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75 years
of passion
Discover the art of
Flower Meadows p. $6^{7}$

Solvitions I Inspirations


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ALL OUR FLOWERS

Discover also all our Flower Meadons on our website :
www.bertrand-flowers.com

# Our profession: PRODUCE QUALITY SEEDS 

French producer
since 1947!

It was in Angers, in 1947, that two passionate brothers created their company selling flower seeds. At that time, this choice showed Bertrand's audacity: to abandon the attractive market of vegetable seeds in order to focus on a speciality: the production of flower seeds, a just emerging market.

Located in the heart of the Anjou region, the world's biggest seed production site, their company has accumulated 75 years of experience and know-how which today has earned "Graines Bertrand" a reputation for quality in France and abroad. In 2016, Bertrand became a subsidiary of the Dutch company EconSeeds, which then relocated most of its production in France and opened up new export markets for Bertrand seeds.


## Control the quality of the products PRODUCTION

- 600 variety multiplication contracts per year
- 150 farmers-multipliers
- 380 ha of seed plants monitored by our technicians




## Add value to each flower seed PROCESS

Machine reliability and human assessment - Meticulous sorting and precision cleaning

Optimisation of batch specific purity


Guarantee our offer LABORATORY
60 years of product-guarantee 5000 batches tested per year 800 defined and recognised protocols

## Our passion:

 - THE ART OF FLOWER MEADOWSEvolution of the "Hardy Flowers" mix


## A passionate creatar!

Thanks to its expertise as a flower seeds producer, Graines Bertrand has been creating flower meadows for 60 years, constantly seeking the most ingenious and harmonious combinations. The passion behind the birth of a new blend of flower seeds is just as inspiring as the winemaker's passion who, after the care given to his grapevines, will combine his juices with perfection for his new vintage!

The diversity of species, including some quite surprising ones, is sure to make a lively change! The contrasting colours, heights and growth habits also make for an atmosphere that is far different from that of traditional flowerbeds. But it is in particular the everyday changes in the flower mix that create a peaceful and natural ambience, which is always colourful and cannot possibly leave the observer indifferent.

## Pioneer committed to biodiversity

The first Bertrand flower mixes were created and marketed in 1963. In 1999, anticipating the emerging trend of low-input bloom, a new development program was launched which would culminate in the publication of the first catalogue entirely dedicated to flower mixes in 2004 called "Guide to alternative practices" [Guide de pratiques alternatives].


Through the experience of Bertrand's technicians and with the help of numerous partners, the mixes have progressively become more sophisticated to help address the challenges of sustainable development. Today, the usefulness of flower mixes to encourage biodiversity has been demonstrated by scientists and ecologists, and our latest creations provide relevant solutions to aid the switch to zero use of pesticides (France's "zéro phyto" programme) in communities.

## Our commitment: <br> years of testing <br> to guarantee our offering

By producing in France, we can monitor our crops as closely as possible and obtain plants that are adapted to the european climate. We select the "elite" seed plants (or "basis seeds") on our 2 Naudières and Bricardières farms, which are then entrusted to a network of farmersmultipliers based in the greater Centre-Val de Loire region.

Flower mixes are only marketed after years of fullscale testing. Each year, our test site presents all 100 compositions described in this catalogue and allows us to study and test our new arrangements. From mid-August to the end of September, you can visit this test site by making an appointment: don't hesitate to come and look for ideas and tips!


## Inspiration book City centre <br> PARKS AND GARDENS, ROUNDABOUTS

 PRESTIGIOUS MONUMENTS


## Inspiration book Suburban Areas <br> DECORATION FOR ROADSIDES,

 INDUSTRIAL ZONES, AND MORE
## The Landscapers

 p. 35 The Fallom Mixtures p. 59

p. 42 "Flowers for Everywhere" in Les-Ponts-de-Cé (49)


## Inspiration book (-) Zero Pesticide <br> AT THE FOOT OF WALLS OR TREES,

 CEMETERIES, PERMEABLE SURFACESThe Specifics
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The Perennials p.47


## Inspiration book

# Biodiversity 

PRESERVING WILDLIFE PROTECTING CROPS

The Ecosystems p. 51


# 111111111111111 

## Oup padaction of arganic seeds



Established in Maine-et-Loire since 1947, in the heart of the top seed production basin in Europe and one of France's most dynamic regions in organic agriculture, what could be more natural than for Bertrand to convert a part of its production? Thanks to our network of $\mathbf{1 5 0}$ farmersmultipliers in the greater western region of France, we are very proud to be able to offer you $\mathbf{4 0}$ varieties of locally produced, certified organic flowers and 6 mixes of useful, melliferous, or edible flowers.
Our unique expertise in flower mixes and our roots as a producer thus allow us to offer diversified mixes of unparalleled quality, at last compatible with organic agriculture!




## The first assortment of 100\% ORGANIC flower mixes!

## OXIPOLI® ${ }^{\circledR}$ annual ORGANIC <br> 兴

Sown in flower strips between crops or on field edges, it attracts and retains beneficial insects for crops (lacewings, hoverflies, ladybugs, etc.) and pollinators (Hymenoptera, bees, hoverflies, etc.) from marketgarden crops, in order to optimise their yield.

Composed of $\mathbf{2 2}$ annuals, including: Dill, cornflower, poppy viper's-bugloss, lavatera, corn-cockle, French marigold, buckwheat, pot marigold, Persian clover, and more.

[^0]\% 9 lune to october
殓 60.80 cm


## Fallow for Bees ORGANIC

An economical and high-performance formula that provides good coverage and long-lasting bloom, compatible with organic agriculture with no dispensation requirement as it is 100\% ORGANIC. EFA compatible (Ecological Focus Area).

Composed of 13 annuals, including: Borage, poppy, Centaurea 'Blue Boy', birdsfoot trefoil, California bluebell, mallow, love-in-a-mist, sainfoin, buckwheat, pot marigold, dwarf sunflower, Persian clover, and more.

