# HIMACHAL PRADESH GOVERNMENT
# FOREST DEPARTMENT


# APPENDICES

# FOR

# DRAFT WORKING PLAN FOR THE FORESTS

# OF

# NAHAN FOREST DIVISION

**(2023-2024 TO 2032-33)**

**Finally submitted by**

**Sh. Sourabh, (IFS)**

**WPO-Cum-DFO Nahan**

# VOLUME-II

# INDEX

## Appendix I- Divisional Area Statement

| SN | Name of Range | Name of Block | Name of Beat | Name of Reserve Forests Area | Number of Compartment | Area in ha as per working Plan |
|---|---|---|---|---|---|---|
| **1** | **Nahan** | **Bikrambag** | **1. Suketi** | Suketi | **C-1** | 17.1 |
| | | | | | C-2 | 2.51 |
| | | | | | **Total** | **19.61** |
| | | | | Bhabarwala | C-1 | 34.21 |
| | | | | | C-2 | 41.5 |
| | | | | | C-3 | 127.02 |
| | | | | | **Total** | **202.73** |
| | | | **2.Khari** | Khari | C-1 | 35.97 |
| | | | | | C-2 | 35.21 |
| | | | | | **Total** | **71.18** |
| | | | | Satkumbha | C-1 | 45.03 |
| | | | | | C-2 | 84.77 |
| | | **-** | | | **Total** | **129.8** |
| | | | | Shisham wala | C-3 | 131.8 |
| | | | | | **Total** | **131.8** |
| | | | **3.Mandpa IInd** | Mandpa | C-4 | 100.61 |
| | | | | | C-5 | 83.04 |
| | | | | | C-6 | 55.36 |
| | | | | | **Total** | **239.01** |
| | | | | Shisham wala | C-2 | 155.95 |
| | | | | | **Total** | **155.95** |
| | | | **4.Mandpa Ist** | Mandpa | C-2 | 140.8 |
| | | | | | C-3 | 129.28 |
| | | | | | **Total** | **270.08** |
| | | | | Shisham wala | C-1 | 124.25 |
| | | | | | **Total** | **124.25** |
| | | | **5.Bikram Bag** | Bikram Bag | C-1 | 24.47 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | C-2 | 44.7 |
| | | | | | **Total** | **69.17** |
| | | | | Khairwala | C-1 | 93.06 |
| | | | | | C-2 | 117.46 |
| | | | | | **Total** | **210.52** |
| | | | | Mandpa | C-1 | 147.2 |
| | | | | | **Total** | **147.2** |
| **2** | | **Nahan** | **1.Kotri** | Kotri | C-1 | 37.08 |
| | | | | | C-2 | 37.72 |
| | | | | | C-3 | 22.72 |
| | | | | | C-4 | 45.56 |
| | | | | | **Total** | **143.08** |
| | | | | Ganashwala | **C-1** | 64.72 |
| | | | | | **C-2** | 54.12 |
| | | | | | C-3 | 79.52 |
| | | | | | **Total** | **198.36** |
| | | **-** | | Kotba | C-1 | 80.96 |
| | | **-** | | | C-3 | 90.4 |
| | | **-** | | | C-4 | 25.6 |
| | | **-** | | | **Total** | **196.96** |
| | | **-** | **2.Jabal** | Jabal | C-1 | 160.96 |
| | | **-** | | | C-2 | 114.4 |
| | | **-** | | | C-3 | 58.36 |
| | | **-** | | | C-4 | 35.4 |
| | | **-** | | | **Total** | **369.12** |
| | | **-** | **3.AmbWala** | Ambwala | C-1 | 88.22 |
| | | **-** | | | C-2 | 65.28 |
| | | **-** | | | C-3 | 161.6 |
| | | **-** | | | C-4 | 85.6 |
| | | **-** | | | **Total** | **400.7** |
| | | **-** | **4.Banswala** | Banswala | C-1 | 157.44 |
| | | **-** | | | C-2 | 69.77 |
| | | **-** | | | C-3 | 146.4 |
| | | **-** | | | **Total** | **373.61** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | - | **5.Periwala** | Periwala | C-1 | 108.86 |
| | | - | | | C-2 | 90.04 |
| | | - | | | C-3 | 62 |
| | | - | | | **Total** | **260.9** |
| | | - | **6.Kangniwal a** | RF Kangiwala | C-1 | 100 |
| | | - | | | C-2 | 81.48 |
| | | - | | | C-3 | 103.04 |
| | | - | | | C-4 | 53.28 |
| | | - | | | **Total** | **337.8** |
| **3** | | **Shambhuwala** | **1.Dhaun** | Dhaun | C-1 | 108.64 |
| | | - | | | C-2 | 85.92 |
| | | - | | | C-3 | 61.12 |
| | | - | | | C-6 | 89.6 |
| | | - | | | C-7 | 110.88 |
| | | - | | | **Total** | **456.16** |
| | | - | | Kotba | C-2 | 75.52 |
| | | - | | | **Total** | **75.52** |
| | | | **2.Katasan** | Katasan | C-1 | 17.6 |
| | | - | | | C-2 | 40.16 |
| | | - | | | C-3 | 24.12 |
| | | - | | | C-4 | 22.56 |
| | | - | | | C-5 | 25.12 |
| | | - | | | C-6 | 28.08 |
| | | - | | | C-7 | 25.12 |
| | | - | | | C-8 | 41.44 |
| | | - | | | C-9 | 37.6 |
| | | - | | | Total | **261.8** |
| | | - | | Uttamwala | C-4 | 58.32 |
| | | - | | | **Total** | **58.32** |
| | | - | **3.Gadda Beat** | Kala Bhood | C-1 | 77.92 |
| | | - | | | C-2 | 56.96 |
| | | - | | | C-6 | 82.88 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | - | | | C-7 | 25.12 |
| | | - | | | C-8 | 57.92 |
| | | - | | | **Total** | **300.8** |
| | | - | | DhaunC4 , C5 | C-4 | 94.08 |
| | | - | | | C-5 | 125.26 |
| | | - | | | **Total** | **219.34** |
| | | - | **4.Bankla** | Bankala Nehrla | C-1 | 71.36 |
| | | - | | | C-2 | 27.36 |
| | | - | | | C-3 | 18.88 |
| | | - | | | C-4 | 40.64 |
| | | - | | | C-5 | 37.6 |
| | | - | | | C-6 | 72.48 |
| | | - | | | C-7 | 67.52 |
| | | - | | | C-8 | 42.88 |
| | | - | | | C-9 | 41.16 |
| | | - | | | C-10 | 75.46 |
| | | - | | | **Total** | **495.34** |
| | | - | **5.Uttam wala** | Uttam wala | C-1 | 35.2 |
| | | - | | | C-2 | 32.64 |
| | | - | | | C-3 | 40.16 |
| | | - | | | C-5 | 9.92 |
| | | - | | | C-6 | 20.56 |
| | | - | | | **Total** | **138.48** |
| | | - | | Kala Bhood | C-3 | 59.04 |
| | | - | | | C-4 | 50.24 |
| | | - | | | C-5 | 50.4 |
| | | - | | | C-9 | 55.84 |
| | | - | | | C-10 | 65.6 |
| | | - | | | **Total** | **281.12** |
| | | - | **6.Rama Ist** | Rama | C-5 | 111.68 |
| | | - | | | C-6 | 107.68 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | - | | | C-7 | 125.76 |
| | | - | | | C-8 | 92.96 |
| | | - | | | **Total** | **438.08** |
| | | - | **7.Teeb** | Teeb | C-1 | 45.12 |
| | | - | | | C-2 | 48.16 |
| | | - | | | C-3 | 41.6 |
| | | - | | | C-4 | 52.8 |
| | | - | | | C-5 | 47.68 |
| | | - | | | C-6 | 45.28 |
| | | - | | | C-7 | 36.32 |
| | | - | | | C-8 | 45.44 |
| | | - | | | **Total** | **362.4** |
| | | - | **8.Rama II nd** | Rama | C-1 | 82.72 |
| | | - | | | C-2 | 54.56 |
| | | - | | | C-3 | 158.4 |
| | | - | | | C-4 | 110 |
| | | - | | | **Total** | **405.68** |
| **4** | | **<u>Todarpur</u>** | **1.Shanghouli** | Shanghouli | C-1 | 128.28 |
| | | - | | | C-2 | 156.48 |
| | | - | | | **Total** | **284.76** |
| | | - | **2.Shanghouli II nd** | Shanghouli | C-3 | 156.96 |
| | | | | | C-4 | 146.88 |
| | | | | | **Total** | 303.84 |
| | | | **3.Thaska** | Thaska | C-1 | 145.88 |
| | | | | | C-2 | 120.48 |
| | | | | | **Total** | **266.36** |
| | | | **3.Todarpur Ist** | Todarpur | C-1 | 92.3 |
| | | | | | C-2 | 145.88 |
| | | | | | **Total** | **238.18** |
| | | | **4.Todarpur IInd** | Todarpur | C-3 | 171.03 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | C-4 | 153.43 |
| | | | | | **Total** | **324.46** |
| | | | | | **G Total** | **8962.47** |
| **1`** | Trilokpur | Trilokpur | Mainthapal | Kala Amb | C-1 | 93.76 |
| | | | | Kala Amb | C-2 | 131.04 |
| | | | | Kala Amb | C-3 | 42.72 |
| | | | | Kala Amb | C-4 | 66.72 |
| | | | | Lai Devi | C-1 | 37.92 |
| | | | | Lai Devi | C-2 | 53.8 |
| | | | | Lai Devi | C-3 | 60.66 |
| | | | | | **Total** | **486.62** |
| | | | Trilokpur | Trilokpur | C-2 | 61.12 |
| | | | | Trilokpur | C-3 | 181.12 |
| | | | | Trilokpur | C-4 | 144.8 |
| | | | | Trilokpur | C-5 | 107.84 |
| | | | | | **Total** | **494.88** |
| | | | Gurudwara | Trilokpur | C-1 | 182.56 |
| | | | | Andheri | C-1 | 112.12 |
| | | | | Andheri | C-2 | 104.75 |
| | | | | Andheri | C-3 | 64.28 |
| | | | | | **Total** | **463.71** |
| | | | Kandiwala | Maidhar | C-4 | 154.9 |
| | | | | Maidhar | C-5 | 76.82 |
| | | | | Maidhar | C-7 | 100.64 |
| | | | | | **Total** | **332.36** |
| | | | Burma Papri | Maidhar | C-1 | 99.04 |
| | | | | Maidhar | C-2 | 116.96 |
| | | | | Maidhar | C-3 | 121.44 |
| | | | | Maidhar | C-8 | 82.56 |
| | | | | | **Total** | **420** |
| **2** | | Kotla | Gumti | Gumti Shambalwa | C-6 | 237.02 |
| | | | | Gumti Shambalwa | C-7 | 263.36 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | **Total** | **500.38** |
| | | | Churan | Gumti Shambalwa | C-2 | 334.4 |
| | | | | Gumti Shambalwa | C-3 | 215.78 |
| | | | | | **Total** | **550.18** |
| | | | Kundla | Gumti Shambalwa | C-1 | 202.88 |
| | | | | Gumti Shambalwa | C-4 | 222.56 |
| | | | | Gumti Shambalwa | C-5 | 121.92 |
| | | | | | **Total** | **547.36** |
| | | | Kotla | Bhogpur Kotla | C-1 | 197.72 |
| | | | | Bhogpur Kotla | C-2 | 184.6 |
