

ABSTRACT

Rice is a special plant because it can adapt to almost all environments, from the lowlands to the highlands. Variety is an important technological component that has a major contribution to increasing production and farming income. Rice (*Oryza sativa* L.) is one of the most important food commodities in the world, especially in the Asian region. In Indonesia, the need for rice consumption continues to increase along with the increase in population. This is because Indonesian people still rely heavily on rice as a staple food. Germplasm is a genetic resource that carries important and potential traits needed in plant breeding programs. This research was precisely carried out on the campus of Malikussaleh University, North Aceh district and the agroecotechnology laboratory of the Faculty of Agriculture. This research was carried out from August to December 2023. This research used a non-factorial randomized block design method consisting of 7 rice lines. The variables observed were flowering age, net assimilation rate, relative growth rate, leaf chlorophyll content, plant fresh weight, plant dry weight, root dry weight, shoot root ratio, number of tillers per hill, number of productive panicles, panicle length, grain length, number of grain per hill, percentage of empty grain, percentage of filled grain, weight of 1000 seeds and grain yield tons/ha. The cot bada 04 and cot bada 08 lines gave the best effect compared to the other lines, seen in the net assimilation rate parameter 2, relative growth rate I, plant wet weight 57 days after planting and 64 days after planting, number of tillers per hill, number of grains per bush, Weight of 1000 seeds and. Meanwhile, the yield on the Unsyiah Cute line was 9.2 tonnes/ha

Keywords: physiology, Aceh character water rice strains

RINGKASAN

TROUZIERI DEWA AKBAR DMK. Identifikasi Respon Fisiologi Dan Hasil Beberapa Galur Padi (*Oryza Sativa* L) Lokal Aceh Pada Interval Air Yang Berbeda. Dibimbing oleh LAILA NAZIRAH dan NILA HAYATI

Padi (*Oryza sativa* L.) merupakan tanaman pangan penting yang telah menjadi makanan pokok lebih dari setengah penduduk dunia. Di Indonesia, padi merupakan komoditas utama dalam menyokong pangan masyarakat. Indonesia sebagai negara dengan jumlah penduduk yang besar menghadapi tantangan dalam memenuhi kebutuhan pangan penduduk. Oleh karena itu, kebijakan ketahanan pangan menjadi fokus utama dalam pembangunan pertanian. Penelitian dilaksanakan di Rumah kaca kampus Unimal, kabupaten aceh utara dan Laboraturium Agroekoteknologi Fakultas Pertanian Universitas Malikussaleh Kabupaten Aceh Utara. Penelitian ini dilakukan pada bulan Agustus sampai Desember 2023. Penelitian ini menggunakan metode rancangan petak terbagi (RPT) non faktorial yang terdiri dari 7 galur padi. Peubah yang diamati diamati umur berbunga, laju asimilasi bersih, laju tumbuh relatif, kandungan klorofil daun, berat basah tanaman, berat kering tanaman, berat kering akar, shoot- root-ratio, jumlah anakan per rumpun, jumlah malai produktif, panjang malai, jumlah gabah per rumpun, persentase gabah hampa, persentase gabah berisi, berat 1000 biji dan hasil gabah ton/ha.

Kata Kunci: fisiologi, galur padi air karakter aceh