

西アフリカ産イネ遺伝資源におけるいもち病抵抗性の変異

Genetic variation of blast resistance in rice germplasm from West Africa

西アフリカ産遺伝資源のうち、アジアイネの栽培種 (*Oryza sativa* L.) は、いもち病に対して広い変異を有し、多くの品種が高い抵抗性を示すが、アフリカイネの栽培種 (*Oryza glaberrima* Steud.) は中程度で *O. sativa* に比べ低い。

The genetic variation of rice accessions from West Africa, and the relationships among cultivars of *O. sativa* L. and *O. glaberrima* Steud., were clarified. Results of our investigation showed that the genetic variation and resistance of *O. glaberrima* was narrower and lower than those of *O. sativa*.

Cluster group based on polymorphism data of SSR markers and species		No. of accessions (%)			
		Blast-resistant group		Total	
		Ia	Ib	II	Total
Germplasm from West Africa	A	Upland	Upland NERICA	Upland	Upland NERICA
		4	3	15	15
		1	1	1	2
	Sum	0	8	31	39
B		Lowland	Lowland	Lowland	Lowland NERICA
		4	1	30	2
		3	1	1	4
	Sum	0	9	74	83
C		<i>O. glaberrima</i> (upland)			
		8			41
		<i>O. glaberrima</i> (lowland)			1
	Sum	0	1		1
Sum in each species	<i>O. sativa</i>	0	42	102(89.5)	114
	<i>O. glaberrima</i>	0	12(10.5)	1(2.2)	45
	<i>O. barthii</i>	0	44(97.8)	2(40.0)	5
		0	3(60.0)		
	Total	0(0.0)	59(36.0)	105(64.0)	164(100.0)
Differential varieties and controls	A	Japonica Group differential varieties (<i>Pik-s, Pish, Pi19(t)</i>) Nipponbare (Japonica Group) LTH (Japonica Group susceptible)	Japonica Group differential varieties (<i>Pik-h, Pib, Pit, Pii, Pi3, Pi5(t), Pi2, Pi2-5, Pik-m, Pik-p, Pi1, Pi7, Pi12(t), Pi20(t), Pita(2), Pita-2(2)</i>)	Japonica Group differential varieties (<i>Piz-1, Pi9</i>)	2
	Sum	6	19	2	27
	B	US-2 (Indica Group susceptible)	Kasalath (Indica Group)		1
		1	1		1
	Sum	2	2		4
	Total	8(25.8)	19(61.3)	2(6.5)	31(100.0)

表1. 西アフリカ産イネ遺伝資源のDNAマーカー多型情報といもち病抵抗性反応による分類

Table 1. Classification of rice accessions from West Africa based on the polymorphism data of DNA markers and the genetic variation in resistance to blast disease

クラスターグループAとBは、*O. sativa*のそれぞれ日本型とインド型に、Cはアフリカイネ (*O. glaberrima*) および野生種 (*O. barthii*) に対応する。いもち病抵抗性グループは、Ia (低)、Ib (中)、II (高) の順で程度が異なる (Odjo et al. 2017を一部改変)。

Clusters A and B are corresponded to Japonica Group and Indica Group, respectively, in *O. sativa*, and cluster C includes *O. glaberrima* and its wild relative *O. barthii*. Group II is highly resistant, and Ib and Ia follow as middle and lowly resistant group, respectively.

図1 西アフリカ産イネ遺伝資源の品種グループごとの抵抗性程度
Fig. 1. Resistance of rice accessions from West Africa in each variety group.

標準判別いもち病菌32菌系と各イネ遺伝資源との組み合わせによる各スコアの出現頻度。
▽: 平均値
The reaction data of rice accessions to 32 standard differential blast isolates are shown in each cultivar group.