| | | | | Bhogpur Kotla | C-3 | 108.16 |
| | | | | | **Total** | **490.48** |
| | | | Neron | Bhogpur Kotla | C-4 | 138.4 |
| | | | | Bhogpur Kotla | C-5 | 108.44 |
| | | | | Bhogpur Kotla | C-6 | 94.56 |
| | | | | Bhogpur Kotla | C-7 | 107.36 |
| | | | | | **Total** | **448.76** |
| **3** | | K.W Bhood | Surla | Maidhar | C-6 | 188.64 |
| | | | | Surla | C-1 | 37.34 |
| | | | | Surla | C-2 | 95.07 |
| | | | | Surla | C-3 | 50.24 |
| | | | | Sikardi | C-1 | 84.4 |
| | | | | Sikardi | C-2 | 16.6 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Sikardi | C-3 | 89.56 |
| | | | | Sikardi | C-4 | 103.9 |
| | | | | Sikardi | C-5 | 65.12 |
| | | | | Sikardi | C-6 | 73.92 |
| | | | | | **Total** | **804.79** |
| | | | Jheera | Jheera | C-1 | 145.7 |
| | | | | Jheera | C-2 | 82.2 |
| | | | | Jheera | C-3 | 104.3 |
| | | | | Jheera | C-4 | 106.66 |
| | | | | Jheera | C-5 | 81.92 |
| | | | | Jheera | C-6 | 114.72 |
| | | | | | **Total** | **635.5** |
| | | | Kiyari | Kiyari | C-1 | 37.1 |
| | | | | Kiyari | C-2 | 53.3 |
| | | | | Kiyari | C-3 | 28.5 |
| | | | | Kiyari | C-4 | 94.05 |
| | | | | Kiyari | C-5 | 94.4 |
| | | | | Kiyari | C-6 | 109.6 |
| | | | | Kiyari | C-7 | 118.8 |
| | | | | Kiyari | C-8 | 150.2 |
| | | | | | **Total** | **685.95** |
| | | | Kotri | Tribhoni | C-1 | 162 |
| | | | | Tribhoni | C-2 | 81.74 |
| | | | | Tribhoni | C-3 | 180.34 |
| | | | | | **Total** | **424.08** |
| | | | Bhudra | Tribhoni | C-4 | 140.1 |
| | | | | Tribhoni | C-5 | 214.8 |
| | | | | Tribhoni | C-6 | 89 |
| | | | | Tribhoni | C-7 | 208.75 |
| | | | | Tribhoni | C-8 | 73.7 |
| | | | | | **Total** | **726.35** |
| | | | | | **G.Total** | **8011.4** |
| **1** | **Jamta** | **Jamta** | **Nauni** | **Nauni** | **C-1** | **9.10** |
| | | | | Nauni | **C-2** | **19.50** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Nauni | **C-3** | **27.70** |
| | | | | Nauni | **C-4** | **11.40** |
| | | | | Nauni | **C-5** | **19.00** |
| | | | | Nauni | **C-6** | **26.00** |
| | | | | Nauni | **C-7** | **26.30** |
| | | | | Nauni | **C-8** | **46.60** |
| | | | | Nauni | **C-9** | **52.00** |
| | | | | Nauni | **C-10** | **46.80** |
| | | | | Nauni | **C-11** | **32.50** |
| | | | | Nauni | **C-12** | **26.40** |
| | | | | | **Total** | **343.30** |
| | | | **Talon** | Talon | **C-1** | **35.10** |
| | | | | Talon | **C-2** | **27.30** |
| | | | | Talon | **C-3** | **70.20** |
| | | | | Talon | **C-4** | **62.40** |
| | | | | Talon | **C-5** | **39.00** |
| | | | | Talon | **C-6** | **42.90** |
| | | | | Talon | **C-7** | **36.40** |
| | | | | Talon | **C-8** | **58.50** |
| | | | | Talon | **C-9** | **50.70** |
| | | | | Talon | **C-10** | **67.60** |
| | | | | Talon | **C-11** | **28.60** |
| | | | | Talon | **C-12** | **13.00** |
| | | | | | **Total** | **531.70** |
| | | | **Barman** | Barman | **C-1** | **14.30** |
| | | | | Barman | **C-2** | **17.00** |
| | | | | Barman | **C-3** | **23.40** |
| | | | | Barman | **C-4** | **19.50** |
| | | | | Barman | **C-5** | **42.20** |
| | | | | Barman | **C-6** | **20.10** |
| | | | | Barman | **C-7** | **31.50** |
| | | | | Barman | **C-8** | **32.50** |
| | | | | Barman | **C-9** | **20.50** |
| | | | | Barman | **C-10** | **31.20** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Barman | **C-11** | **11.7** |
| | | | | Barman | **C-12** | **40.30** |
| | | | | Barman | **C-13** | **35.10** |
| | | | | Barman | **C-14** | **32.50** |
| | | | | Barman | **C-15** | **28.60** |
| | | | | Barman | **C-16** | **19.50** |
| | | | | Barman | **C-17** | **14.30** |
| | | | | | **Total** | **434.2** |
| | | | **Bohal** | Kanoti | **C-1** | **5.20** |
| | | | | Kanoti | **C-2** | **35.20** |
| | | | | Kanoti | **C-3** | **92.30** |
| | | | | Kanoti | **C-4** | **18.20** |
| | | | | Kanoti | **C-5** | **35.10** |
| | | | | Kanoti | **C-6** | **18.20** |
| | | | | Kanoti | **C-7** | **22.10** |
| | | | | Kanoti | **C-8** | **26.00** |
| | | | | Kanoti | **C-9** | **20.80** |
| | | | | Kanoti | **C-10** | **36.40** |
| | | | | Kanoti | **C-11** | **57.20** |
| | | | | Kanoti | **C-12** | **85.80** |
| | | | | Kanoti | **C-13** | **61.10** |
| | | | | Kanoti | **C-14** | **6.50** |
| | | | | | **Total** | **520.10** |
| **2** | | **Panjhal** | **Panjhal** | **Panjhal** | **C-1** | **36.40** |
| | | | | Panjhal | **C-2** | **33.80** |
| | | | | Panjhal | **C-3** | **26.00** |
| | | | | Panjhal | **C-4** | **37.70** |
| | | | | Panjhal | **C-5** | **39.00** |
| | | | | Panjhal | **C-6** | **28.60** |
| | | | | | **Total** | **201.50** |
| | | | **Jatak** | Jatak | **C-1** | **57.95** |
| | | | | Jatak | **C-2** | **34.55** |
| | | | | Jatak | **C-3** | **63.30** |
| | | | | Jatak | **C-4** | **18.20** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Jatak | **C-5** | **57.20** |
| | | | | Jatak | **C-6** | **22.10** |
| | | | | Jatak | **C-7** | **24.70** |
| | | | | Jatak | **C-8** | **24.70** |
| | | | | Jatak | **C-9** | **27.30** |
| | | | | Jatak | **C-10** | **22.10** |
| | | | | | **Total** | **352.10** |
| | | | **Sanoga** | Sanoga | **C-1** | **80.60** |
| | | | | Sanoga | **C-2** | **81.90** |
| | | | | Sanoga | **C-3** | **9.10** |
| | | | | Sanoga | **C-4** | **70.20** |
| | | | | Sanoga | **C-5** | **55.90** |
| | | | | Sanoga | **C-6** | **66.30** |
| | | | | Sanoga | **C-7** | **48.10** |
| | | | | Sanoga | **C-8** | **26.00** |
| | | | | | **Total** | **438.10** |
| | | | **Patandi** | Kasoga | **C-1** | **53.30** |
| | | | | Kasoga | **C-2** | **65.00** |
| | | | | Kasoga | **C-3** | **31.20** |
| | | | | Kasoga | **C-4** | **39.00** |
| | | | | Kasoga | **C-5** | **13.00** |
| | | | | Kasoga | **C-6** | **39.00** |
| | | | | Kasoga | **C-7** | **29.90** |
| | | | | Kasoga | **C-8** | **57.20** |
| | | | | Kasoga | **C-9** | **14.30** |
| | | | | | **Total** | **341.90** |
| | | | **Dhagera** | Dhegra | **C-1** | **20.80** |
| | | | | Dhegra | **C-2** | **28.60** |
| | | | | Dhegra | **C-3** | **18.20** |
| | | | | Dhegra | **C-4** | **14.30** |
| | | | | Dhegra | **C-5** | **33.80** |
| | | | | Dhegra | **C-6** | **36.40** |
| | | | | Dhegra | **C-7** | **22.10** |
| | | | | Dhegra | **C-8** | **28.60** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Dhegra | **C-9** | **29.50** |
| | | | | Dhegra | **C-10** | **14.30** |
| | | | | Dhegra | **C-11** | **5.20** |
| | | | | | **Total** | **251.80** |
| | | | | Dandoli | **C-1** | **22.10** |
| | | | | Dandoli | **C-2** | **40.30** |
| | | | | Dandoli | **C-3** | **35.10** |
| | | | | | **Total** | **97.50** |
| **3** | | **Banethi** | **Banethi** | **Eest Banethi** | **C-1** | **42.60** |
| | | | | Eest Banethi | **C-2** | **26.00** |
| | | | | Eest Banethi | **C-3** | **26.00** |
| | | | | Eest Banethi | **C-4** | **31.70** |
| | | | | Eest Banethi | **C-5** | **29.60** |
| | | | | Eest Banethi | **C-6** | **33.40** |
| | | | | Eest Banethi | **C-7** | **29.75** |
| | | | | Eest Banethi | **C-8** | **29.60** |
| | | | | Eest Banethi | **C-9** | **28.90** |
| | | | | Eest Banethi | **C-10** | **20.80** |
| | | | | Eest Banethi | **C-11** | **13.00** |
| | | | | Eest Banethi | **C-12** | **31.20** |
| | | | | Eest Banethi | **C-13** | **21.70** |
| | | | | Eest Banethi | **C-14** | **32.40** |
| | | | | Eest Banethi | **C-15** | **31.20** |
| | | | | Eest Banethi | **C-16** | **15.60** |
| | | | | Eest Banethi | **C-17** | **17.50** |
| | | | | Eest Banethi | **C-18** | **27.30** |
| | | | | | **Total** | **488.25** |
| | | | | West Banethi | **C-1** | **38.50** |
| | | | | West Banethi | **C-2** | **16.90** |
| | | | | West Banethi | **C-3** | **20.80** |
| | | | | West Banethi | **C-4** | **29.80** |
| | | | | West Banethi | **C-5** | **23.40** |
| | | | | West Banethi | **C-6** | **19.50** |
| | | | | West Banethi | **C-7** | **31.20** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | West Banethi | **C-8** | **27.10** |
