

Abstract

In this experiment, we aim to investigate the effects of 3 kinds post incubation period conditions on uniform primordia formation and cultural characteristics of oyster mushroom.

3 kinds post incubation period 35, 40, 45days and control were treated for 30 days. 2 kinds incubation room temperature 23°C, 26°C and control were treated 20°C. The substrate temperature of Suhan No. 1 and Gonji No. 7, oyster mushroom varieties, were tend to increase 24°C ~ 27°C at 11 ~ 14days after inoculation and then maintained in treatment temperature during post incubation period. The longer post incubation days and the higher post incubation temperature of room were lower side primordia of two cultivars. However, the higher post incubation temperature of room resulted in the higher percentage of primordia formation of two cultivars. In addition, the yields were the highest and non-product ratio of fruit body in 35 ~ 40days. 23°C of post incubation conditions were the lowest than other treatments.

Key words : *Pleurotus ostreatus*, post incubation, side primordia

Objective

- ❖ Investigation of side primordia and yield according to post incubation condition during incubation.

Material and Methods

- ◆ Mushroom : *Pleurotus ostreatus* (Suhan No. 1 and Gonji No. 7)
- ◆ Post incubation conditions : temperature (20°C, 23°C, 26°C), pre incubation period(30days) + post incubation period(5day, 10day, 15day)
- ◆ Cultivation type : bottle
 - composition of substrate : sawdust:beet pulp:cotton seed meal(5:3:2,w/w)
 - condition of incubation room temperature : 20±1°C
 - control of CO₂ content for fruit body growth : initial 1,500ppm, middle 1,200ppm, finish 800ppm

Results

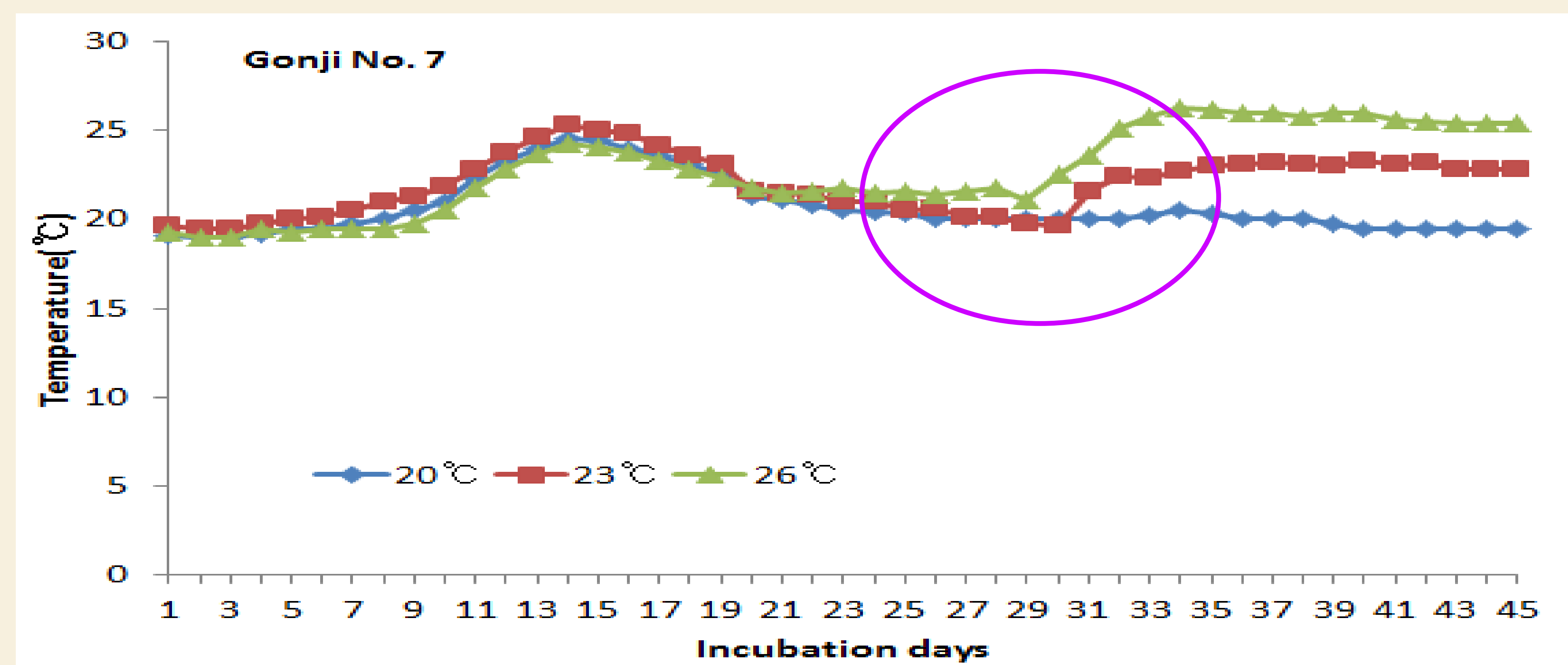
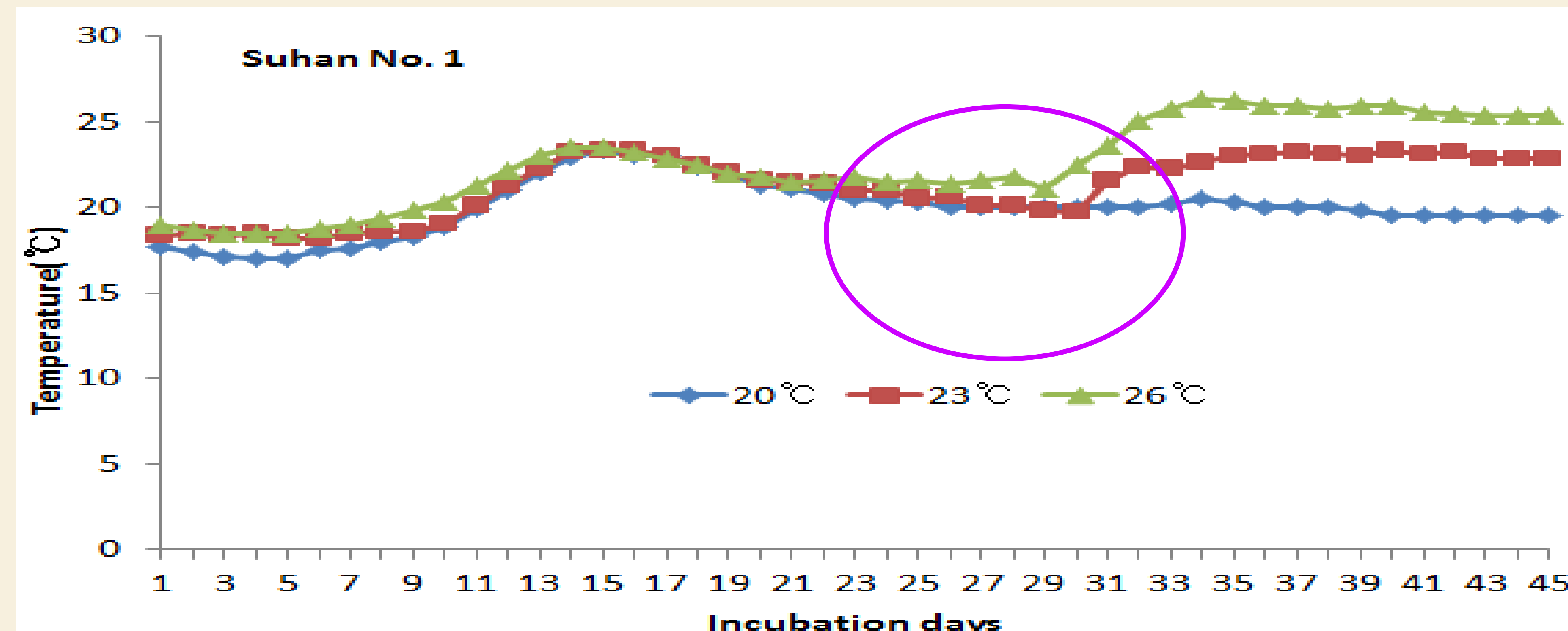


