

## BHP-FC1

Plain Larvae & Oval Cocoons



## BHP-FC2

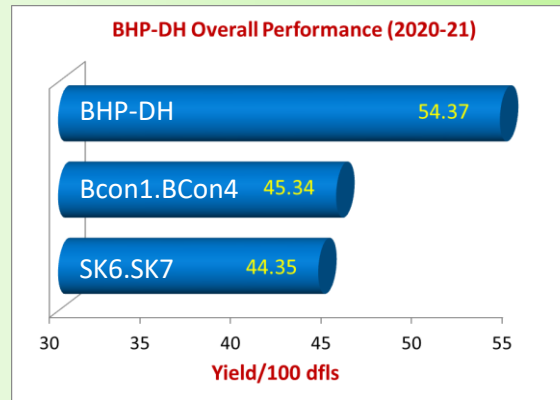
Marked Larvae & Dumbbell Cocoons



## BHP-DH

### Salient Features

- ❖ First Double hybrid developed at CSRTI-BHP
- ❖ Better survival & moderate economic traits
- ❖ Marked larvae with bluish white body colour
- ❖ White cocoons with intermediate shape & medium grains
- ❖ Cocoon shell ratio: 20-21%
- ❖ Raw Silk recovery: 14-16%
- ❖ Cocoon yield: 65-70 kg /100 Dfls
- ❖ Renditta : 6.8 – 7.0
- ❖ Suitable for Eastern & NE region



**V.Lakshmanan, N.Chandrakanth, V.S.Raviraj, Zakir Hussain, Khasru Alam, P.Kumaresan, G.Singh, Collin & V. Sivaprasad**

#### For Further Details Contact:

Director, CSRTI, Berhampore – 742 101, West Bengal

Tel: 03482-224713, EPABX: 224716/17/18

Fax: 03482-224714/224890

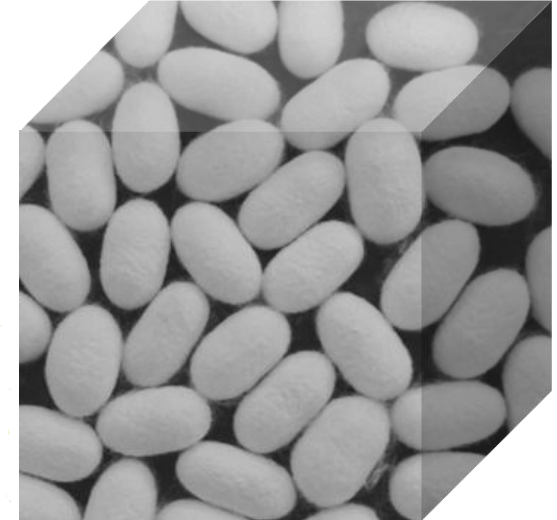
Email: csrtiber@gmail.com; csrtiber.csb@nic.in

[www.csrtiber.res.in](http://www.csrtiber.res.in)

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## BHP-DH

**Bivoltine  
Double Hybrid  
for Eastern &  
North-Eastern region**



### CSRTI

**Central Sericultral Research & Training Institute**  
Central Silk Board, Ministry of Textiles  
Govt. of India, Berhampore, West Bengal

# BHP-DH

## Bivoltine Double Hybrid for Eastern & North-Eastern region

Eastern and North-Eastern India, produced about 12,430 MT of raw silk (Eastern: 4951 MT & North-Eastern: 7481 MT) during 2018-19. While priding on this impressive silk output, it is disheartening that bivoltine raw silk production remains low and is not more than 5-6%. The major bottle-neck in increasing bivoltine raw silk production in E & NE region has been the highly fluctuating climatic conditions and more so, the absence of suitable bivoltine silkworm hybrids suitable to thrive better in local conditions.

Central Sericultural Research and Training Institute (Berhampore) has attempted to develop suitable bivoltine silkworm hybrids for E & NE region through shuttle breeding approach. It is quite successfully employed in improvement programmes of plants like Wheat and animals like Cattles. Under this breeding programme, G x E interactions are facilitated between different environments representing the E & NE locations, to improve the fitness traits in particular in the bivoltine breeds/hybrids.

The continuous dedicated and systematic efforts has resulted into a promising new bivoltine double hybrid, BHP DH (BHP3.BHP2 x BHP8.BHP9). The performance of BHP-DH is stable and could be reared through out the year. On-Station (2019) and On-Farm (2020) evaluation trials at different locations in E & NE indicated its superiority over the ruling bivoltine foundation crosses (SK6.SK7 & BCon1.BCon4), which are commercially being exploited in E & NE region at present.