| | | | | | **Total** | **207.20** |
| | | | **Gaunth** | Eest Banethi | **C-19** | **48.80** |
| | | | | Eest Banethi | **C-20** | **14.30** |
| | | | | Eest Banethi | **C-21** | **18.50** |
| | | | | Eest Banethi | **C-22** | **27.30** |
| | | | | Eest Banethi | **C-23** | **18.20** |
| | | | | Eest Banethi | **C-24** | **54.60** |
| | | | | Eest Banethi | **C-25** | **43.10** |
| | | | | Eest Banethi | **C-26** | **19.50** |
| | | | | Eest Banethi | **C-27** | **20.80** |
| | | | | Eest Banethi | **C-28** | **26.00** |
| | | | | Eest Banethi | **C-29** | **52.00** |
| | | | | Eest Banethi | **C-30** | **26.00** |
| | | | | Eest Banethi | **C-31** | **26.00** |
| | | | | | **Total** | **395.10** |
| | | | **Katli** | Katli | **C-1** | **26.00** |
| | | | | Katli | **C-2** | **5.50** |
| | | | | Katli | **C-3** | **27.30** |
| | | | | Katli | **C-4** | **16.90** |
| | | | | Katli | **C-5** | **81.20** |
| | | | | Katli | **C-6** | **92.30** |
| | | | | Katli | **C-7** | **97.50** |
| | | | | Katli | **C-8** | **5.20** |
| | | | | | **Total** | **351.90** |
| | | | **Amta** | Dadhu | **C-1** | **41.60** |
| | | | | Dadhu | **C-2** | **45.50** |
| | | | | Dadhu | **C-3** | **19.50** |
| | | | | Dadhu | **C-4** | **24.70** |
| | | | | Dadhu | **C-5** | **36.40** |
| | | | | Dadhu | **C-6** | **33.00** |
| | | | | Dadhu | **C-7** | **17.70** |
| | | | | Dadhu | **C-8** | **31.20** |
| | | | | Dadhu | **C-9** | **28.60** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Dadhu | **C-10** | **23.40** |
| | | | | Dadhu | **C-11** | **23.40** |
| | | | | Dadhu | **C-12** | **33.80** |
| | | | | | **Total** | **358.80** |
| | | | | Korar | **C-1** | **28.60** |
| | | | | Korar | **C-2** | **44.20** |
| | | | | Korar | **C-3** | **70.00** |
| | | | | Korar | **C-4** | **39.00** |
| | | | | | **Total** | **181.80** |
| | | | | Amta | **C-1** | **31.10** |
| | | | | Amta | **C-2** | **27.30** |
| | | | | Amta | **C-3** | **48.10** |
| | | | | | **Total** | **106.50** |
| | | | **Kathara** | Amta | **C-4** | **66.5** |
| | | | | Amta | **C-5** | **31.20** |
| | | | | Amta | **C-6** | **39.00** |
| | | | | Amta | **C-7** | **42.90** |
| | | | | Amta | **C-8** | **67.60** |
| | | | | Amta | **C-9** | **52.00** |
| | | | | Amta | **C-10** | **30.00** |
| | | | | | **Total** | **329.2** |
| | | | | Sadhor | **C-1** | **65.30** |
| | | | | Sadhor | **C-2** | **31.10** |
| | | | | Sadhor | **C-3** | **27.00** |
| | | | | Sadhor | **C-4** | **64.00** |
| | | | | Sadhor | **C-5** | **22.10** |
| | | | | Sadhor | **C-6** | **62.40** |
| | | | | | **Total** | **271.90** |
| | | | **Saroga** | Saroga | **C-1** | **13.30** |
| | | | | Saroga | **C-2** | **52.00** |
| | | | | Saroga | **C-3** | **22.00** |
| | | | | Saroga | **C-4** | **26.00** |
| | | | | Saroga | **C-5** | **14.30** |
| | | | | Saroga | **C-6** | **27.30** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Saroga | **C-7** | **14.30** |
| | | | | Saroga | **C-8** | **13.00** |
| | | | | Saroga | **C-9** | **19.50** |
| | | | | Saroga | **C-10** | **26.30** |
| | | | | | **Total** | **228.00** |
| | | | | | **G-Total** | **6430.85** |
| **1** | **Kolar** | **Kolar** | **Kolar** | **Karondewali** | **C-1** | **9.97** |
| | | | | | C-2 | 15.09 |
| | | | | | C-3 | 37.22 |
| | | | | | C-4 | 45.27 |
| | | | | | **Total** | **107.55** |
| | | | | Bidhawali | C-1 | 36.16 |
| | | | | | C-2 | 16.00 |
| | | | | | C-3 | 26.72 |
| | | | | | C-4 | 22.72 |
| | | | | | C-5 | 24.64 |
| | | | | | C-6 | 31.20 |
| | | | | | **Total** | **157.44** |
| | | | **Jattanwali** | Dardawala | C-1 | 12.57 |
| | | | | | C-2 | 23.89 |
| | | | | | C-3 | 14.88 |
| | | | | | C-4 | 27.36 |
| | | | | | C-5 | 31.52 |
| | | | | | C-6 | 25.44 |
| | | | | | C-7 | 40.80 |
| | | | | | C-8 | 20.16 |
| | | | | | **Total** | **196.62** |
| | | | | Gariwala | C-1 | 11.82 |
| | | | | | C-2 | 10.56 |
| | | | | | C-3 | 23.84 |
| | | | | | C-4 | 19.84 |
| | | | | | C-5 | 20.16 |
| | | | | | C-6 | 40.48 |
| | | | | | C-7 | 32.64 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | C-8 | 45.28 |
| | | | | | C-9 | 55.36 |
| | | | | | C-10 | 27.36 |
| | | | | | **Total** | **287.34** |
| | | | **Kodewala** | Haripur | C-1 | 39.84 |
| | | | | | C-2 | 51.04 |
| | | | | | C-3 | 69.08 |
| | | | | | C-4 | 86.00 |
| | | | | | C-5 | 82.88 |
| | | | | | C-7 | 115.16 |
| | | | | | C-8 | 26.88 |
| | | | | | C-9 | 53.48 |
| | | | | | **Total** | **524.36** |
| | | | **Jheel** | Haripur | C-6 | 100.20 |
| | | | | | C-11 | 91.72 |
| | | | | | C-12 | 59.72 |
| | | | | | C-13 | 62.88 |
| | | | | | C-14 | 81.48 |
| | | | | | **Total** | **396.00** |
| | | | **Haripur** | Haripur | C-10 | 40.64 |
| | | | | | C-15 | 52.80 |
| | | | | | C-16 | 78.60 |
| | | | | | C-17 | 70.40 |
| | | | | | C-18 | 67.84 |
| | | | | | C-19 | 48.00 |
| | | | | | C-20 | 25.12 |
| | | | | | **Total** | **383.40** |
| **2** | | **Sambhalka** | **Dhakrawala** | **Dardawala** | **C-1** | **54.40** |
| | | | | | C-2 | 81.92 |
| | | | | | C-3 | 79.04 |
| | | | | | C-4 | 88.00 |
| | | | | | **Total** | **303.36** |
| | | | **Sambhalka** | Sambhalka | C-1 | 101.44 |
| | | | | | C-2 | 93.76 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | C-3 | 58.40 |
| | | | | | C-4 | 79.04 |
| | | | | | C-5 | 80.48 |
| | | | | | C-6 | 145.60 |
| | | | | | **Total** | **558.72** |
| | | | **Negiwala** | Negiwala | C-1 | 97.92 |
| | | | | | C-2 | 158.29 |
| | | | | | C-3 | 91.04 |
| | | | | | C-4 | 60.64 |
| | | | | | C-5 | 58.56 |
| | | | | | **Total** | **466.45** |
| | | | Rampur Ganda | Rampur Ganda | C-1 | 124.75 |
| | | | | | C-2 | 63.91 |
| | | | | | C-3 | 75.74 |
| | | | | | **Total** | **264.40** |
| **3** | | **Bheron** | **E/Bheron** | **E/Bheron** | **C-1** | **68.16** |
| | | | | | C-2 | 224.60 |
| | | | | | C-3 | 163.04 |
| | | | | | C-4 | 121.00 |
| | | | | | C-5 | 114.24 |
| | | | | | **Total** | **691.04** |
| | | | **W/Bheron** | W/Bheron | C-1 | 76.48 |
| | | | | | C-2 | 38.72 |
| | | | | | C-3 | 77.92 |
| | | | | | C-4 | 100.32 |
| | | | | | C-5 | 90.56 |
| | | | | | C-6 | 88.00 |
| | | | | | **Total** | **472.00** |
| | | | **Jamretwa** | Jamretwa | C-1 | 59.11 |
| | | | | | C-2 | 45.27 |
| | | | | | C-3 | 69.17 |
| | | | | | C-4 | 55.08 |
| | | | | | C-5 | 78.56 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | C-6 | 98.09 |
| | | | | | C-7 | 75.46 |
| | | | | | **Total** | **480.74** |
| | | | **Mattar** | Mattar | C-1 | 70.82 |
| | | | | | C-2 | 142.00 |
| | | | | | C-3 | 130.78 |
| | | | | | C-4 | 124.64 |
| | | | | | C-5 | 124.64 |
| | | | | | **Total** | **592.88** |
| | | | **Brahamanwali** | Brahamanwali | C-1 | 87.90 |
| | | | | | C-2 | 126.92 |
| | | | | | C-3 | 143.74 |
| | | | | | **Total** | **358.56** |
| | | | | Kohluwala | C-1 | 52.43 |
| | | | | | C-2 | 64.70 |
| | | | | | **Total** | **117.13** |
| | | | | | C-7 | 25.12 |
| | | | | | C-8 | 48.00 |
| | | | | | **Total** | **320.28** |
| | | | | | C-11 | 50.24 |
| | | | | | C-12 | 43.68 |
| | | | | | C-13 | 48.00 |
| | | | | | C-14 | 65.28 |
| | | | | | **Total** | **306.68** |
| | | | **Lohgarh**-3 | Lohgarh | C-3 | 65.36 |
| | | | | | C-15 | 85.76 |
| | | | | | C-16 | 44.86 |
| | | | | | C-17 | 44.00 |
| | | | | | C-18 | 42.72 |
| | | | | | **Total** | **282.70** |
| | | | **Lohgarh**-4 | Lohgarh | C-19 | 50.20 |
| | | | | | C-21 | 16.32 |
| | | | | | C-22 | 68.80 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | C-24 | 41.44 |
| | | | | | C-25 | 47.20 |
| | | | | | **Total** | **223.96** |
| | | | **Lohgarh-5** | Lohgarh | C-20 | 20.00 |
| | | | | | C-23 | 69.12 |
| | | | | | C-26 | 55.20 |
| | | | | | C-27 | 52.48 |
| | | | | | C-28 | 67.84 |
| | | | | | **Total** | **264.64** |
| | | | **Lohgarh-6** | Lohgarh | C-29 | 71.36 |
| | | | | | C-30 | 41.60 |
| | | | | | C-31 | 60.48 |
| | | | | | C-32 | 72.80 |
| | | | | | **Total** | **246.24** |
| | | | | | **G.Total** | **8002.49** |

