Optimization of Rice Planting Technology to Enhance Rice Planting Benefit

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Abstract: Chemical fertilizers and pesticides are certainly ways to increase rice planting yield, but with the development of scientific technology, tests and analysis show that the rice induced by chemical fertilizers and pesticides has low safety, low health value and great damage to soil and environment. In order to improve rice planting technology, it is also necessary to start from a systematic level, understand the links that need to be controlled in planting with the help of new technical means of rice planting, and do a good job in field management. Comprehensive analysis of elements that can strengthen the planting benefits can be introduced into the rice planting space to alleviate the impact of external invasion on crops and gradually optimize the previous planting forms, thus greatly improving the planting benefits and efficiency of rice.

Keywords: Optimization; Rice planting technology; Strengthening; Rice planting benefits; Analysis

Recently, rice planting still faces many problems. Although the planting form of rice is diversified, under different regional environments, rice is facing the interference of geological and weather problems. Under different leaf ages, rice growth has its own specific rules. Therefore, observation and analysis in planting should be strengthened, scientific leaf age planting scheme should be used to mark abnormal rice, in-depth analysis should be carried out, and effective technical measures should be introduced, so as to establish the management system of rice planting, prevent the occurrence of diseases, reduce the influence scope of diseases, promote rice planting to meet the production requirements, and simultaneously improve the yield and quality of rice.

Planting attention problem water

Each part of rice will undergo growth changes with the passage of planting time. During the change of leaf age, you should combine the characteristics of each leaf age, foster strengths and avoid weaknesses. You should combine the root, stem and leaf feedback of rice to formulate a growth management plan, and distinguish each leaf age. Starting from the theoretical basis of leaf age breeding, we should innovate scientific cultivation strategies, understand China's rice planting standards, so as to improve technical means, reduce rice planting costs and improve benefits. 1) Establishment of observation points for leaf age. Since it is necessary to observe and analyze the state of paddy rice during its leaf age, an observation point should be established. However, there are many varieties of rice and different varieties have different characteristics of leaf age. It is also necessary to divide the rice into varieties and observe the leaf age separately. Moreover, the observation of leaf age should adopt a pre-analysis mode, actively combine the possibility of leaf age growth in the next step to observe whether there is any difference with the results of pre-analysis, instead of passively recording after the problem of leaf age is highlighted. 2) Rice planting time. Rice is grown at different times in different places, some in one season and some in two seasons. North China is a single season rice. The sowing time of one season of rice must be before Qingming Festival. The rice will be transplanted at the end of April and the beginning of May (if conditions permit, it can also be transplanted in Grain Rain). The sowing time of early-maturing single-season rice in the northeast of North China is about April. The growth period of northern double-season rice is 104 days in the first season and rice in the second season. The growth period is 87 days. They are usually early maturing varieties. Avoid winter. 3) Rice seedling strengthening agent and its effect on dry seedling raising. Disinfectants are used to control and eliminate soil bacterial wilt pathogens by disinfection and sterilization agents according to the pathogen characteristics and incidence laws of bacterial wilt to prevent diseases. Chemical control agents are mainly plant growth regulators. After being applied to the soil, they can improve the cold resistance of seedlings and promote root growth through root inhalation, control overground growth and play a dwarfing role. Nutrients are based on the fertilizer requirements at the seedling stage. Nitrogen, phosphorus, potassium, Ga, Mg, S, Fe, Zn, Si and other trace elements are reasonably proportioned to meet the nutrient requirements of rice at the seedling stage. Acidifiers are applied to the soil to reduce the PH value of the bed soil and maintain it for a period of time, aiming at the acid-loving and damping-off pathogenic anaerobic characteristics of rice seedlings, thus
playing dual roles of inhibiting bacteria and activating soil nutrients.

**Rice Disease Resistance Treatment**

Magnaporthe grisea, also known as rice fever, can be divided into seedling blast, leaf blast and panicle according to different damage periods and locations.

Neck blast, branch blast, grain blast, etc. Seedling plague: the base is gray and black, the upper part is brown, and it shrinks to death. When the humidity is high, a large amount of ash is generated in the diseased part. Black mould layer and leaf blast can occur in the whole growth period. Tillering to jointing stage is more harmful.