## Summer Cut Flowers ORGANIC sios353

A mix of tall flowers allows the creation of magnificent country-style bouquets all summer long.

Composed of 17 annuals, including: Cornflower, poppy, Cosmos, corncockle, lavatera, nigella, pot marigold, sunflower, zinnia, and more.


## Bees and Co.ORGANIC ह10856

This highly diversified mix of annual flowers rich in nectar and in pollen has the purpose of nourishing wild and domesticated bees over a long period.

Composed of $\mathbf{2 2}$ annuals, including: Centaurea 'Blue Boy', poppy, Cosmos Sensation, Cosmos Bright Lights, corn marigold, viper's-bugloss, lupin, mallow, single French marigold, corn-cockle, sunflower, zinnia, and more.

[^1]


## $\left\{\begin{array}{l}\text { ANNUAL MIXES } \\ \text { THE MOST DECORATIVE } \\ \text { WIDE SELECTION }\end{array}\right.$ OF FLORAL SETTINGS,

particularly suitable for urban and periurban blooms such as roundabouts, avenues, close to a castle or a church.

## The Minis

## Edges of flowerbeds, planters and mindou boxes

## Little Carpet Ultramarine

MP08711
Composed of 16 annuals, including: Annual Alyssum, dwarf cornflower, dwarf Morning Glory, California Blubell, Echium, annual Candytuft, Love-in-a-Mist, Petunia, and more.


## Little Carpet For Bees

```
MP08612
```

Composed of $\mathbf{1 4}$ annuals and $\mathbf{7}$ perennials, including: annual alyssum, dwarf Centaurea, sulphur cosmos, lemon balm, various sages, dwarf pot marigold, Reseda.

## Little Carpet Persian

Composed of $\mathbf{8}$ annuals, including: Mexican Zinnia, Pot Marigold, Cosmos sulphureus, Coreopsis, Eschscholzia..


## Little Carpet Pearls of Tenderness wrosino

Composed of 16 annuals, including: Annual Candytuft, Dwarf Morning Glory, Godetia, Rose of Heaven corncockle, Virginia stock, Silene, Nigella...

April - May - June
Op June-September $\quad$ 20-40 cm


## A sound investment in any situation!



Mix inspired by the meadows of California. This highly melliferous mix tolerates dry summers well.

Composed of $\mathbf{1 6}$ annuals, including: Clarkia, marigold, dwarf coreopsis, California poppy, baby's breath, Layia, scarlet flax, and more.

90 July - August
910) $40-60 \mathrm{~cm}$


## Carpet <br> Mediterranean

This multicoloured composition with azure tones enjoys the warmth of the Mediterranean basin's latitudes.

Composed of $\mathbf{1 5}$ annuals, including Zinnia, Marigold, Cornflower, Poppy, Fennel, annual Lupin, Nolana, Purslane.

April - May - June
90 July-September
别 40.60 cm

## Carpet <br> Thousand Lights

This mix in bold, lively colours withstands both bad weather and heatwaves well.

## Composed of 16 annuals

including: Zinnia, marigold, annual flax, California poppy, sulphur cosmos, corncockle, Coreopsis, annual lupin, and more.
$90 \%$ July - September
+1 $40-60 \mathrm{~cm}$



## The Fresh Tones

## Carpet Blue Fields

An homage to cornflowers, this is our most beautiful blue mix thanks to a touch of white.

## Composed of 17 annuals,

 including: Cornflower, Zinnia, Malope, Flax, Sweet Sultan, Gilia capitata, Ageratum, Dwarf Morning Glory, Ammi Majus, annual Clary, Chinese Hound's Tongue..April - May - June
\%ob suy to september别 $60-70 \mathrm{~cm}$

\author{

| MP08 |
| :---: |
|  |
| , this |

}


For your farearounds. ALSO CONSIDER
our little carpets!

$$
\text { see page } 18
$$



Little Carpet
Pearls of Tenderness

## Carpet

 In the PinkCombining sweetness and strength of character, this mix is a true ode to femininity, as well as a sound investment that has proven its worth since its creation.

## Composed of $\mathbf{1 2}$ annuals

including: Zinnia, Cosmos, Mallow, Malope, Cow Soapwort, annual Baby's Breath, annual Everlasting Flower, Cleome...April - May - June
$90 \%$ July to September
䥒 $60-100 \mathrm{~cm}$
}



## Carpet Flower Dreams mp2014

Composed of $\mathbf{2 3}$ annuals, including: Dwarf Morning glory, Cornflower, Kochia, Zinnia, Echium, Linaria, annual Flax, Cosmos, Cornflower, Sweet Sultan...
April - May - June 90 , July to September $50-70 \mathrm{~cm}$


## Carpet Pastel Shades меро193

Composed of 11 annuals, including: Cleome, cornflower, dwarf Cosmos, annual baby's breath, Malope, common corn-cockle, Phacelia campanularia, statice...

- April-May -une
\% Iuyto seperember
别 40.60 cm



## THE AESTHETICS

## The Contrasts



## Carpet Loire Valley

An audacious combination of sweet pink and mustard yellow, in homage to the sweetness of our climate and our region.

Composed of $\mathbf{1 5}$ annuals, including: Zinnia, Cosmos, yellow Eschscholzia, African Marigold, Linaria, Marigold, Mallow, Dill, Basil...

April-May - June

O\% July - October
ㅇ. $60-100 \mathrm{~cm}$

## Carpet Tricolour ㄸwont

Composed of $\mathbf{2 9}$ annuals, including: Cornflower, Poppy, Cosmos, Flax Mallow, Zinnia, annual Candytuft, Cow Soapwort, annual Baby's Breath, annual Coreopsis, Ageratum, Ammi Majus


April - May - June
90, July - September
94 $60-80 \mathrm{~cm}$



## Carpet Chambord wpog692

Composed of $\mathbf{2 4}$ annuals, including: Marigold, Zinnia, Sunflower, Dwarf Morning Glory, Cornflower, Coreopsis, Corn Marigold, Echium, Ageratum, Gilia capitata, Flax, Chinese Hound's Tongue...


