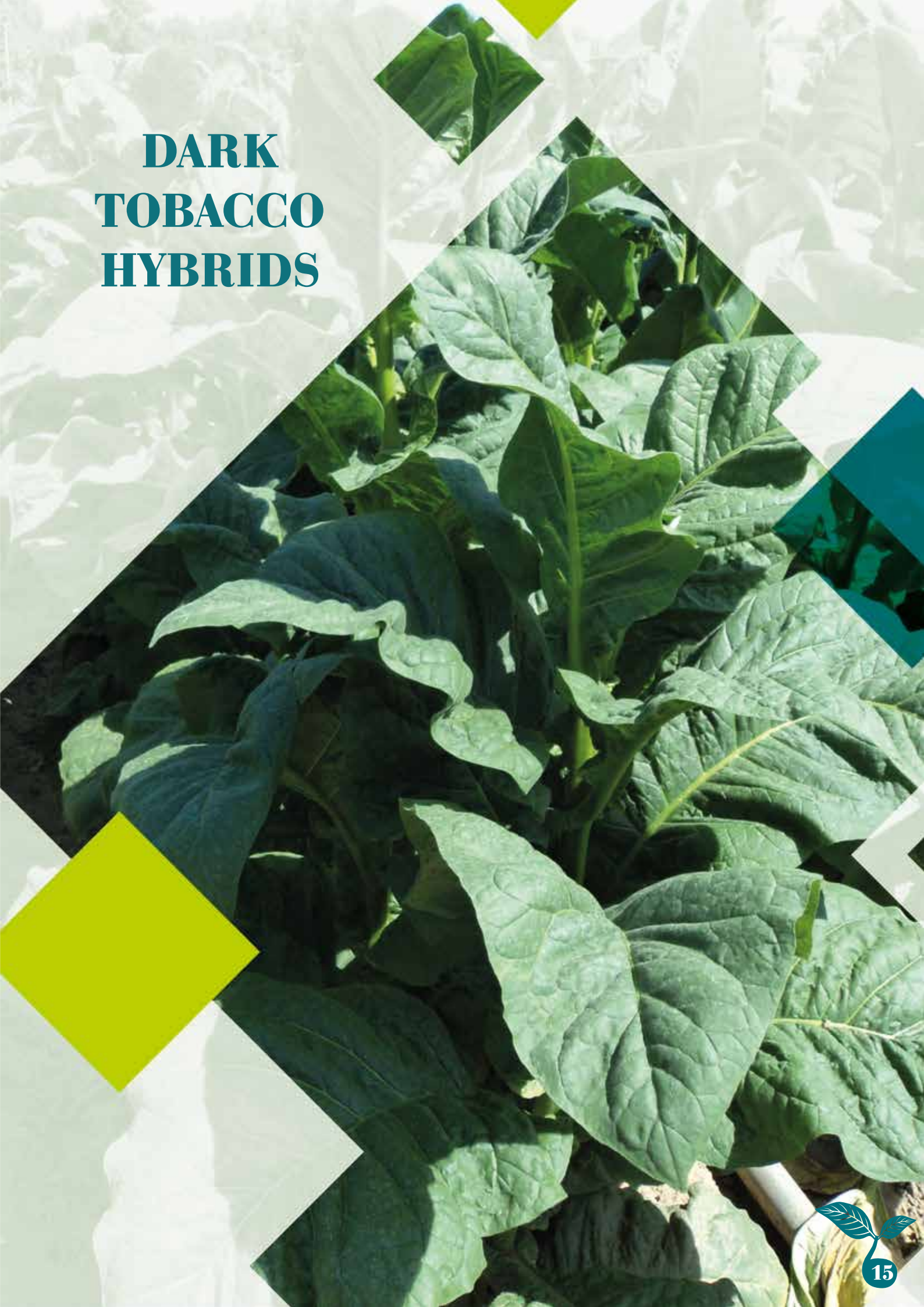
Medium Late

Resistances: Black root-rot, PVYⁿ, TMV, Blue mold IR

ITB 5107 has been selected as a medium-late ripening aromatic hybrid with a very strong yield potential associated to blue mold intermediate resistance. The plant shape is semi-erect, with height close to TN 90LC.



DARK TOBACCO HYBRIDS





DARK TOBACCO HYBRIDS



ITB 1000 Paraguay, Cigar wrapper Nicotine  **Medium**

Resistances: PVY^N, TMV, Blue mold IR

ITB 1000 is a Paraguay subtype of dark air-cured, with extended, semi-erect leaves. Air-curing of ITB 1000 produces a raw matter usable for dark cigarettes, interior of cigars, roll your own blends and, in proper conditions, cigar wrapper leaves.




