

KULTURSAAT e.V.

Association for Breeding Research and Crop Maintenance
Based on Biodynamic Principles

Breeding Biography of a Biodynamic Variety

Updated: 15/02/2017



**Blight-tolerant stake tomato
with particular outdoor
cultivation suitability**

QUADRO

German Plant Variety Registry Code:
TOT 265

Breeder:

Dr. habil. Hartmut SPIESS

Variety Description:

QUADRO is a strong growing, widely tolerant to blight (*Phytophthora infestans*), stake tomato with high yield, equally suitable for cultivation outdoor or in the greenhouse. The oval fruits (Roma type) have a high marketability and are particularly suitable for processing. With its long growth length and high number of fruit sets, the cultivar is characterized by a high yield capacity due to its long vegetation period.

Characteristics according to the UPOV Examination Guidelines include (selection from the results of the variety register test): undetermined growth, high growth velocity and medium internodal length. Horizontal to hanging leaves, double pinnate leaves. The fruit stalks have a breaking point. The unripe fruit is light green and mottled, with the mottling medium-strongly distributed and with low to medium color intensity. The medium-sized, egg-shaped fruits are internally two- to three-chambered and in longitudinal section are oval to rectangular. The ripe fruits are completely red colored. The maturity is early to medium early. Resistances against tobacco mosaic virus (breed 0), as well as against *Fusarium* (breed 0) and *Verticillium* (breed 0) are not present, further resistances were not tested.

QUADRO's susceptibility to *Phytophthora* was examined in 2003 and 2004 together with nine other varieties by artificial inoculation with 20 different *Phytophthora* isolates (FINCKH et al. 2005). In comparison to the wild tomato varieties GOLDEN CURRANT and ROTE MURMEL and the variety CELSIOR, it had a significantly lower susceptibility to blight compared to the other varieties. In comparison to the other varieties of similar fruit size, such as MATINA, HARZFEUER or CAMPARI, it had the lowest incidence and intensity of infestation.

Literature:

FINCKH *et al.* 2005: Resistenzeigenschaften von Freilandtomaten gegen *Phytophthora infestans*. Beiträge zur 8. Wissenschaftstagung Ökologischer Landbau, Kassel, 179-180.

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Breeding History:

The variety originates probably from Brazil and was exchanged at the time of the German Democratic Republic with the name DE BERA0 by small gardeners. From seed originally from Herbert Beier, in Coswig, Saxon, since 1994 the variety has been selectively bred on Demeter-certified biodynamic cultivation under outdoor conditions at Dottenfelderhof Farm. Due to its positive qualities – high yield, blight resistance, very long vegetative period, good taste and processing characteristics – QUADRO was entered for approval in 1999 to the German Plant Variety Registry; in 2001 it was eventually entered into the national register.

Maintenance breeding and the cultivation of the stock seed takes place in the context of the “Vegetable Breeding Research” program of the Farm School Association of Dottenfelderhof. The Bingenheimer Saatgut AG is responsible for organizing the multiplication and commercialization of the sale seed.