## The Warm Tones

## Carpet <br> Red \& Gold

A contrasting, powerful mix, primarily composed of giant zinnias whose colours are a match for each other.

Composed of $\mathbf{7}$ annuals, including: Zinnia, Marigold, annual Coreopsis, Tithonia, African Marigold..

90 July-September
94 $60-90 \mathrm{~cm}$


## Carpet Flower Power

## MP20145

Composed of $\mathbf{1 3}$ annuals, including: Zinnia, Cosmos sulphureus, Bidens, Yellow Chamomile, French Marigold, Ageratum, Carthamus, Coreopsis..



## Carpet Orange Flash mpos361

Composed of 6 annuals: Marigold, Zinnia, Cosmos sulphureus, Cosmos, Sunflower, Corn Marigold.


# The Main Shades........ 

Blooms in your colours!

Sop Ine Spopenter



## Summer Fast \& Long MPoss96

Composed of $\mathbf{3 4}$ annuals, including: Cosmos, Cornflower, Annual flax Eschscholzia, Cow Soapwort, Virginia stock, Malope, Marigold, Corncockle annual Alyssum, Silene, annual Poppy, annual Rudbeckia.
$\therefore$ April - May - June $\quad$ Her June-October $40-100 \mathrm{~cm}$


## Summer Multicolour mposils

Composed of 31 annuals, including: Cornflower, Annual flax Malope, Coreopsis, Cosmos Sensation, Cosmos sulphureus, Mallow Corncockle, Chrysanthemum, Zinnia, Marigold, African Marigold.



## The Pickings



## Summer Cut Flowers

Ideal for cut flowers.
Composed of 19 annuals, including: Zinnia, Marigold, Cornflower, Malope, Cosmos, Mallow, annual Sweet Sultan, African Marigold, China Aster, annual Baby's Breath.

- April - May - June

Yo July - September 4 $60-100 \mathrm{~cm}$

## Summer Cut Flowers ORGANIC

$\square$
Composed of $\mathbf{1 7}$ annuals, including Cornflower, poppy, Cosmos, corncockle, lavatera, nigella, pot marigold, sunflower, zinnia, and more.

$\Delta$March to June
?\% July to October of $60-100 \mathrm{~cm}$


## Edible Flowers ORGANIC

A cheerful edible mix of flowers and aromatic herbs, produced using $100 \%$ organic agriculture. Primarily used to adorn dishes, these flowers will also be valuable in elevating summer salads thanks to the lively petal colours and their incredible taste, like borage with its iodic flavour, or nasturtium with its spicy, peppery taste.

Composed of 18 annuals, including: dill, borage, basil, dwarf nasturtium, Centaurea 'Blue Boy', Cosmos Sensation and Bright Lights, common mallow, French marigold, marigold, dwarf sunflower, and more.

April to June 90 , uly to october $50-70 \mathrm{~cm}$


B100780 Borage


B101604 Cosmos Sensation mixed


BIO7636 Calendula Corniche d'Or


Bl04371 French Marigold


B107601 Calendula Double Mixed


103218 Common mallow


B101109 Centaurea 'Blue Boy'


B105941 Small burnet


B101247 Edible chrysanthemum


B107570 Dwarf sunflower

# The Beneficial Plants 

## Flowers for Dyes

Plants that can be made into natural dyes.

Composed of $\mathbf{1 3}$ annuals including: Zinnia, Cosmos sulphureus, Bidens, Yellow Chamomile, French Marigold, Ageratum, Carthamus, Coreopsis...April - May - June
$90 \%$ June - September 94 $60-80 \mathrm{~cm}$


MP20146
Priester Garden

Mix of aromatic and medicinal plants and edible flowers.

Composed of 15 annuals, including: Borage, Marigold, Coriander, Fennel, Lemon Balm, Dill, Basil, Nasturtium, Hyssop, Rue...

- March - April - May - June

O\% June - September
$30-60 \mathrm{~cm}$




MP02834 Ipomoea Heavenly Blue


MP03286 Mina lobata


MP02850 Ipomoea Morning glory mix


MP01925 Dolichos Ruby Moon


MP00970 Lobb Nasturtium


MP07810 Thunbergia

## Climbing Flowers wpog35

Livens up fences and all kinds of supports!
Composed of 9 annuals: Climbing nasturtium, colocynth, Dolichos, morning glory, Mina lobata, Thunbergia, and more.
April-May - June $\quad 90$ july - October $\quad \overline{904}>250 \mathrm{~cm}$



THE
LANDSCAPERS \#MULTI-ANNUAL BLOOM
 $\square$


RESOW EVERY 2 TO 3 YEARS

IN AUTUMN OR IN SPRING

DENSITY
OF SOWING
1 to $4 \mathrm{~g} / \mathrm{m}^{2}$

FLOWERING
from summer onwards when sown in spring; from spring onwards the following years

- MULTI-YEAR MIXES: 2 to 3 years EXTENSIVE AREAS
2 DIFFERENT RESULTS DEPENDING ON THE SOWING PERIOD (spring or autumn)


Meadow Glints 20 to 60 cm


Garden Flowers 30 to 100 cm
Garden Flowers 30 to 100 cm


Ground-covering Flowers 15 to 25 cm


## Flowers of the Countryside

It is the most natural and spontaneous of the flower mixes, evoking memories of flowers from our childhood

Composed of $\mathbf{1 0}$ annuals and
5 perennials, including: Wild poppy, wild cornflower,
corn marigold, wild ox-eye daisy, perennial flax, corncockle, and more.

March to June
September to November

9os summer when sown in spring spring the following years
9. $50-100 \mathrm{~cm}$


MP08684

## Hardy <br> Flowers

The essential mix! This multi-annual mix takes root easily and hardily in all situations: embankments, roadsides, at the foot of walls and/ or trees...