## Appendix II A- Enumeration and its Results.

Compartment History files of Nahan Forest Division is under process and will be prepared as per National Working Plan Code, 2014:

| Block | Compartment | Sub compartment | Total area (Ha) | Area enumerated | Sampling Method if partial | Year of enumeration |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |

- **Result of enumeration are enlisted in working circles.**

**Details of CH files are given as under:**

| Sr. No. | Name of Range | Name of Reserve Forest with compartment | Total compartment (in Nos) |
|---|---|---|---|
| 1 | **Nahan Forest Range** | Toderpur C-1 to C-4 | 4 |
| | | Sangholi C-1 to C-4 | 4 |
| | | Thaska C-1 to C-2 | 2 |
| | | Shishamwala C-1 to C-3 | 3 |
| | | Khari C-1 to C-2 | 2 |
| | | Satkumbha C-1 to C-2 | 2 |
| | | Bhabarwala C-1 to C-3 | 3 |
| | | Suketi C-1 to C-2 | 2 |
| | | Mandpa C-1 to C-6 | 6 |
| | | Khairwala C-1 to C-2 | 2 |
| | | Bikrambagh C-1 to C-2 | 2 |
| | | Teeb C-1 to C-8 | 8 |
| | | Katasan C-1 to C-9 | 9 |
| | | Uttamwala-Baraban C-1 to C-6 | 6 |
| | | Rama C-1 to C-8 | 8 |
| | | Kala-Bhood C-1 to C-10 | 10 |
| | | Nehrla-Bankala C-1 to C-10 | 10 |

| | | | |
|---|---|---|---|
| | | Dhaun C-1 to C-7 | 7 |
| | | Kotba C-1 to C-4 | 4 |
| | | Ganeshwala C-1 to C-3 | 3 |
| | | Kotri C-1 to C-4 | 4 |
| | | Periwala C-1 to C-3 | 3 |
| | | Ambwala C-1 to C-4 | 4 |
| | | Kangniwala C-1 to C-4 | 4 |
| | | Jabbal C-1 to C-4 | 4 |
| | | Banswala C-1 to C-3 | 3 |
| | **Total number of CH files of Nahan Range.** | **26 Nos RF & CH files** | **119 Nos.** |
| 2 | **Jamta Forest Range** | Burman C-1 to C -17 | 17 |
| | | Jetag C-1 to C -10 | 10 |
| | | Nauni C-1 to C-12 | 12 |
| | | Kasoga C-1 to C-9 | 9 |
| | | Thandoli C-1 to C-3 | 3 |
| | | Dhagera C-1 to C-11 | 11 |
| | | Panjahal C-1 to C-6 | 6 |
| | | Sanoga C-1 to C-8 | 8 |
| | | Talon C-1 to C-12 | 12 |
| | | East-Banethi C-1 to C-31 | 31 |
| | | West-Banethi C-1 to C-8 | 8 |
| | | Kanoti C-1 to C-14 | 14 |
| | | Katli C-1 to C-8 | 8 |
| | | Korar C-1 to C-4 | 4 |
| | | Dhadu C-1 to C-12 | 12 |
| | | Amta C-1 to C-10 | 10 |
| | | Sador C-1 to C-6 | 6 |

| | | | |
|---|---|---|---|
| | | Saroga C-1 to C-10 | 10 |
| | **Total number of CH files of Jamta Range.** | **18 Nos RF & CH files** | **191 Nos.** |
| | **Kolar Forest Range** | Bhidawala C-1 to C-6 | 6 |
| | | Karondiwala C-1 to C-4 | 4 |
| | | Dardanwala C-1 to C-8 | 8 |
| | | Gariwala C-1 to C-10 | 10 |
| | | Lohgarh C-1 to C-32 | 32 |
| | | Haripur C-1 to C-20 | 20 |
| | | Negiwal C-1 to C-5 | 5 |
| | | Dhakranwala C-1 to C-4 | 4 |
| | | Shambhalka C-1 to C-6 | 6 |
| | | Rampurgainda C-1 to C-3 | 3 |
| | | Matter C-1 to C-5 | 5 |
| | | Brahmanwali C-1 to C-3 | 3 |
| | | Kohluwala C-1 to C-2 | 2 |
| | | East-Bheron C-1 to C-5 | 5 |
| | | West-Bheron C-1 to C-6 | 6 |
| | | Jamretwa C-1 to C-7 | 7 |
| | **Total number of CH files of Kolar Range.** | **16 Nos RF & CH files** | **126 Nos.** |
| | **Trilokpur Forest Range** | Jheera C-1 to C-6 | 6 |
| | | Surla C-1 to C-3 | 3 |
| | | Maidhar C-1 to C-8 | 8 |
| | | Trilokpur C-1 to C-5 | 5 |
| | | Lai Devi C-1 to C-3 | 3 |
| | | Kala-Amb C-1 to C-4 | 4 |
| | | Shikardhi C-1 to C-6 | 6 |
| | | Kiary C-1 to C-8 | 8 |

| | | | |
|---|---|---|---|
| | | Tribhuni C-1 to C-8 | 8 |
| | | Bhogpur Kotla C-1 to C-7 | 7 |
| | | Andheri Gurdwara C-1 to C-3 | 3 |
| | | Gumti-Sambhalwa C-1 to C-7 | 7 |
| | **Total number of CH files of Trilokpur Range.** | **12 Nos RF & CH files** | **68 Nos** |
| | **Total number of CH files of Nahan Forest Division** | **72 Nos RF & CH files** | **504 Nos.** |

## Appendix II B- Biodiversity Assessment

Biodiversity assessment refers to the process of evaluating and documenting the variety of living organisms in a specific area or ecosystem. It involves identifying and quantifying different species, as well as understanding their ecological interactions and the overall health of the ecosystem.

Biodiversity assessments are important for several reasons:

Conservation: By assessing biodiversity, scientists and conservationists can identify areas of high species richness and prioritize them for conservation efforts. This helps protect endangered species and preserve habitats that are crucial for the functioning of ecosystems.

