

**SELEKSI SEGREGAN TRANSGRESIF PADA POPULASI F2  
HASIL PERSILANGAN CERDEK MERAH × INPARI-21**

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# SELEKSI SEGGREGAN TRANSGRESIF PADA POPULASI F2 HASIL PERSILANGAN CEREDEK MERAH × INPARI-21

## ABSTRAK

Penelitian bertujuan untuk mengetahui tingkat keragaman populasi dan parameter genetik serta mendapatkan segregan transgresif yang berpotensi untuk menghasilkan varietas inbrida dari populasi F2 hasil persilangan Ceredek Merah × Inpari-21. Penelitian ini telah dilaksanakan dari bulan November 2019 sampai Juni 2020, di Lahan Basah, Fakultas Pertanian, Universitas Andalas, Padang. Metode penelitian yang digunakan adalah eksperimen tanpa rancangan dengan metode *head to row*. Setiap individu populasi F2 dijadikan tanaman sampel kecuali tanaman pinggir. Pengamatan dilakukan pada lima karakter kualitatif dan delapan karakter kuantitatif. Pengujian untuk karakter kualitatif menggunakan Analisis *Chi Square* berdasarkan hukum Mendel. Pengujian untuk karakter kuantitatif menggunakan parameter populasi, parameter genetik dan segregan transgresif. Hasil penelitian menunjukkan seluruh pewarisan karakter kualitatif sesuai dengan nisbah Mendel. Keragaman karakter kuantitatif populasi F2 hasil persilangan Ceredek Merah dengan Inpari-21 memiliki keragaman yang luas kecuali karakter bobot gabah total per malai dan bobot gabah isi per malai. Heritabilitas pada populasi F2 memiliki kriteria sedang hingga tinggi pada semua karakter kuantitatif yang diamati, kecuali pada karakter persentase gabah isi per malai. Keragaman genetik pada populasi F2 memiliki kriteria sedang hingga luas pada semua karakter kuantitatif kecuali karakter umur berbunga, umur panen dan persentase gabah isi per malai. Segregan transgresif terdapat pada karakter jumlah gabah total per malai, bobot gabah total per malai, bobot gabah isi per malai, bobot gabah total per rumpun, dan bobot isi per rumpun serta direkomendasikan sebagai karakter seleksi. Rumpun-rumpun yang tumpang tindih (*overlap*) merupakan rumpun potensial yang akan dilanjutkan ke-F3 untuk penggaluran dengan seleksi *pedigree*.

**Kata kunci:** *Segregan transgresif, varietas inbrida, heritabilitas, overlap*

# TRANSGRESSIVE SEGREGANT SELECTION ON F2 POPULATION RESULTS OF CROSSING CEREDEK MERAH × INPARI-21

## ABSTRACT

The aim of this study was to determine the level of population diversity and genetic parameters as well as to obtain a transgressive segregant that has the potential to produce inbred varieties from the F2 population resulting from crosses of Ceredek Merah × Inpari-21. This research was conducted from November 2019 to June 2020, in Lahan Basah, Faculty of Agriculture, Andalas University, Padang. The research method used was experiment without design with the method of head to row. Each individual F2 population was used as a sample plant except for peripheral plants. Observations were made on five qualitative characters and eight quantitative characters. Testing for qualitative characters using Chi Square Analysis based on Mendel's law. Testing for quantitative characters using population parameters, genetic parameters and transgressive segments. The results showed that all inheritance of qualitative characters was in accordance with Mendel's ratio. The diversity of the quantitative characters of the F2 population resulted from crossing Ceredek Merah and Inpari-21 has wide variations except for the characters of total grain weight per panicle and filled grain weight per panicle. Heritability in population F2 has moderate to high criteria in all quantitative characters observed, except for the character of percentage of filled grains per panicle. Genetic diversity in the F2 population has moderate to broad criteria for all quantitative characters except for the characters of flowering age, harvest age and percentage of filled grain per panicle. Transgressive segregation is found in the characters of total grain number per panicle, total grain weight per panicle, filled grain weight per panicle, total grain weight per hill, and filled weight per hill and is recommended as a selection character. Clumps that are overlapping are potential clumps that will be continued to F3 for removal with pedigree selection.

**Keywords:** *Transgressive segregant, inbred varieties, heritability, overlapping*