Composed of $\mathbf{1 0}$ annuals and
18 perennials, including: Marigold, Eschscholzia, annual Flax, annual Rudbeckia, Poppy, Yellow Chamomile, Thyme, Red Valerian, Meadow Clary, Echinops, Yarrow, Lychnis..
9. summer when sown in spring,
spring the following years
.1 $30-50 \mathrm{~cm}$


## Meadow Glints

This mix is highly diversified in colours, in somewhat muted tones.

## Composed of 16 annuals and

17 perennials, including: Cornflower, Cheiranthus, Corncockle, Wallflower, Virginia Stock, Cow Soapwort, Leucanthemum, Nigella, Marigold, Soapwort, Yarrow, perennial Coreopsis, Iceland Poppy, Sweet William

March to June
September to November
O. summer when sown in spring, spring the following years
9. $20-60 \mathrm{~cm}$


## Garden Flowers mposili

When sown in autumn, the Garden Flowers mix is perfectly able to withstand the winter.

Composed of $\mathbf{1 2}$ biannuals and $\mathbf{2 1}$ perennials, including: Centaurea, Dame's Rocket, Sweet William, Corncockle, Lupin, Corn Marigold, Leucanthemum, Candytuft, Marvel of Peru, Poppy, Coreopsis, Flax, Red Valerian, Gaillardia, Yarrow, Foxglove ...

August - November
90. starting in April
9. $30-100 \mathrm{~cm}$



## Flowers from Nature Flowered Meadows <br> $\square$

This mix is designed to look like a natural country meadow and, above all, encourage biodiversity by providing a supply of wild flowers, especially field companion flowers.

Composed of $\mathbf{9}$ annuals and $\mathbf{2 8}$ perennials, including: Silene, Poppy, Common Mallow, Dame's Rocket, Leucanthemum, Cornflower, Bird's-foot trefoil, Lupin, Flax, Lychnis, Liatris, Lythrum, Burnet, Common Corncockle

[^2]

## Ground-covering Flowers

One of the shortest flower mixes in the BERTRAND range, in its $2^{\text {nd }}$ year. Ideal for re-vegetating zones where visibility should not be impeded.

Composed of 13 annuals and
9 perennials, including: Annual Alyssum, perennial Alyssum, Cerastium, dwarf Eschscholzia, Virginia stock, Limnanthes, Linaria, Myosotis, Prunella, Soapwort, Silene

[^3]



## THE SPECIFICS



## Flowers from Nature All-Terrain

100\% wild flowers indigenous to Europe. This very rich and well balanced mix can adapt to all situations, no matter the exposure and the nature of the soil. The annuals occupy the terrain in the first year, while the perennial species that are adapted to the location take root to endure

Composed of $\mathbf{2 4}$ annuals and $\mathbf{4 4}$ perennials, including: Yarrow, chamomile, cornflower, borage meadow knapweed, corn marigold, poppy, fennel, ox-eye daisy, flax, mallows, St. John's Wort, corncockle, oregano, burnet saxifrage, meadow clary, silenas, pot marigold creeping thyme, viper's bugloss, and more.
$\checkmark$
March to June or September to November
90. summer when sown in spring spring the following years

91 $80-100 \mathrm{~cm}$


FLOWERS
for Foot of Walls
 for Foot of Walls

This mix, ideal for cracks and the foot of walls, is an effective combination of decorative and technical purposes.
composed of $\mathbf{1 6}$ annuals and $\mathbf{2 6}$ perennials, including: Sweet Alyssum, Silene, Flax, Viola, Cerastium, Valerian, perennial Coreopsis, Stock, Soapwort, Mountain Alyssum, Virginia Stock, Pot Marigold, Daisy, Alyssum saxatile, Nigella, Cheiranthus, Forget-me-not ...

March to June
September to November
summer when sown in spring, spring the following years $20-40 \mathrm{~cm}$

Available in packets (code MPS20149)
These mixes are also apt for:


Little Carpet Multicolour


Perennial Dwarf Varieties


Flowers for Everywhere


Ground-covering Flowers

## THE SPECIFICS

## \#SOILS AND EXPOSURES

## The Shart Mixes

## Super Dwarf Flowers

Very short, robust and versatile mix, ideal for re-vegetating difficult areas while maintaining a well-groomed appearance, e.g. in cemeteries.

## Composed of 8 annuals and

 19 perennials, including: Dwarf Sweet Alyssum, Purslane, Sanvitalia, Perennial Alyssum, Oregano, Petrorhagia, Wild Thyme, Blue Fescue..March to June
September to November
To summer when sown in spring, spring the following years
9. $15-30 \mathrm{~cm}$


## Flush of Daisies mpos998

Composed of $\mathbf{5}$ biannuals and $\mathbf{7}$ perennials, including: Lawn Daisy, Mountain Alyssum, Cerastium, Nemophila, Virginia Stock, Myosotis, Viola cornuta, perennial Primula .

September-October
90\% March to May P1 $10-25 \mathrm{~cm}$



## Flowers for Roadsides mpegss

Composed of $\mathbf{5}$ annuals and $\mathbf{1 2}$ perennials, including: Yarrow, Sweet Alyssum, perennial Flax, Poppy, Mountain Alyssum, Bird's-foot-trefoil, Cerastium, Eschscholzia, Virginia Stock, Nepeta, Daisy, Anthyllis, Clover

March to June March to June
September to November .o summer when sown in spring spring the following years


## Flowers for Rocky Places

Composed of $\mathbf{5}$ annuals and $\mathbf{1 5}$ perennials, including: Alyssum saxatile, Common Corncockle, Virginia Stock, Burnet, Soapwort, Nepeta, Mountain Alyssum, Thyme, Clary Sage, Oregano, St. John's Wort, Anthyllis, Sedum

March to June September to November

Somer when sown in spring
局 $20-40 \mathrm{~cm}$

## Fors'IONY LIMRS'IONESOIL



Flowers for

## Sandy and Silty Soils mpozz9

Composed of $\mathbf{2}$ annuals and $\mathbf{1 4}$ perennials, including: Sweet Alyssum Yellow Chamomile, Cerastium, Cheiranthus, Yarrow, Virginia Stock, Nemophila, Maiden Pink, Crimson Clover, Candytuft, Anchusa capensis, Lagurus, Sedum, Thyme, and more.