Environmental Impact Assessment: Biodiversity assessments are often conducted as part of environmental impact assessments for development projects. They help identify potential impacts on biodiversity and inform decision-making processes to minimize negative effects on ecosystems.

Monitoring and Management: Regular biodiversity assessments can provide valuable data for monitoring changes in ecosystems over time. They help identify trends, assess the effectiveness of conservation measures, and guide management strategies for maintaining or restoring biodiversity.

Research: Biodiversity assessments generate valuable data for scientific research. They contribute to our understanding of ecological processes, species distributions, and the impacts of environmental changes on ecosystems.

Biodiversity assessments typically involve a combination of field surveys, data collection, and analysis. Different methods may be used, depending on the scale and objectives of the assessment. These can include techniques such as habitat surveys, species inventories, genetic analysis, remote sensing, and modeling.

Assessments often focus on different taxonomic groups, such as plants, birds, mammals, insects, or marine organisms. However, comprehensive assessments aim to capture the diversity of all organisms, including microorganisms and the variety of genetic material present in an ecosystem.

Overall, biodiversity assessments are essential tools for understanding and conserving the natural world, helping to safeguard ecosystems and the services they provide to humanity.

## Appendix II C-Regeneration Surveys

**Status of Regeneration:** To enhance forest health, reforestation and Afforestation programs are critical. Reforestation involves replanting trees in areas where forests have been harvested or destroyed by natural disturbances. Afforestation, on the other hand, involves establishing forests in areas that were previously non-forest lands. Both practices help to restore forest cover, increase carbon sequestration, prevent soil erosion, and provide habitat for wildlife. The status of forest regeneration varies depending on the specific region and the efforts made in terms of conservation and reforestation. Forests around the world face different challenges such as deforestation, illegal logging, wildfires, climate change, and habitat destruction, which can hinder their regeneration.

**Parameter to assess regeneration**

*a.* Good regeneration, if seedlings are more in numbers than the saplings and likewise Saplings are more than that of adults.

*b.* Fair regeneration, if seedlings are more in numbers than the saplings but the saplings are equal or less than that of adults.

*c.* Poor regeneration, if a species survives in only sapling stage, but not as seedlings (though sapling may be less, more or equal to adults).

*d.* No regeneration, if a species is absent both in sapling and seedling stage, but present as adult.

**Regeneration Survey Methodology & Assessment of Sal regeneration**

Regeneration Survey Methodology for assessing status of natural regeneration of Sal is given as under:

**Natural regeneration (seed origin) method:**

i) Line plot system of cruising was followed

ii) The regeneration survey was carried out on the cruise lines

iii) The cruise lines followed should be recorded in the GPS

**Natural Regeneration (seed origin) Methodology**

The cruise lines should be at least be 20 m apart, equally spaced and cover the entire compartment area

- On each of these cruise lines, 10 square plots of 2 m × 2 m size was laid out
- 5 plots on the left-hand side and the other 5 plots on the right hand -side
- A gap of at least 5 m will be maintained between the two sample -plots

- The sample plot must be perpendicular to the cruise lines
- No sample plot should lie on Nalas, fire-lines, forest roads etc.

**Sampling Intensity and Number of Regeneration Plots**

| Compartment Area (Ha.) | No. of regeneration plots per Hectare (Ha.) |
|---|---|
| 0-10 | 5 |
| 11-50 | 3 |
| >50 | 2 |

**EVALUATION OF DATA**

| Score | Category of Regeneration | Remarks |
|---|---|---|
| 5 | Woody shoots of establishment height (2.5m and above) having d.b.h. of 10cm or less | At least one such plant is present in regeneration plot |
| 1.5 | Seedlings up to 2.5m | In the absence of above category, one or more plants of height less than 2.5m and are more than one year old |
| 0.1 | Current years seedlings or recruitment. Two-leaved | Fresh seedlings that have erupted after last monsoon. |
| 0 | Blank | All categories of regeneration are absent |

Field assessment of Natural Regeneration of Sal is shown under:

**RF Dardawala C-1 Area=12.57 Hact**

**Line -1**

| S.No | Plot No | Category of Regeneration | Score | GPS Location | Remarks |
|---|---|---|---|---|---|
| 1. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49814<br>E077.4294<br>Elv.440 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49814<br>E077.4294<br>Elv.440 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49814<br>E077.4294<br>Elv.440 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49814<br>E077.4294<br>Elv.440 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49814<br>E077.4294<br>Elv.440 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49814<br>E077.4294<br>Elv.440 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49814<br>E077.4294<br>Elv.440 mtr | |

| | | | | | |
|---|---|---|---|---|---|
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49814<br>E077.4294<br>Elv.440 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49814<br>E077.4294<br>Elv.440 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49814<br>E077.4294<br>Elv.440 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line 2** | | | | | |
| 2 | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49651<br>E077.42874<br>Elv.448 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49651<br>E077.42874<br>Elv.448 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment | 5 | N30.49651 | |

| | | | | | |
|---|---|---|---|---|---|
| | | height (2.5 m and above) having dbh of 10 cm less | | E077.42874 Elv.448 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49651 E077.42874 Elv.448 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49651 E077.42874 Elv.448 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49651 E077.42874 Elv.448 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49651 E077.42874 Elv.448 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49651 E077.42874 Elv.448 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49651<br>E077.42874<br>Elv.448 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49651<br>E077.42874<br>Elv.448 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line 3** | | | | | |
| 3. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49515<br>E077.42826<br>Elv.515 mtr | |

| | | | | | |
|---|---|---|---|---|---|
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line 4** | | | | | |
| 4. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49586<br>E077.42784<br>Elv.508 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49586<br>E077.42784<br>Elv.508 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49586<br>E077.42784<br>Elv.508 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49586<br>E077.42784<br>Elv.508 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49586<br>E077.42784<br>Elv.508 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment | Nil | N30.49586 | |

| | | | | | |
|---|---|---|---|---|---|
| | | height (2.5 m and above) having dbh of 10 cm less | | E077.42784 Elv.508 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49586 E077.42784 Elv.508 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49586 E077.42784 Elv.508 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49586 E077.42784 Elv.508 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49586 E077.42784 Elv.508 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line 5** | | | | | |
| 5. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641 E077.42688 Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641<br>E077.42688<br>Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641<br>E077.42688<br>Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641<br>E077.42688<br>Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641<br>E077.42688<br>Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641<br>E077.42688<br>Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641<br>E077.42688<br>Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641<br>E077.42688<br>Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641<br>E077.42688<br>Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49641<br>E077.42688<br>Elv.509 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |

**RF Dardawala 3 Area=14.88 Hact**

**Line -1**

| S.No | Plot No | Category of Regeneration | Score | GPS Location | Remarks |
|---|---|---|---|---|---|
| 1. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49538<br>E077.43456 | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | | dbh of 10 cm less | | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | Nil | | |
| | | Blank | 0 | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line -2** | | | | | |
| 2. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49483<br>E077.43431 | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line -3** | | | | | |
| 3. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49322 E077.43529 | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line-4** | | | | | |
| 4. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49377 E077.43598 | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | Nil | | |
| | | Blank | 0 | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | | dbh of 10 cm less | | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line-5** | | | | | |
| 5. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49343 E077.43683 | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |

| **LINE -6** | | | | | |
|---|---|---|---|---|---|
| 6. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49415 E077.43703 | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |

| **LINE -7** | | | | | |
|---|---|---|---|---|---|
| 7. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49463<br>E077.43588 | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |

**RF Gariwala C-1 Area=11.82 Hact**

**Line -1**

| S.No | Plot No | Category of Regeneration | Score | GPS Location | Ramarks |
|---|---|---|---|---|---|
| 1. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49262 E077.42567 Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49262 E077.42567 Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49262 E077.42567 Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49262 E077.42567 Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having | Nil | N30.49262 E077.42567 | |

| | | | | | |
|---|---|---|---|---|---|
| | | dbh of 10 cm less | | Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49262<br>E077.42567<br>Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49262<br>E077.42567<br>Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49262<br>E077.42567<br>Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49262<br>E077.42567<br>Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49262<br>E077.42567<br>Elv.527mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Blank | Nil | | |
| **Line 2** | | | | | |
| 2. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |

| | | | | | |
|---|---|---|---|---|---|
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49229<br>E077.42565<br>Elv.537 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line 3** | | | | | |
| 3. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49170<br>E077.42524<br>Elv.541 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment | 5 | N30.49170 | |

| | | | | | |
|---|---|---|---|---|---|
| | | height (2.5 m and above) having dbh of 10 cm less | | E077.42524 Elv.541 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49170 E077.42524 Elv.541 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49170 E077.42524 Elv.541 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49170 E077.42524 Elv.541 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49170 E077.42524 Elv.541 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49170 E077.42524 Elv.541 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49170<br>E077.42524<br>Elv.541 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49170<br>E077.42524<br>Elv.541 mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49170<br>E077.42524<br>Elv.541 mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line 4** | | | | | |
| 4. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49297<br>E077.42569<br>Elv.539mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49297<br>E077.42569<br>Elv.539mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49297<br>E077.42569<br>Elv.539mtr | |
| | | Seedling up to 2.5 | 1.5 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49297<br>E077.42569<br>Elv.539mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49297<br>E077.42569<br>Elv.539mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49297<br>E077.42569<br>Elv.539mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49297<br>E077.42569<br>Elv.539mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49297<br>E077.42569<br>Elv.539mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49297<br>E077.42569<br>Elv.539mtr | |

| | | | | | |
|---|---|---|---|---|---|
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49297<br>E077.42569<br>Elv.539mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line 5** | | | | | |
| 5. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49329<br>E077.42542<br>Elv.524mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49329<br>E077.42542<br>Elv.524mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49329<br>E077.42542<br>Elv.524mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | N30.49329<br>E077.42542<br>Elv.524mtr | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment | Nil | N30.49329 | |

| | | | | | |
|---|---|---|---|---|---|
| | | height (2.5 m and above) having dbh of 10 cm less | | E077.42542 Elv.524mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49329 E077.42542 Elv.524mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49329 E077.42542 Elv.524mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49329 E077.42542 Elv.524mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49329 E077.42542 Elv.524mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49329 E077.42542 Elv.524mtr | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |

