

## Breeding of botrytis tolerant *V. vinifera* and interspecific wine varieties

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**Abstract:** Arnsburger (Gm 22-74), a patented, intravarietal white wine variety developed at Geisenheim (Gm), is a cross of White Riesling clone 88 Gm x White Riesling clone 64 Gm and proved to be very tolerant to botrytis. The skin of the berries is tough and the stems of the clusters exhibit no stem rot, even when no botryticides were applied. The clusters of Arnsburger are very loose and not compact. This also helps to prevent the infections of botrytis.

The variety Arnsburger was used in Geisenheim as a genetic source for tolerance against botrytis. The characteristics of this tolerance are transmitted to seedlings with *V. vinifera* and interspecific genome as well. Arnsburger was also used as mother plant because of the Riesling character of the grapes and wines. We were able to select many new types of white and even red wine varieties with high tolerance to botrytis. The new botrytis tolerant *V. vinifera* varieties were not sprayed with botryticides but with fungicides against both of the mildews. The new interspecific varieties need no spray at all and are resistant or tolerant to fungus diseases.

The best varieties are as follows:

### *V. vinifera* varieties:

| Gm No.     | Crossing                                | Picking time | % Botrytis |
|------------|---|--------------|------------|
| Gm 711-4   | Arnsburger x Reichensteiner             | 14.10.89     | 1          |
| Gm 7110-3  | Arnsburger x Faberrebe                  | 3.10.89      | 1          |
| Gm 712-7   | Arnsburger x Deckrot                    | 14.10.89     | 5          |
| Arnsburger | Riesling cl. 88 Gm x Riesling cl. 64 Gm | 26.10.89     | 15         |

### Interspecific varieties:

| Gm No.    | Crossing                                    | Picking time | % Botrytis |
|-----------|---|--------------|------------|
| Gm 788-4  | Arnsburger x Gf. B-6-18 (Pollux)            | 27.10.89     | 5          |
| Gm 789-12 | Arnsburger x Fr. 993-60                     | 27.10.89     | 5          |
| Gm 7813-2 | Arnsburger x Landot 2282 (red wine variety) | 10.10.89     | 0          |

They have been propagated for further field tests.