## THE SPECIFICS

## Flowers for Shady Places mpo870

Composed of $\mathbf{1 2}$ annuals and $\mathbf{1 6}$ perennials, including: Virginia Stock, Balsam, Dame's Rocket, Yarrow, Borage, Sweet Alyssum, Wild Poppy, Common Mallow, Sweet Pea, Foxglove, Aquilegia, Violet, Lobelia, Campanula carpatica ...

March to June September to Novemb

Oop summer when sown in spring,
91 $20-80 \mathrm{~cm}$


## Flowers for Wetlands mpogsi9

Composed of $\mathbf{7}$ annuals and $\mathbf{1 2}$ perennials, including: Mallow, Lythrum, Achillea ptarmica, wild Leucanthemum, Common Mallow, Bird's-foottrefoil, annual Alyssum, Yarrow, perennial Flax, perennial Lupin

March to June September to November Op summer when sown in sprin spring the following years

## Flowers from Nature Shade and Lights

Composed of $\mathbf{2 3}$ perennials, including: Perennial Flax, Common Mallow, Common Self-Heal, Agrimony, Foxglove, Dracocephalum, Wild Garlic, Giant Buttercup, Wild Strawberry, Greater Stitchwort, Pendulous Sedge, Canterbury Bells, Granny's bonnet .


## Flowers from Nature Damp Meadows <br> MP08781

Composed of $\mathbf{3 0}$ perennials, including: Dame's Rocket, Musk Mallow, Lythrum, Giant Buttercup, Ragged Robin, Centaurea jacea, Yarrow, Sneezewort, Yellow Chamomile Foxglove, Common Toadflax, Common Self-Heal ..

March to June
September to November

# 6. BERTRAND <br> Seed producer since 1947 

# THE PERENNIALS 

## \#LONG-LASTING SOLUTIONS

SOWING IN AUTUMN

DENSITY
OF SOWING
1 to $4 \mathrm{~g} / \mathrm{m}^{2}$

## MAINTENANCE

like a flowerbed of perennials

## - PERENNIAL MIXES:

last for over 3 years depending on the degree of maintenance

## ROOTING FOR THESE

MIXES IS SLOWER:
several months are required to ensure complete coverage of the site


# THE PERENNIALS \#LONG-LASTING SOLUTIONS 



## Perennial Semi-tall

 VarietiesMid-height flowers also bloom the longest.

## Composed of $\mathbf{2 2}$ perennials,

 including: Wallflower, Flax, Sweet William, Lupin, Coreopsis, Garden Pinks, Musk Mallow, Carnation, Catananche, Water Avens, Red Valerian, Yarrow .March to June September to November
90\% From April to July of the following year क14 $30-60 \mathrm{~cm}$



## Atthactionenes of Botanand mises

 \& BENEFICIAL INSECTS

It is essential to pay attention to diversity, i.e. the number of species and the population balance in the mixes, in order to have more insight into the "arthropod potential" of the various compositions. This was the purpose of the "Flor'Insectes" lab study carried out on our flower blends. It allows us to continually improve our flower blends. In order to know the potential of our mixes to attract arthropods (which include insects), inventories were carried out using active trapping and by observing them.

## RESULTS

In total, 7231 arthropods were collected, which can be divided into 13 orders and 66 families. 136 genera/ species were identified.

## MAIN CONCLUSION

According to this study and other studies carried out by Flor'insectes, horticultural plants appear to be beneficial for biodiversity and can be used in ecofriendly districts or for other eco-friendly features. It is best to use either mixes containing a combination of garden flowers and wild flowers, or to sow both garden flower mixes and Flowers of Nature mixes in the same area. For example, in order to attract auxiliaries and repel pests, an efficient solution would be to sow both "IPM Flowers \& Beneficial Insects" and "Universal Flowers From Nature" in the same area.
Mixes with the greatest varietal diversity are the most likely to encourage the development of auxiliary fauna.

## Collection method

For the insect inventory, we used: - A camera, for 5 minutes, to observe the pollinators and other flying insects. A hand net to collect flying insects, by sweeping the net 20 times.

- A fuel-powered vacuum collector, used for 1 min 30 s to collect the small and crawling insects.


Flor'Insectes www.florinsectes.com Applied research Laboratory on the link between Landscape and Biodiversity

## TYPES OF INSECTS OBSERVED:

- Predators are insects that feed on other insects.
- Pollinators gather pollen from flowers to feed themselves, transport pollen from one flower to another and ensure pollination.
Parasitoidal insects develop on or inside of other "host" insects, causing them to die.
- Phytophagous insects feed on plants. They can therefore be either beneficial or harmful.
- Detritivores feed on all sorts of organic waste, making it available to the soil microflora.



## Agriculture

## Repel Nematodes



Used in fallow land (10 to $15 \mathrm{~kg} / \mathrm{ha}$ ). To be effective, it must remain in place for 3-4 months and the debris must be buried.

Composed of French marigolds.


## Flowers for Orchard \& Vineyards weosi96

Composed of $\mathbf{9}$ annuals and $\mathbf{3}$ perennials, including: Sweet Alyssum, Flax, Coriander, Eschscholzia, Nigella, Virginia Stock, Cow Soapwort ...

## Flowers from Nature \|PM (Integrated Pest Management)

Composed of $\mathbf{1 2}$ annuals and $\mathbf{9}$ perennials, including: Marigold, Cornflower, Coriander, annual Alyssum, Basil, Echium, annual Coreopsis, Common Sage, Hyssop, Tansy ...