**RF Gariwala 2 Area=10.56 Hact**

**Line -1**

| S.No | Plot No | Category of Regeneration | Score | GPS Location | Ramarks |
|---|---|---|---|---|---|
| 1. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49189 E077.42666 | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | | dbh of 10 cm less | | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line -2** | | | | | |
| 2. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49189 E077.42712 | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line -3** | | | | | |
| 3. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49232 E077.42652 | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | | height (2.5 m and above) having dbh of 10 cm less | | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line-4** | | | | | |
| 4. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N30.49422 E077.42721 | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | 5 | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | | | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| **Line-5** | | | | | |
| 5. | 1 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | N 30.49529<br>E 077.42593 | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | 2 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 3 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 4 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 5 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 6 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 7 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 8 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 9 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | 1.5 | | |
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |
| | 10 | Woody Shoots of establishment height (2.5 m and above) having dbh of 10 cm less | Nil | | |
| | | Seedling up to 2.5 | Nil | | |

| | | | | | |
|---|---|---|---|---|---|
| | | Currently Seedling | 0.1 | | |
| | | Blank | Nil | | |

**Regeneration status of the compartment**

The Regeneration score of all the plots will be summed up and

the regeneration status will be determined as per the following formula:

$$Natural\ Regeneration\ Percentage = \frac{sum\ of\ score\ in\ all\ plots}{total\ no.\ of\ plots} \times 20$$

$$= \frac{310.80}{220} \times 20$$

$$= 1.412 \times 20$$

$$= 28.24\%$$

## Appendix II D Socio economic survey.

**-Survey didn’t conducted-**

## Appendix III-NTFP (including MAPs) Estimation.

**-No estimation conducted-**

## Appendix IV-Research Plots

**No Research has been done.**

## Appendix V- Rights, Concession, Grazing Regulations

Some of the Migratory grazers mainly, (Gaddies & Gujjars) are present in this Forest Division shown in the table below:

**Migratory Grazer & Gujjars of Nahan Forest Division:-**

| Year | Goat/Sheep | Cow & Bull | Buffalo | Other | Total Animal |
|---|---|---|---|---|---|
| 2014-15 | 20205 | 15 | 243 | 43 | 20506 |
| 2015-16 | 2021 | 363 | 73 | 0 | 2457 |
| 2016-17 | 7419 | 15 | 126 | 0 | 7560 |
| 2017-18 | 12643 | 0 | 225 | 52 | 12920 |
| 2018-19 | 8941 | 9 | 103 | 44 | 9097 |
| 2019-20 | 8106 | 6 | 63 | 118 | 8293 |
| 2020-21 | 14418 | 19 | 241 | 1391 | 16069 |
| 2021-22 | 5764 | 14 | 101 | 912 | 6791 |
| 2022-23 | 3419 | 4 | 108 | 539 | 4070 |
| Total | 82936 | 445 | 1283 | 3099 | 87763 |

**Right holder's of Nahan Forest Division:**

| Year | Goat/Sheep | Cow & Bull | Buffalo | Other | Total Animal |
|---|---|---|---|---|---|
| 2014-15 | 13390 | 354 | 499 | 70 | 14313 |
| 2015-16 | 15547 | 2155 | 1122 | 88 | 18912 |
| 2016-17 | 9607 | 528 | 391 | 39 | 10565 |
| 2017-18 | 10732 | 25 | 210 | 55 | 11022 |
| 2018-19 | 1390 | 614 | 485 | 29 | 2518 |
| 2019-20 | 776 | 809 | 574 | 24 | 2183 |
| 2020-21 | 820 | 1105 | 747 | 58 | 2730 |
| 2021-22 | 1252 | 642 | 540 | 27 | 2461 |
| 2022-23 | 914 | 1057 | 731 | 98 | 2800 |
| Total | 54428 | 7289 | 5299 | 488 | 67504 |

## Appendix VI Schedule of Rates of timber, compensation etc.

In compliance with Himachal Pradesh Govt. circular no. FFE-A(B)II-16/2015 Dated 12.07.2017, all the estimates of the civil and engineering works are prepared as per the schedule rates of Himachal Pradesh Public Works Department. At present the revised schedule rate of HPPWD for 2020 is followed. However, for forestry works the schedule rate of HPFD is followed. The norms of plantation and nursery works are annually revised by the Forest Department.

### Rates of compensation for compounding of forest offences fixed by Chief Conservator of Forests in May 2023 –

(In exercise of powers vested in CCF Nahan under serial no. 5 of Govt. of HP. Notification no. FFE-B-A (3)-3/2010 Dated 05.05.2010, the rates of compensation for compounding of various forest offences u/s 68 of the Indian Forest Act, 1927 in Forest Circle, Nahan are hereby fixed)

SCHEDULE OF SANCTIONED RATES OF COMPENSATION FOR COMPOUNDING OF FOREST OFFENCES UNDER SECTION 68 OF INDIAN FOREST ACT,1927.

**1. Illicit Felling:**

**(a) Illicit Felling of trees:** Not to be compounded **as per the order dated 24.05.2016 of CWPIL 8/2015 of Hon'ble High court Himachal Pradesh**

**(b) Illicit cutting or girdling of trees leading to death of tree:**

| **Sr. No.** | **Name of Species** | **Compensation (in Rs.) Per m3** | **Penalty /Value of Forest Produce ( Rs./m3)** |
|---|---|---|---|
| 1. | Conifers and Broadleaf Species | 5% (Five percent) of the market rates (Specie-wise) fixed by the Govt./Pr.CCF. H.P.Shimla for the year. - | Rates (Specie-wise) fixed by the Govt./Pr.CCF. H.P.Shimla for the year. - |
| 2. | Sapling /Seedlings of conifer and B.L. Species. | Rs.100/- each | Rs.100/- each |
| **I Illicit Felling of Bamboos from Govt/.Forest Land:** | | | |
| **S.No.** | **Bamboo** | **Compensation(Rs.)** | **Penalty /Value of Forest produce in (Rs.)** |
| 1. | Maggar | 100/-each | 100/-each |
| 2. | Other Bamboos | 50/- each | 100 /-each |
| 3. | Nargal | 100/- per bundle | 500/- per bundle of 100 sticks. |
| **2. Illicit Lopping** | | | |
| 1 | Per head load/ cycle load | 100/- | 150/- |
| 2. | Per mule/ donky load | 100/- | 250/- |
| 3. | Per load of Cycle/ motorcycle/ Scooter/ Riksha. | 100/- | 300/- |
| 4. | Per trolly tractor load, tempo | 100/- | 5000/- |
| 5. | Per truck load. | 100/- | 12000/- |
| 6. | Car/ Jeep/ Pickup Van/Auto Rikshaw. | 100/- | 3000/- |
| **3. Illicit Grazing:-** | | | |
| **S.No.** | **Particulars** | **Compensation (in Rs.) Per** | **Penalty per Animal** |

| | | | |
|---|---|---|---|
| | | **animal.** | |
| 1. | Buffalo | 50/- | 130/- |
| 2. | Sheep and Goat | 50/- | 130/- |
| 3. | Cow, Bullocks and OX | 50/- | 130/- |
| 4. | Pony, Mules, Camel, Horses and Donkeys | 50/- | 130/- |
| 5. | Non Renewal of Grazing Permit | 500/- per permit/per year | After 3 year permit will be cancelled |

**Note:- 1. Compensation at double rate will be charged if a person(s) graze his/her animals outside their recorded right without valid permits and in closed areas.**
**2. Half the rates shall be charged for calves/kids/ponny.**

**4.Unauthorized Muck dumping in Forest land/ Govt Land :-**

| Sr. No. | Particulars | Compensation | Price (Rs.) |
|---|---|---|---|
| 1. | Dumping of excavated material/ muck/ debris. | 3500/-Per $m^3$ | This kind of offences shall be compounded after ascertaining the facts by an Officer not below the rank f RFO. |
| 2. | Dumping of Municipality/ House/ Hospital/ Industry/ garbage/ waste. | 5000/-Per $m^3$ | |
| 3 | Dumping of House Hold Waste By Individual | 5000/-Per $m^3$ | -do- |
| 4 | Dumping of Industry Garbage/Waste | 50000/-Per $m^3$ | -do- |

**5. Illicit extraction of slates, sand, Bajri, Stone, from the Govt. Forest/Land.**

| **S. No.** | **Particulars** | **Compensation / Penalty (in Rs.) Per M3** | **Value of Forest Produce (in Rs.) Per M3** |
|---|---|---|---|
| 1. | Stone or Bajri | 2000/- | 3000/- |
| 2. | Sand | 2000/- | 3000/- |
| 3. | Slate | 100/- per Sq. Feet | 100/- per Sq. feet |
| 4. | Soil | 500/- per M3 | 1700/- per M3 |

**6. Illicit Grass cutting**

| **S. No.** | **Particulars** | **Compensation / Penalty (in Rs.)** | **Value of Forest Produce** |
|---|---|---|---|
| 1. | Un-authorized grass cutting per head load (HL) | 25/- | 45/- P. HL. |
| 2. | Un-authorized grass cutting Donkey/Camel load | 60/- | 90/- P. HL. |
| 3. | Un-authorized grass cutting Tractor load (Tr/1) | 900/- | 2700/- P. Tr/L |
| 4. | Un-authorized grass cutting truck load (Tr/1) | 3500/- | 7000/- P. Tr/L |