Fig 1. Changes of substrate temperature in *Pleurotus ostreatus* according to post incubation conditions.

Table 1. The characteristic of incubation and fruit body according to post incubation period and temperature of *Pleurotus ostreatus*(‘Suhan No. 1’).

Treatment	Ratio of side primordia (%)	Ratio of primordia (%)	No. of available stipe per bottle	Yield (g/bottle)	Non commercial yields(%)
0day 20°C	17.7 a [↓]	96.9 a	36 a	152 b	2.8 c
5day	23°C	2.1 c	99.0 a	157 b	2.1 cd
	26°C	0.5 d	87.5 b	161 a	3.6 b
10day	23°C	3.6 b	95.8 a	162 a	2.6 c
	26°C	1.0 de	84.9 c	166 a	5.7 a
15day	23°C	0.0 e	90.6 b	163 a	1.6 e
	26°C	0.0 e	75.5 d	165 a	2.6 c

Table 2. The characteristic of incubation and fruit body according to post incubation period and temperature of *Pleurotus ostreatus*(‘Gonji No. 7’).

Treatment	Ratio of side primordia (%)	Ratio of primordia (%)	No. of available stipe per bottle	Yield (g/bottle)	Non commercial yields(%)
0day 20°C	14.6 a [↓]	98.4 a	33 a	146 c	3.1 e
5day	23°C	5.7 c	93.8 a	158 b	8.9 cd
	26°C	5.2 c	83.3 b	160 b	14.6 b
10day	23°C	2.6 d	78.6 c	166 a	10.4 c
	26°C	2.6 d	76.6 c	165 a	9.4 c
15day	23°C	0.5 e	79.7 bc	166 a	16.1 b
	26°C	2.1 d	61.5 d	171 a	12.0 bc



Fig 2. Side primordia in *Pleurotus ostreatus* according to post incubation period and temperature conditions(Gonji No. 7).

Conclusions

- ▶ The over 23°C temperature & longer incubation period showed the lowest side primordia of *pleurotus ostreatus*.
- ▶ It is necessary to investigate more detail post incubation temperature and period during incubation for the future .

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