April to November $40-60 \mathrm{~cm}$


## Inter-row Compact Mixture <br> MP08729

Composed of $\mathbf{6}$ annuals and $\mathbf{1 1}$ perennials, including: Marigold, Sweet Alyssum, Parsley, Chamomile, Coriander, Alpine Forget-me-not, Chervil, Yarrow, Nepeta ...

[^4]
## Flower strips for Market Gardening Beneficial Insects and Pollinators

## (6)

 OXIPOHThis mix is dedicated to "functional biodiversity", i.e. services rendered to agriculture by the ecosystem in which it is found. Sown in flower strips between crops or on field edges, this mix attracts beneficial insects (lacewings, hoverflies, ladybugs, etc.) and pollinators (Hymenoptera, bees, hoverflies, etc.) from the primary market-garden crops, in order to optimise their yield while respecting the environment.

Technical tip: Spread out the flowering and thus the attractiveness of the mix by staggering your sowing every month from March to June over several plots. Sow 2 to 3 grammes $/ \mathrm{m}^{2}$ on plots smaller than $1000 \mathrm{~m}^{2}$. Larger than that, sow 10 to $15 \mathrm{~kg} / \mathrm{ha}$.

## OXIPOLI® Annual Mr203s

Annual mix composed of 21 annuals including sweet alyssum, dill, Centaurea, vipers-bugloss (Echium), flax, and more.


## OXIPOLI® Annual ORGANIC 1 B20023

Composed of $\mathbf{2 2}$ annuals, including: Dill, Centaurea cornflower, poppy, viper's-bugloss, lavatera, corncockle, French marigold, buckwheat, marigold, sunflower, and more.



Insect population structure according to their ecological role observed on the "OXIPOLI® Annual" mix sown in strips in a squash crop on 4 August 2016 during the flowering peak. (Credit: Flor-Insectes - Johanna Villenave-Chasset)


## OXIPOLI® Pluriannual mporaz9

Composed of $\mathbf{2 3}$ annuals and $\mathbf{9}$ perennials, including: Alyssum, Ammi, dill, chamomile, various Centaureas, ox-eye daisy, poppy, perennial flax, Sweet William, oregano, burnet saxifrage, marigold, sunflower, and more.


## Bees \& Co.

Beyond its richness in melliferous flowers, this annual mix has the advantage of being both decorative and competitive.

Composed of $\mathbf{2 6}$ annuals, including: Maritime Alyssum, Cornflower, Marvel of Peru, Corn Marigold, Phacelia, Cosmos, Echium, annual lupin, common corncockle, weld, and more.

- March to June

90 June to October
9.1 $40-70 \mathrm{~cm}$

## Bees \& Co. ORGANIC

Composed of $\mathbf{2 2}$ annuals, including: Centaurea 'Blue Boy', poppy, Cosmos Sensation, Cosmos Bright Lights, corn marigold, viper's bugloss, lupin, mallow, French marigold, corncockle, sunflower, zinnia, and more.

## March to June

90 June to October
9. $60-100 \mathrm{~cm}$


## Flowers from Nature

MP20309
Bees
Composed of "true" wild flowers, from our local ecotype when possible, this mix will provide food for bees and a wide diversity of pollinating insects for several years.
Composed of $\mathbf{1 3}$ annuals and $\mathbf{3 5}$ perennials, including: Yarrow*, common teasel, Centaurea*, poppy*, foxglove*, Ox-eye Daisy*, Birdfoot trefoil, mallow, St. John's wort*, corn-cockle, various Umbelliferae, oregano, meadow clary*, Silene*, viper's bugloss*.
March to April
August to November
Oe from summer onwards if sown in
"ospring from spring onwards the
9.4. $80-100 \mathrm{~cm}$


## Little Carpet <br> MP08612

## for Bees

This short mix, which is beneficial for insects, is a blend of highly colourful dwarf melliferous plants.

Composed of $\mathbf{1 4}$ annuals and $\mathbf{7}$ perennials, including: Annual alyssum, Reseda, dwarf Centaurea, annual savory, dwarf cosmos, dwarf poppy, basil, lemon balm, sage, and more.


909 June to September
9.4. $20-30 \mathrm{~cm}$



Nourishing Flowers for Bees

This nourishing mix, rich in pollen and in nectar, provides a true concentrate of food resources to strengthen the bees' metabolism. Can be sown at regular intervals, bloom after 9 to 11 weeks.

## Annual mix мp2024

Composed of $\mathbf{2 5}$ annual, including cornflower, viper's-bugloss, reseda, marigold, and more.

March to June 90.8 June to October or $60-100 \mathrm{~cm}$
Multi-annual mix
Composed of $\mathbf{2 0}$ annuals, $\mathbf{2 9}$ perennials including, in addition to the annual varieties, Columbines, lavenders, bird's-foot-trefoils, Nepetas, thymes.... for flowering spread out over the year.

March to May
September to October




## Insects and Birds



## Annual Flowers for Birds

This mix attracts grain-eating birds, from house sparrows to tits, chaffinches, and goldfinches, whose numbers are declining drastically. The mix should not be harvested after flowering to allow birds to feed on the seeds throughout the winter: this is natural and aligned with their diet.

Composed of $\mathbf{1 6}$ annuals, including: Flax, Cornflower, Millet, Corn Marigold, Sunflower, Cosmos bipinnatus, Common Corncockle, Tithonia, and more.

- March to June

90 June to October
9. $60-100 \mathrm{~cm}$

## Annual Flowers

## for Birds ORGANIC

Composed of 12 annuals, including: Safflower, Centaurea 'Blue Boy', poppy, Cosmos Sensation, corn marigold, spring flax, simple French marigold, Tithonia, sunflower, and more.

- March to June

90? June to October
O4 $60-100 \mathrm{~cm}$

## Perennial Flowers

 for BirdsThe birds will get the benefit of the flowers the year following sowing, and then the seeds. You can mow this mix in December or January.

Composed of $\mathbf{1 8}$ perennials, including: Cheiranthus, perennial Flax, Wallflower, Lunaria, Soapwort, Alpine Forget-me-not, Silene ...