**7. Illicit collection and Transportation of Fire/fuel Wood**

| **S. No.** | **Particulars** | **Compensation / Penalty (in Rs.)** | **Value of Forest Produce (in Rs.)** |
|---|---|---|---|
| 1. | Fire wood per head load (HL) | 50/- | 80/- |
| 2. | Fire wood Mule/ Donkey/Camel load | 550/- | 880/- |
| 3. | Fire wood all LMVs load | 4000/- | 12000/- |

| | | | |
|---|---|---|---|
| | Fire wood Tractor load | 4400/- | 12000/- |
| 4. | Fire wood truck load | 6600/- | 23000/- |

**8. Transportation of Timber and other forest Produce under section 41, 42 of IFA 1927. Violating terms and conditions imposed by DFO.**

| Sr. No. | Particulars | Penalty | Price (Rs.) |
|---|---|---|---|
| 1. | Transportation of the resin, timber, Khairwood, Katha carrying valid permit and rawanna challan after sunset and before sunrise violating T & C imposed by DFO. | I Rs 5000 per case for 1st offence in a financial year<br><br>II Subsequent 2nd offence onwards Value of forest produce and value of rate of release of vehicle to be realized. | This kind of offences shall be compounded after ascertaining the facts by an Officer not below the rank of RFO. |
| 2 | Transportation of the other Forest Produce carrying valid permit and rawanna challan after sunset and before sunrise violating T & C imposed by DFO. | -do- | - |

**9. Offence in Plantations and Nursery areas.**

| Sr. No. | Particulars | Compensation | Penalty |
|---|---|---|---|
| 1. | Removal/ damage of fence posts from plantation areas | 250 per case | Wooden -200/-,RCC-500/- Per fence post |
| 2. | Removal/ damage of B/Wire fencing per running meter. | 10/-RMT | 15/- Per RMT |
| 3. | Damage to plants in nursery. | 100/-Per case | 70/- Per Plant |
| 4. | Damage to plants planted in plantation area | 200/-per case | 250/- Normal Plants, 500/- Tall Plants. |

**10. Un-authorised /illicit Resin Tapping in Govt.Forest/Land and Private Land : -**

(ii) Fixing of compensation rates for the under section 68 of IFA in respect of Resin Tapping

| Sr. No. | Particular | Compensation | Penalty | Value of Forest Produce (in Rs.) |
|---|---|---|---|---|
| 1. | Setting of crop without permission i.e. debarking & marking. | 60/-per tree | 40/- per tree per blaze | As per prevailing pricing committee decision available in record. |
| 2. | Unauthorized Resin tapping in private area. | 50/-per tree | 50/- per tree per blaze | Resin to be seized and released on realization of market value |
| 3. | Illicit resin tapping in Govt. Forests | 50/-per tree | 50/- per tree per blaze | As per prevailing pricing committee decision available in record. |
| 4. | Number of rills from 33 to 40. | 200/-per case | 30/- per ril | |
| 5. | Number of rills more than 40. | 200/-per case | 40/- per ril | |
| 6. | Depth of rill more than 4mm | 200/-per case | 10/- per ril | |
| 7. | Width of blaze more than 20cm | 200/-per case | 10/- per blaze | |
| 8. | Distance below rill less than 5mm | 200/-per case | 10/- per blaze | |
| 9. | Acid concentration higher than prescribed | 200/-per case | 50/- blaze | |
| 10. | Setting of blaze not above the blaze of last year. | 200/-per case | 10/- per blaze | |
| 11. | Using knife without guide. | 200/-per case | 10/- per | |

| | | | | |
|---|---|---|---|---|
| | | | blaze | |
| 12. | Setting of blaze without frame. | 200/-per case | 10/- per blaze | |
| 13. | Setting of blaze without keeping space of 7.5 cm from adjacent blaze | 200/-per case | 10/- per blaze | |
| 14. | Non removal of Cup & Lip from the tree after completion of resin extraction period. | 200/-per case | 10/- per blaze | |
| 15. | Storing of resin outside the approved depots. | 200/-per case | 100/-per tin | |
| 16. | Storing of resin tins at registered depot without entry into depot register. | 200/-per case | 100/- per tin | |
| 17. | Storing of empty tins at registered depot without numbering & without property Mark. | 200/-per case | 100/- per tin | |

**11. Un-authorized collection, carriage and transportation of medicinal herbs and NTFP.**

| Sr. No | Botanical Name | Local/Trade Name | Plant Part | Compensation per Qtls. In Rs. | Penalty/Market Value (in Rs.) per Qtl. |
|---|---|---|---|---|---|
| 1 | *Aconitum dienorrhizum* | Vatsnabh/Mohra | Tubers | 110/- | 80000/- |
| 2 | *Aconitum heterophyllum* | Atis/Patis/Karvi patis | -do- | 110/ | 55000/- |
| 3 | *Aconitum violaceum* | Mitha Telia/Mitha Patis. | -do- | 110/ | 5500/- |
| 4 | *Acorus calamus* | Bach/Bare/Barian | Rhizomes | 110/ | 1650/- |
| 5 | *Adhatoda zeylanica=A vasiaca* | Basuti/Bansa | Leaves | 110/ | 1100/- |
| 6 | *Adiantum lunulatum* | Damtuli/Hansraj | Fronds/whole plant | 110/ | 0 |
| 7 | *Aegle marmelos* | Bael | Roots/Stem/Fruit | 110/ | 1100/- |
| 8 | *Aesculus indica* | Khanor | Fruits/Seeds | 110/ | 1100/- |
| 9 | *Ainselia aptera* | Sathjalori | Roots | 110/ | 1100/- |
| 10 | *Alnus nitida* | Kosh Cones/Birch pine | Dry Cones | 110/ | 1650/- |
| 11 | *Angelica glauca* | Chora | Roots | 110/ | 1650/- |
| 12 | *Arctium lappa* | Jangli kuth | Roots | 110/ | 11650/- |
| 13 | Artemisia brevifolia | Seski | Flowering Shoots | 110/ | 1320/- |
| 14 | *Atropha acuminate* | Belladona/Jharka | Leaves | 110/ | 1310/- |
| 15 | *Asparagus adscendens* | Shatavari/Safed Musli/Sanspal | | 110/ | 2220/- |
| 16 | *Berberis spp* | Kashmal/Daruhaldi | Roots/Stems | 110/ | 1650/- |
| 17 | *Bergenia Ciliate/Bstracheyi* | Pasahnbhed/Pather Chat | Roots | 110/ | 1200/- |
| 18 | *Betula Utilis* | Bhojpatr | Bark | 110/- | 3000/- |
| 19 | *Bunium Persicum* | Kala Zira | Frults | 110/ | 22000/- |
| 20 | *Cedrus deodara* | Deodar Rosette | Dry Cone Part | 110/ | 1650/- |
| 21 | *Cinnamomum tamala* | Tejpatra | Leaves | 110/ | 1650/- |
| 22 | *Colebrookia oppositifolia* | Bindi Phool | Dried Flowers | 110/ | 660/- |
| 23 | *Curcuma angustifolla* | Ban Haldi | Rhizomes | 110/ | 1300/- |
| 24 | *Dactylorhiza hatageria* | Salam Panja/Hath Panja | Tubers | 110/ | 66000/- |
| 25 | *Dioscorea deltoidea* | Singli Mingli/Kins | Roots | 110/ | 9900/- |
| 26 | *Emblica officinalls=phyllanthus emblica* | Amla | Fruits | 110/ | 550/- |
| 27 | *Girardiana diversifolia=G.heterophyll la* | Bichhu Buti | Roots | 110/ | 2200/- |
| 28 | Hedychum acuminatum | Kapur kachri/kachur/van Haldi | Roots | 110/ | 1320/- |
| 29 | Heracleum spp (H. candicans; H. lanatum) | Patishan/Patrala | Roots | 110/ | 660/- |
| 30 | Hissopus officinalis | Juffa | Flowering Twigs | 110/ | 2400/- |
| 31 | Hyocyumus niger | Khurasani Ajwain | Seeds/leaves | 110/ | 2200/- |

