

Since the introduction of hybrid varieties in Europe in the 1950s, average maize yields have more than doubled. This continuous genetic progress represents an average gain of 1.2 quintals/ha per year and is expressed across all yield levels, following a continuous trend for more than 50 years.

Today, varietal innovation offers a wide range of robust hybrids, both at the beginning and at the end of the growing cycle, with new varieties selected each year for improved performance and resistance to biotic and environmental stresses. The rapid pace of varietal turnover encourages growers to take advantage of the latest innovations.

Variety selection should be based on the intended end use, as well as the local soil and climatic conditions and the desired sowing and harvest dates.

Several criteria should therefore be taken into account:



• **Variety maturity / earliness:**
earliness reflects the length of the plant's development period from sowing to harvest. It is defined by the number of growing degree days (GDD) required to reach harvest maturity.



• **Yield potential:**
whether expressed as dry matter or grain yield, it is measured in quintals per hectare (q/ha).



• **Tolerance to water stress:**
(particularly during sensitive growth stages such as flowering).



• **Tolerance to diseases and pests:**
taking into account the previous crop and the pests present locally.



• **UFL concentration:**
(or UFV) (UFL = Feed Units for Lactation; UFV = Feed Units for Meat Production) and digestibility, which determine the energy contribution of the forage to livestock.

To learn more about maize breeding and cultivation, visit **maize.seedsforfuture.eu/en/**

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SELECTION CRITERIA ACCORDING TO END USE

Grain maize grown under good conditions or with irrigation

Key criteria
- Grain yield potential
- Earliness adapted to the available growing degree days, allowing harvest at less than 32% grain moisture

Additional criteria
- Suitability for high plant densities and lodging resistance
- Suitability for early harvest when relying on natural field drying (“dry-down”)
- Threshing quality (resistance to grain shattering)

Grain maize grown under difficult conditions or water stress

Key criteria
- Grain yield potential
- Yield stability
- Tolerance to water stress at flowering

Additional criteria
- Suitability for early sowing (cold tolerance) as part of drought-escape strategies
- Tolerance to Fusarium infection at the end of the growing cycle
- Late-season lodging resistance

Maize harvested as high-moisture grain

(HMG or CCM)

Key criteria
- Grain yield potential
- Earliness adapted to harvesting at 34–38% grain moisture

Additional criteria
- Disease tolerance

Forage maize: whole-plant harvest

Key criteria
- Whole-plant yield potential
- Feed value and organic matter digestibility (OMD) of the whole plant
- Earliness adapted to harvesting at 30–35% whole-plant dry matter (WPDM)

Additional criteria
- Suitability for high plant densities and in-crop lodging resistance
- Plant size
- «Stay-Green»

Maize grown under organic farming systems

Key criteria
- Disease tolerance
- Early vigor

Additional criteria
- Yield potential and yield stability

Corn for biomass: ethanol or anaerobic digestion (biogas)

Key criteria
- Yield potential of the harvested fraction
- Appropriate maturity: 27–37% whole-plant dry matter for biogas, 32% grain moisture for ethanol (grain biomass or total biomass)

Additional criteria
- Disease tolerance
- Lodging resistance (for a “clean” harvest)



SEEDS FROM EUROPE

MAIZE, A KEY TO BUILD OUR FUTURE.

Productive, economical, resilient... offering multiple opportunities, corn is undoubtedly a crop with a bright future in Europe. This is especially true given that corn farmers can count on genetic progress and the quality of seeds made in Europe.

Genetic progress is constantly improving the performance (yield, UFL) and characteristics of corn (early vigor, resistance to disease, lodging, pests, water stress, etc.). And the quality of seeds provides guarantees in terms of varietal purity, technological quality, and health quality, allowing the full expression of the varietal innovation offered by breeders.

maize.seedsforfuture.eu/en/