- August to November

90. April to July
91. $20-80 \mathrm{~cm}$



## Flowens from Nature

## Butterflies

Wild plants to feed butterflies and caterpillars.
Composed of $\mathbf{4}$ annuals and $\mathbf{2 1}$ perennials, including: Cornflower, Catnip, Fennel, Echium, Teasel, Achillea, Lythrum, Bird's-foot-trefoil, Foxglove, Bladder Campion, Viper's Bugloss, Lychnis flos-coculi
August to November 90 from Spring $80-100 \mathrm{~cm}$


## Flowers for Ladybirds

These plants, such as Centaureas, attract ladybirds.
Composed of $\mathbf{1 5}$ annuals and $\mathbf{7}$ perennials, including: Yarrow, chamomile, borage, wild carrot, Coreopsis Cosmos, various Centaureas, red flax, viper's-bugloss, and more

March - April - May - June 90 June to October $50-80 \mathrm{~cm}$


## Home-gardening



These mixes "simultaneously" attract and repel harmful pests with the aim of driving them away by creating confusion. Just like the lunar calendar, their effectiveness is not scientifically proven but one thing is certain: flowers in an allotment provide an undeniable diversity and contribute to a balanced environment that favours the natural regulation of insect populations.


Composed of $\mathbf{1 0}$ annuals and $\mathbf{5}$ perennials, including: Yarrow, annual alyssum, nasturtium, French marigold, marigold, common rue, savory, thyme, and more.

## - April - May - June

90, July to September
OA) $30-50 \mathrm{~cm}$


Repel

## Slugs

## MP08822

Composed of $\mathbf{8}$ annuals and $\mathbf{5}$ perennials, including: Yarrow, annual alyssum, borage, nasturtium, black caraway, French marigold, poppy, Mexican zinnia, and more.

A April - May - June
909 July to September
(9) $30-60 \mathrm{~cm}$


Repel
Potato Beetles
Composed of $\mathbf{5}$ annuals and $\mathbf{1}$ perennial, including: coriander, red flax, perennial flax, various French marigolds, savory, and more.

April - May - June
909 June to September
9. 40.60 cm


SOWING IN AUTUMN OR SPRING

## SOWING DENSITY

for agricultural use: 0.4 to $0.6 \mathrm{~g} / \mathrm{m}^{2}$ in public green spaces: 0.8 to $1.5 \mathrm{~g} / \mathrm{m}^{2}$

- AN ECONOMICAL ANSWER
for adding bloom to large areas



## Fallow Short Annuals mpos644

Composed of 9 annuals, including: Marigold, Zinnia, annual Flax, Cornflower, Eschscholzia, Cow Soapwort...

- April to June

908 June to October 90.00 cm


## Fallow for Bees

 BI20225 ORGANIC

Composed of 13 annuals, including: Borage, poppy, Centaurea ‘Blue Boy', birdsfoot trefoil, Phacelia, mallow, love-in-a-mist, sainfoin, buckwheat, marigold, dwarf sunflower, Persian clover, and more.

[^5]
## Fallow Tall Annuals mpog645

Composed of $\mathbf{4}$ annuals, including: Cosmos, Zinnia, Cornflower
$\therefore$ April to June $60-100 \mathrm{~cm}$


## Flowers from Nature

Universal
Composed of $\mathbf{1 0}$ annuals and $\mathbf{5}$ perennials, including: Wild Poppy, wild Cornflower, Corn Marigold, wild Leucanthemum, perennial Flax, Common Corn-cockle

March to June 9. from summer onwards when sown in spring, from spring onwards the following years


## Fallow

## Perennial Flowers mpogs87

Composed of $\mathbf{8}$ annuals and $\mathbf{5}$ perennials, including: Marigold, Cosmos Cornflower, Flax, Common Corncockle, Wallflower

March to June
90 from summer onwards when sown in spring, from
following years


Fallow
Sowing in Autumn

Composed of $\mathbf{5}$ annuals and $\mathbf{5}$ perennials, including: Dame's Rocket, annual Delphinium, perennial Flax, Leucanthemum, Cheiranthus

> March to June September to November iop in spring, from spring whwards the following years


## THE Flowers in pictures



Achillea flipendulina - Fernleaf Yarrow


Ammi majus - Bishop's Flower


Arabis alpina - Alpine Rock-cress


Carthamus tinctorius - Safflower


Centaurea imperialis - Sweet Sultan


Cheiranthus cheirii - Wallflower


Achillea millefolium - Common Yarrow


Ammi visnaga - Bisnaga


Aurinia saxatilis - Perennial Alyssum


Centaurea cyanus - Cornflower


Centaurea montana - Perennial Cornflower


Cheiranthus maritimus - Virginia Stock


Agrostemma coeli-rosa - Rose-of-Heaven


Anethum graveolens - Dill


Borago officinalis - Borage


Centaurea cyanus - Cornflower


Centranthus ruber - Red Valerian


Chrysanthemum carinatum - Annual Chrysanthemum


Agrostemma githago - Common Corn-cockle


Anthemis tinctoria - Yellow Chamomile


Calendula officinalis - Pot Marigold


Centaurea cyanus - Cornflower


Cerastium tomentosum - Snow-in-Summer


Chrysanthemum coronarium - Garland Chrysanthemum


Chrysanthemum segetum - Corn Marigold


Convolvulus tricolor - Dwarf Morning Glory


Cosmos sulphureus - Yellow Cosmos


Digitalis purpurea - Foxglove


Erysimum allionii - Siberian Wallflower


Gypsophila elegans - Annual Baby's Breath


Clarkia amoena - Godetia


Coreopsis tinctoria - Annual Plains Coreopsis


Cynoglossum amabile - Chinese Hound's Tongue


Dipsacus fullonum - Wild Teasel


Eschscholzia californica - California Poppy


Helianthus annuus - Common Sunflower


Clarkia elegans - Mountain Garland


Coreopsis tinctoria - Annual Plains Coreopsis


Dianthus chinensis - China Pink


Echium vulgare - Viper's Bugloss


Gaillardia aristata - Common Blanketflower


Helipterum roseum - Paper Daisy


Cleome spinosa - Spiny Spiderflower


Cosmos bipinnatus - Garden Cosmos


Dianthus plumarius - Plumed Pink


Eruca sativa - Rocket


Gilia capitata - Bluehead Gilia


Hesperis matronalis - Dame's Rocket

## THE Flowers in pictures



Iberis amara - Rocket Candytuft


Lavatera trimestris - Annual Mallow


Linum rubrum - Annual Flax (Red Flax)