### Performance of BHP DH @ Laboratory

Hybrid	Pupation rate (%)	Yield/10,000 larvae (Kg)	Cocoon weight (g)	Shell Weight (g)	Shell ratio (%)	AVFL (m)	Reel (%)	Raw Silk (%)	Neat (pts)
<b>BHP-DH</b>	<b>91.5</b>	<b>15.40</b>	<b>1.69</b>	<b>0.330</b>	<b>19.52</b>	<b>950</b>	<b>75</b>	<b>14.2</b>	<b>92</b>
<b>SK6.SK7-C1</b>	<b>90.2</b>	<b>13.30</b>	<b>1.47</b>	<b>0.240</b>	<b>16.32</b>	<b>710</b>	<b>72</b>	<b>11.5</b>	<b>90</b>
<b>BCon1.BCon4-C2</b>	<b>86.4</b>	<b>12.10</b>	<b>1.42</b>	<b>0.250</b>	<b>17.60</b>	<b>780</b>	<b>70</b>	<b>12.4</b>	<b>90</b>
<b>% Imp Over C1</b>	<b>1.44</b>	<b>15.78</b>	<b>14.9</b>	<b>37.50</b>	<b>19.60</b>	<b>33.8</b>	<b>4.2</b>	<b>23.4</b>	<b>2.2</b>
<b>% Imp over C2</b>	<b>5.90</b>	<b>27.27</b>	<b>19.0</b>	<b>32.00</b>	<b>10.90</b>	<b>21.7</b>	<b>7.1</b>	<b>14.5</b>	<b>2.2</b>

### Performance of BHP DH @ OST @ E & NE

<b>BHP-DH</b>	<b>83.27</b>	<b>68</b>	<b>1.63</b>	<b>0.322</b>	<b>19.70</b>	<b>831</b>	<b>73</b>	<b>14.7</b>	<b>91</b>
<b>SK6.SK7</b>	<b>82.15</b>	<b>62</b>	<b>1.44</b>	<b>0.238</b>	<b>16.57</b>	<b>670</b>	<b>72</b>	<b>11.6</b>	<b>89</b>
<b>BCon1.4</b>	<b>78.19</b>	<b>59</b>	<b>1.48</b>	<b>0.256</b>	<b>17.25</b>	<b>694</b>	<b>71</b>	<b>12.3</b>	<b>88</b>
<b>% Imp Over C1</b>	<b>1.36</b>	<b>9.67</b>	<b>13.41</b>	<b>35.29</b>	<b>18.88</b>	<b>24.1</b>	<b>1.4</b>	<b>26.7</b>	<b>2.2</b>
<b>% Imp over C2</b>	<b>6.49</b>	<b>15.25</b>	<b>10.04</b>	<b>25.78</b>	<b>14.20</b>	<b>19.7</b>	<b>2.8</b>	<b>19.5</b>	<b>3.4</b>

### Performance of BHP DH @ OFT @ E & NE

Hybrid	No. of Dfls (Crops)	Yield/100 dfls( Kg)		Cocoon weight (g)	Shell weight (g)	Shell ratio (%)	AVFL (m)	Reel (%)	Raw Silk (%)	Neat (pts)
		Range	Avg.							
<b>BHP-DH</b>	<b>11440 (184)</b>	<b>24-88</b>	<b>54.37</b>	<b>1.624</b>	<b>0.306</b>	<b>18.82</b>	<b>902</b>	<b>76</b>	<b>14.5</b>	<b>91</b>
<b>SK6.SK7</b>	<b>2500 (40)</b>	<b>10-60</b>	<b>44.35</b>	<b>1.506</b>	<b>0.254</b>	<b>16.89</b>	<b>728</b>	<b>74</b>	<b>12.0</b>	<b>88</b>
<b>BCon1.4</b>	<b>950 (18)</b>	<b>20-57</b>	<b>45.34</b>	<b>1.515</b>	<b>0.272</b>	<b>17.92</b>	<b>723</b>	<b>72</b>	<b>12.6</b>	<b>87</b>
<b>% Imp. Over C1</b>			<b>22.59</b>	<b>7.83</b>	<b>20.47</b>	<b>11.42</b>	<b>23.9</b>	<b>2.7</b>	<b>20.8</b>	<b>3.4</b>
<b>% Imp over C2</b>			<b>19.91</b>	<b>7.19</b>	<b>12.50</b>	<b>5.02</b>	<b>24.7</b>	<b>5.5</b>	<b>15.1</b>	<b>4.6</b>