

1,000
(r = 0.45) (r = 0.21) (r = 0.22)
(r = -0.68)
7

80
OPA07, OPA08, OPA10, OPA15,
OPE05, OPE09, OPE18, OPF09, OPF12, OPF13, OPF14, OPF15 OPG14
69 47
SW105 SMGBWS90702 SMGBW8303-2-1
CMU94-5 8 CMU93-2 INSEE1 FNBW8303-2-1
MJBWS1 LARTC-W95204 CMU94-10 LARTC-W91009 SW107 3
11 FNBW8112-2-3 LARTC-W95205 PMPBWS91273 FANG60 CNO79*2/PRL
SMGBWS92062 SMGBWS91029 SMGBWS90049 LARTC-W94006 SMG 2
PMPBWS91256 4 1 LARTC-W95019

ABSTRACT

STABILITY PARAMETER AND DNA FINGERPRINTING BY RAPD OF WHEAT VARIETIES

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The stability parameter and group classification of twenty one selected wheat lines and three standard varieties were carried out at 8 locations which consisted of 6 locations in the northern and 2 locations in the northeastern parts of Thailand. A randomized complete block design with three replications was used. The stability parameter and cluster analysis indicated that both locations and varieties can be divided into two groups. The first group consisted of 7 locations (Maejo University, Lampang Agricultural Research and Training Institute, Dong Luk Muen Upland Rice and Temperate Cereals Experimental Field, Chiang Mai University, Nong Khai Rice and Temperate Cereals Experiment Station, Udon Thani Rice and Temperate Cereals Experiment Station and Phrae Rice Research Center). The stable varieties with high grain yield potential were INSEE1, SMGBWS91029, SMGBWS90702 and PMPBWS91273, which yielded 362.5, 352.8, 374.5 and 342.2 kilograms per rai, respectively. The second group contained only Samoeng Upland Rice and Temperate Cereals Experiment station which SMGBWS92062, CMU93-3, and FNBW 8112-2-3 showed GxE interaction with grain yield of 813.7, 793.8, and 780.1 kilograms per rai, respectively. In general, grain yield showed positive correlation with 1,000 grain weight ($r = 0.45$), number of grain per spike ($r = 0.21$), and number of hill per squaremeter ($r = 0.22$). However, number of hill per squaremeter was negatively correlated with number of spike per hill ($r = -0.68$).

The preliminary classification of wheat varieties by RAPD technique was conducted from 47 polymorphic bands of 13 primers (OPA07, OPA08, OPA10, OPA15, OPE05, OPE09, OPE 18, OPF09, OPF12, OPF13, OPF14, OPF15 and OPG14). Four groups were classified as follow : 1) SW105, SMGBWS90702, SMGBW8303-2-1 and CMU94-5 2) CMU93-2, INSEE1, FNBW8303-2-1, MJBWS1, LARTC-W95204, CMU94-10, LARTC-W91009 and SW107 3) FNBW8112-2-3, LARTC-W95205, PMPBWS91273, SMG2 FANG60, CNO79*2/PRL, SMGBWS92062, SMGBWS91029, SMGBWS90049, LARTC-W 94006 and PMPBWS91256 4) LARTC-W95019.