Malope trifida - Annual Malope


Myosotis alpestris - Alpine Forget-me-not


Oenothera glazioviana - Large-flowered Evening Primrose


Iberis umbellata - Annual Candytuft


Layia platyglossa - Tidy Tips


Lobularia maritima - Annual Alyssum


Malva moschata - Musk Mallow


Nepeta racemosa - Dwarf Catmint


Papaver rhoeas - Double Poppy


Impatiens balsamina - Garden Balsam


Leucanthemum vulgare - Oxeye Daisy


Lobularia maritima - Annual Alyssum


Malva sylvestris - Common Mallow


Nigella damascena - Love-in-a-Mist


Papaver rhoeas - Poppy


Ipomoea purpurea - Common Morning Glory


Linaria maroccana - Moroccan Toadflax


Lupinus hartwegii - Annual Lupin (Hartweg's Lupine)


Mirabilis jalapa - Marvel of Peru


Ocimum basilicum - Purple Basil


Phacelia campanularia - Desert Bells


## TECHNICAL <br> Sowing Guide

## Mix cycles

## ANNUAL

SOWING IN
SPRING
ONLY
Sowing density: $\mathbf{2}$ to $\mathbf{5} \mathbf{g} / \mathbf{m}^{\mathbf{2}}$


## Mix cycles

## MULTIANNUAL OR PERENNIAL

SOWING IN
SPRING
Sowing density: 1.5 to 4 g/m ${ }^{2}$


OR


SOWING in AUTUMN
Sowing density: $\mathbf{1}$ to $\mathbf{3} \mathbf{g} / \mathbf{m}^{\mathbf{2}}$

## Mowing

Generally, mowing or shredding encourages regrowth, as does the use of an organic soil improver at the beginning of the year (if necessary). A tractor with a rotary cutter allows the stems to be shredded and encourages breakdown of the residue on site. A lawnmower with the blade at the highest setting may be used for small areas.



## SITE SELECTION

- Ideally: good and preferably weed-free garden soil.
- Avoid: areas that have suffered heavy soil disturbance between the topsoil and subsoil, which often have too many weeds.


## SOIL PREPARATION

The ground must be prepared using suitable equipment, as when sowing a lawn. To prepare a flowerbed, it is preferable to give the ground a thorough, deep spading before finely raking over the surface.
To minimise the presence of weeds in the flower mix, we recommend using the false seedbed technique


## Focus on <br> Density of sowing

Depending on the sowing conditions, the ideal sowing density varies from 1 to $\mathbf{5}$ grammes per $\mathbf{m}^{2}$. Soil quality and preparation and access to irrigation are elements which influence the choice of sowing density.

For example, in rock gardens or on nonirrigated land, the density will be higher (3 to $5 \mathrm{~g} / \mathrm{m}^{2}$ ).
Conversely, if the sowing period is optimal, the density can be decreased ( 1 to $2 \mathrm{~g} / \mathrm{m}^{2}$ ) in order to encourage species diversity. Careful! Exceeding $\mathbf{5} \mathbf{g} / \mathbf{m}^{\mathbf{2}}$ would be wasteful! Too high a density increases competition between the plants and decreases the number of species, in particular the late-flowering ones that bloom in the late season and which prolong the mix's flowering period.

## IN SOWING

## - Preferably sow once the ground has warmed up:

- May-June in a cold area
- March-April in a warm area

At the time of sowing, the seeds should be poured into a container and stirred in order to obtain a homogeneous mixture.

- Choose the correct seed density for the sowing period and the agronomic and climatic conditions.
- To facilitate sowing and for equal seed distribution, you may mix the seeds with an inert material such as buckwheat husks, vermiculite or fine and dry soil. Mix thoroughly to obtain a homogeneous mixture (substrate + seeds), then remix regularly when sowing.
- When sowing in spring, a light raking of the surface is sufficient, followed by regular watering during the germination period. In autumn, surface-sow without covering the seeds.


## Focus <br> on <br> False seedbeds

Two or three false seedbeds are often required. After preparing the soil, allow the weed seeds to germinate, then destroy them by shallow tillage (of the first few centimetres of the surface only to avoid bringing up any more weed seeds). The flower mix should be sown as soon as the ground has been prepared again.

## MAINTENANCE

## - Irrigation

After sowing, watering is necessary for the first few weeks to encourage germination and plant growth. Depending on the type of soil and the climatic conditions, watering during the summer may significantly prolong flowering.

## - Occasional weeding

Depending on the results obtained, it may be advisable to intervene from time to time to pull out weeds when they come up; your flower mix will flourish all the more. Amaranth, Goosefoot, Crabgrass, Black Nightshade and Foxtail are all invasive weeds which develop rapidly from May to June onwards. Leaving weeds to grow in the first year would compromise the flower meadow.

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[^0]:    $\Delta$
    March to June

[^1]:    March to June
    $90 \%$ June to October
    91 $60-100 \mathrm{~cm}$

[^2]:    August-October 908 from Spring 904. $30-70 \mathrm{~cm}$

[^3]:    March to June
    September to November
    909. summer when sown in spring, spring the following years

    Q1 $15-25 \mathrm{~cm}$

[^4]:    March to April
    August to November
    90. summer when sown in spring, $20-40 \mathrm{~cm}$

[^5]:    March to July
    "OP July to October
    9.4 $40-70 \mathrm{~cm}$