Festivals: Brown spots are produced on the rice festival, and then gradually expand around the festival, making the diseased part black and easy to break. It occurs early and forms withered and white spikes. The bending of the stem occurs only on one side. Ear neck blast: small brown spots are formed at the beginning, and the neck of the ear turns brown after spreading, which also causes withered and white ears. Late onset

The cause of the blighted valley. Spikelets are not solid due to damage of branches or rachis. Grain blast: brown oval or irregular spots are produced, which can blacken rice. Some glumes are asymptomatic

Form, protect glume damage brown, make the seed carrier.

Prevention and control methods: selecting disease-resistant varieties; Reasonable fertilization, increase the application of organic fertilizer, phosphorus and potassium fertilizer; Scientific irrigation and drainage; Two to three days before the breach, each mu is mixed with 75 to 100 milliliters of 40 percent tefu No.1 emulsifiable concentrate or 100 grams of 20 percent tricyclazole wettable powder to produce 20 grams of iodine alginate, 50 to 75 kilograms of water is added for spraying, and spraying is carried out again in 7 to 10 days.

Occurrence Symptoms of Rice Bacterial Blight: It mainly occurs on leaves and leaf sheaths. At the beginning, translucent yellow was produced at the leaf margin. Small spots, later developed into wavy yellow-green or grayish-green disease spots along one or both sides of vein or along midvein. The boundary between the diseased part and the healthy part is obvious. A few days later, the lesion turned gray and curled inward. When the air is humid, wet muddy water drops or honey yellow fungus glue are secreted from the leaf margin of fresh disease spots, which form hard grains after drying up and are easy to fall off.

Prevention and control methods: selecting disease-resistant varieties; Soaking seeds with 1% Zhongshengmycin 50 times solution for 24 hours for disinfection; Cultivate disease-free strong seedlings; 7-10 days before transplanting, 20% yekuning wettable powder is mixed with 500 times of liquid per mu to spray Saisheng iodine alginate. Spraying iodine alginate to protect flooded rice fields after strong winds and rain.

**Rice Sheath Blight**

Symptoms of the disease: the leaf sheath produces dark green water-soaked fuzzy small spots on the edge, which gradually expand to oval or moire shape. When the disease is serious, several disease spots merge to form serious disease spots, which are irregular moire spots and often cause yellowing and withering of the leaves. When the leaf part is attacked quickly, the disease spots become dirty and the green leaves rot quickly. Stalk damage often does not lead to heading, and a layer of white powdery mildew is formed on the diseased spot under high temperature. Prevention and control methods: to eliminate waterlogging sclerotium and reduce bacteria source; Not partial application of nitrogen fertilizer, increase the application of phosphorus and potassium fertilizer; Reasonable close planting, reasonable irrigation, shallow water irrigation, moderate sun, reduce field humidity; Spraying 30% dimethachlon WP800-1000 times before sealing to maturity, mixing and spraying Saisheng iodine alginate 3-4 times.

**Rice Flak Disease**

Symptoms of the disease: the seed suffers from the bud stage, the bud sheath turns brown, the bud is not drawn out, and the cotyledons die. During the seedling stage, the disease spots of leaves and leaf sheaths expanded and banded when the disease occurred, and the seedlings died when the disease spots occurred. The infected edge of the adult leaves is brown, and when serious, the leaves become irregular large spots. The diseased leaves withered inward from the tip of the leaf and were moist brown. Black mold was produced on the dead seedlings. The leaf sheath is infected with water stains and then becomes irregular large spots with central grayish brown color. Ear neck and branch affected parts are dark brown, causing ear withered. The infected gray-black grain spreads to the whole grain causing blighted grain. When the climate is humid, the sick minister develops a black velveteen layer. Prevention and control methods: disinfection of
improved varieties, increasing the application of irrigation and soil ratio, avoiding partial application of nitrogen fertilizer; 20% Okada
1,000 times wettable powder mixed with Huaguo doctor fruit can be sprayed with multiple elements.

**Conclusion**

To sum up, it is necessary to carry out comprehensive innovation and innovation in the concept of rice planting and to optimize the rice planting technology. However, in the actual optimization process, we must give full consideration to the specific conditions of the region, and resolutely do not allow the phenomenon of copying, so as not to bring adverse effects on the planting effect of rice.

**References**