ITB 420 Paraguay, Cigar wrapper Nicotine  **Medium**

Resistances: Black root-rot, PVY^N, TMV, Blue mold IR

ITB 420 is a Paraguay dark air-cured hybrid with a complete resistance package. ITB 420 produces plants with erect leaves, as tall as ITB 1000. ITB 420 is suitable for stalk or leaf harvesting. It shows a good air-curing ability and produces a classical Paraguay style of dark tobacco, with good body and an evenly spread brown colour.



ITB 1105 Aromatic Paraguay, cigar wrapper Nicotine  **Medium**

Resistances: TMV

ITB 1105 produces a light brown coloured tobacco, with good body and flavourful well balanced smoke. ITB 1105 should be stalk harvested at optimal maturity to ensure the best quality.



ITB 16410 Dark Kentucky Nicotine  **Early**

Resistances: Black root-rot, PVY^N, TMV

ITB 16410 is a new Kentucky dark fire-cured hybrid, resistant to common strains of the PVY^N virus and TMV. It produces a high quality dark tobacco raw matter with strong, elastic body. Leaf maturity occurs earlier than the reference Kentucky 170, with a lower nicotine content.

NEW!





ITB 446

Dark Kentucky

Alkaloids 

Medium

Resistances: Black root-rot

ITB 446 is a Kentucky dark fire-cured hybrid with black root-rot resistance and ability to produce a high quality dark Kentucky style raw matter with good body. Compared to the reference Kentucky 170, the flowering date is similar, the yield as well, leaf maturity occurs slightly earlier, and the nicotine content tends to be lower.



ITB 160

Dark Kentucky

Alkaloids 

Medium-Late

Resistances: Black root-rot, TMV

ITB 160 is a Kentucky type tobacco with wide, well developed, velvety, gummy and green coloured leaves. ITB 160 is well adapted to stalk-harvest and air-curing and enables production of high quality dark brown and elastic leaves.



ITB 180

Cigar Wrapper

Alkaloids 

Medium

Resistances: Blue mold IR

ITB 180 is a cigar wrapper subtype of dark air-cured, with wide, horizontal leaves. ITB 180 has been developed in a program aiming at introducing blue mold intermediate resistance into cigar wrapper tobacco.





BSB SEEDS



All the development process of new hybrids and the production of seeds follow strict internal standards of quality. 100% of the BSB seeds are produced in France with the support of local growers around Bergerac area. Sustainability of our production process, compliance and workers security are guiding our standards definition.

Bergerac Seed & Breeding only produces and markets high quality seeds, thus ensuring **the purity of tobacco lines** and **hybrid seeds** and the **germination capacity** of its seeds. All our seed lots are **tested for GMO** and are controlled in our fields (varietal purity and conformity to the standard) and laboratories (**pathology conformity** and **alkaloid analyses**) before sale.

We pay a particular attention in the control of the conversion of nicotine to nornicotine throughout the breeding and seed production processes, systematically discarding plants that do not fit our standards. Every Flue-cured, Burley and Dark variety sold has been screened for **low converters, following the LC protocol from the university of Kentucky.**

Bergerac Seed & Breeding sells **raw seeds** and **pelleted seeds**. Pelleting is operated by the best selected providers. Package size (grams of raw seeds, number of pellets) and pelleting diameter can be specified at the time of the order. **Organic pelleting is available for all our varieties.**

Customer proximity, flexibility and reactivity are the pillars of our daily organization.



ADDITIONAL SERVICES & OFFERS

SPECIFIC BREEDING PROGRAMS UNDER CONTRACT

Our tobacco breeding expertise makes possible the implementation of specific breeding programs based on your requirements.

This includes:

- development of new varieties adapted to your growing and curing conditions, and to your client expectations,
- introduction of specific traits such as disease resistance traits in your germplasm,
- conversion from fertile to sterile.

MALE STERILE OR FERTILE VARIETIES SEED PRODUCTION UNDER CONTRACT

Our seed production skills make possible seed production from your own parental lines as well as LC (Low Converters) screening and complete seed certification from your productions.

NICOTINE AND NORNICOTINE UPCL ANALYSIS ON YOUR SAMPLES

OTHER VARIETIES

Our most popular varieties are listed in this catalogue. BSB can also produce other seeds, upon request, from:

- varieties with specific properties (high nicotine, low nicotine...),
- fertile varieties (Oriental, others...),
- other *Nicotiana* species (*N. rustica*...).

AGRONOMY SERVICES

- technical assistance for growing and curing our varieties (remote or at location),
- proposal and set up of specific crop management programs.

**PLEASE CONTACT BSB FOR
MORE CUSTOMISED SERVICES**

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