| | | | | | |
|---|---|---|---|---|---|
| 32 | Hypericum patulum/H. perforatum | Khaarera/Basant | Wholw Plant | 110/ | 3300/- |
| 33 | *Iris germanica* | Safed Bach | Rhizomes | 110/ | 2200/- |
| 34 | Juniperus communis | Hauber | Berries | 110/ | 3000/- |
| 35 | Juniperus | Recurva | Bether Patta | 110/ | 1100/- |
| 36 | Jurinea macrocephala= j. dolomoea | Dhoop | Roots | 110/ | 6600/- |
| 37 | Lichens & Mosses | Chalora/Chharila/jhuka/mehndi/stone flower/moss ghas/Green Moss | Thallus | 110/ | 3000/- |
| 38 | Lichens & Mosses | Green moss ghas | Thallus | 110/ | 2970/- |
| 39 | *Mentha longifolia* | Jangli Pudina | Leaves | 110/ | 660/- |
| 40 | *Morchella esculenta* | Guchhi | Fruiting Body | 110/ | 121000/- |
| 41 | *Murraya Koenigii* | Mitthi Nim | Leaves | 110/ | 550/- |
| 42 | *Myrica esculenta* | Kaphal | Bark/Fruit | 110/ | 5500/- |
| 43 | *Nardostachys grandiflora* | Jatamansi | Root | 110/ | 11000/- |
| 44 | *Oroxyleum Indicum* | Tatpatanga | Root Bark | 110/ | 1100 |
| 45 | *Origanum vulgare* | Ban Tulsi | Leaves | 110/ | 1320/- |
| 46 | *Pinus roxburghii* | Pine Needles | Dry Needles | 110/ | 110/- |
| 47 | Picrorhiza kurroa | Karoo/Kutki | Rhizomes | 110/ | 16500/- |
| 48 | *Pistacia integerrima* | Kakarsingi | Leaf Galls | 110/ | 11000/- |
| 49 | *Podophyllum hexandrum=p. emodi* | Bankakri | Roots Frouits | 110/ | 5000/- |
| 50 | Polygonatum spp. (p.vericellatum; p.cirrhifolium; p. multiflorum) | Salam Mishri/Meda/Maha Meda | Rhizomes | 110/ | 11000/- |
| 51 | Potentilla nepalensis | Dori Ghas | Roots | 110/ | 1650/- |
| 52 | Prunus cerasoides | Pajja/Padam/Padma kasht | Wood | 110/ | 1200/- |
| 53 | *Punica granatum* | Daru/Anar | Fruits | 110/ | 1100/- |
| 54 | *Pyrus pashia* | Kainth | Fruits | 110/ | 550/- |
| 55 | *Rauwolfia serpentine* | Sarpagandha | Roots | 110/ | 5500/- |
| 56 | Rheum spp. (R. austral= R. emodi/R. speciforme) | Revandchini | Roots | 110/ | 2200/- |
| 57 | *Rhododendrom anthopogon* | Talis Patra | Leaves | 110/ | 1100/- |
| 58 | *Rhododendron arboretum* | Brash | Flowers | 110/ | 5000/- |
| 59 | *Rhododendron capanulatum* | Kashmiri Patta | Leaves | 110/ | 2000/- |
| 60 | Salvia moorcroftiana | Thuth | Roots | 110/ | 2000/- |
| 61 | *Sapindus Mukorossi* | Ritha | Fruits | 110/ | 2000/- |
| 62 | *Saussurea costus=S.lappa* | Kuth | Roots | 110/ | 4000/- |
| 63 | Selinum spp. (s. vaginatum/S.tenuifolium | Bhutkesi | Roots | 110/ | 4400/- |
| 64 | Swertia spp (S. chirayita; S. angustifolia; S. cordata, S. Ciliate | Chirata | Wholw Plant | 110/ | 8500/- |
| 65 | *Terminalia chebula* | Harar | Fruits | 110/ | 1100/- |
| 66 | Thymus serpyllum | Banajwain | Aerial Parts (Herb) | 110/ | 1100/- |
| 67 | *Tinospora cordifolia* | Giloe/Cuduchi | Stem | 110/ | 1100/- |
| 68 | *Toona 68ompoun= Cedrela toona* | Bari Phool | Dried fruits etc | 110/ | 660/- |
| 69 | Valeriana spp. (V. hardwickii/V. Jatamansi=V. wallichii) | Mushakbala/Tagar/Nihani/Nakh nihani | Roots. | 110/ | 6600/- |
| 70 | Viola spp. (V. pilosa; V.canescens; V. biflora; V.Kunawerensis | Banafsha | Flowers/Aerial Parts | 110/ | 24750/- |
| 71 | *Withania Somnifera* | Ashvagandha | Roots | 110/ | 2200/- |
| 72 | *Woodfordia fruticosa* | Dhatki/Dhai | Flowers | 110/ | 550/- |
| 73 | *Zanthoxylum armatum* | Tirmir | Fruits/Seeds | 110/ | 1100/- |
| 74 | *Trillidium govanianum* | Nag Chhatri | Roots/Rhizomes | -- | -- |
| 75 | **Polystichum spp** | Fern | | 110/ | 1650/- |
| 76 | All Other NTFP not listed above | | | 110/ | As per prevailing Market Rate or ther circle 68ompounding |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | rate |

However for valuable species of medicinal Herbs compensation and value of forest produce will be charged keeping in mind the royalty rate / export permit fee fixed by the Government. The items/medicinal herbs not covered under this order be referred to this office before compounding the offence alongwith your recommendation of rates and compensation to be charged keeping in view the market rate of such medicinal herbs.

**12. Forest Offences in relation to breaking out of Fires in Forest/Govt. land:**

**Fire:-**

| | | |
|---|---|---|
| 1. | Fire by Mischief/ Negligence. | Not Compoundable, Case to register with Police. |
| 2. | Kindling of fire within one hundred meters from a forest without persimmon of the Divisional Forest Officer or his authorized representative. | Case to dealt with under the provision of I F A |
| 3. | Collection and stacking of inflammable forest produce outside the boundary of forest at a place other than open spaces specified by DFO by general of specific order. | 500/-Per $m^{3.}$ |
| 4. | Lighting of private ghasnies/Pvt. Areas beyond 100 mtr. From forest area without adequate notice to Forest Range Officer | Rs. 500/- per Bigha of burnt area. |

**Note:- In case of non- co-operation in fire fighting and fire protection operations by any person will lead to suspension of all rights and concessions in the forests for five years and necessary action in this regard will be initiated by the concerned DFO.**

## 13. Offence under Land Preservation Act, 1978

| Sr. No. | Particulars | Compensation | Penalty /Price of Produce |
|---|---|---|---|
| 1. | Unauthorized felling for bonafide domestic use of trees which involves not more than 3 conifer and 5 B.L. trees than the prescribed limit specified under LPA, 1978 and no element of trade is involved. | Rs. 1000/- Per tree | No value is charged for the release of property as per S. No. 2 (6) of Notification dated 05.05.2010. |
| 2. | Uprooting of Khair Trees | Rs. 1000/- Per Stump, | 1200/stump |
| 3. | Late renewal of Registration of Pvt. Sale Forest Contractor | Rs. 1100/- Per Month | -- |

**14.Misuse of TD Timber.**

| Sr. No. | Particulars | Compensation | Penalty |
|---|---|---|---|
| 1. | If any right holder contravenes provision of rule except 3(ii) of TD Rules | Right suspended for next 20 years | Value of tree/s at Market Rate |
| 2. | If any right holder contravenes provision of rule 3(ii) of TD Rules | Right permanently suspended. | Value of tree/s at Market Rate |

**15.Offence in respect of sale Depot/Saw mill/Furniture Units registered under HP (Sale of timber) Rule ,1969.**

| | | |
|---|---|---|
| i) | **No offence under this Act is compoundable, Every infringement of Rules made under this Act is to be Challenged in the Court of Law as per Section 3 (2) (f) read with Rule 14 of the HP (Sale of Timber) Rules 1969.** | |
| i) | Late renewal of sawmill, furniture shop/Depot | Rs. 1000/- Per Month upto Six Month only thereafter |

| | | |
|---|---|---|
| | & Joinery units & sale timber depot. | the registration will be cancelled as per HP River Rules,1971 and HP Sale of Timber Act,1968. |
| ii) | Non maintenances of Timber account in relevant register of sawmill, furniture shop & joinery units & sale timber depots on prescribed proforma. | 4000/- Per breach. If it is found that offences committed for third time RFO should not compound such case. |
| iii) | Detection of illicit timber in saw Mills. | Not to be compounded |
| iv) | Unauthorized manufacture/Activity like sale of joinery items/timber by the owner of the non registered unit. | Rs. 11000/- in each case and seizure of timber. |

**17. Rates for Release of various Tools, implements and Vehicles used in committing offence under compoundable offence category:**

| S. No. | Particulars | Rates of release in Rs./each. |
|---|---|---|
| 1. | C. C. Saw and frame Saw | 600/- |
| 2. | Hand Saw | 600/- |
| 3. | Axe | 300/- |
| 4. | Drati | 60/- |
| 5. | Power Chain Saw | 1000/- |
| 6. | Jumper | 100/- |
| 7. | Stone Hammer | 150/- |
| 8. | Stone dresser | 700/- |
| 9. | Pick Axe/Shawl | 200/- |
| 10. | Torches | 100/- |
| 11. | Donkey/Horse/Mule | 1000/- |
| 12. | Camel | 2500/- |
| 13. | Binoculars each | 1000/- |
| 14. | Jeep/Maruti Van | 10000/- |
| 15. | Gattu/Pickup utility vehicle (LMV) | 10000/- |
| 16. | Gattu/Mazda/Tempoo/ ( and MTVs) | 15000/- |
| 17. | Trucks | 25000/- |
| 18. | Scooter/Motor Cycle | 7000/- |
| 19. | Cycle | 500/- |
| 20. | Tractor | 15000/- |
| 21. | JCB Buldozer and other similar heavy machinery. | 35000/- |

**18.Miscellaneous Offences**

| S. No. | Particulars | Compensation / (in Rs.) | Penalty /Value of Forest Produce (in Rs.) |
|---|---|---|---|
| 1. | Dragging/rolling of timber per scant/sleeper/log. | 45/- Each | 55/mtr |
| 2. | Uprooting of khair stump | 1200/- per stump | 1320/- |
| 3 | Nailing of Board on tree | 500/- per board | 500/- per tree |
| 4 | Digging in the root zone tree | 1200/- per tree | 5000/-per tree |
| 5 | Putting stay wire/B.wire around tree | 220/-per tree | 330/-per tree |
| 6 | Setting up of unauthorized Charcoal Bhatti in Pvt. Land for bonafide domestic use | Such type of cases may not be compounded and be prosecuted or FIR under the provisions of relevant rules/law lodged with Police. | |
| 7 | Running of unauthorized katha Bhatti in Pvt. Land | | |
| 8 | Setting up of illict liquor/Bhatties | -do- | |
| 9 | Anchoring of stay wire on trees | 500/- per case. | |
| 10 | Anchoring of sign Board and other hoardings on trees/forest land. | Rs 500/- per board up to 3 x 3 feet size and addition of Rs.200 for increase of every sq. foot beyond that. | |
| | | | |

**Note:-**

i) The above compensation rates will come into force with immediate effect and shall remain operative till the same are further revised.

ii) VAT/GST/Income Tax, as applicable, will be charged extra.

iii) Any other offence not covered under above schedule of compensation rates shall be referred to the undersigned for approval before compounding.

iv) Other regulation/instructions regarding cases not liable to be compounded , cases which can compounded, cases in which double rates are to be realized, cases to be taken to courts/prosecuted and cases to be registered with police etc. as contained in H.P. Govt. Notification No.FFE-B-A(3)/2010 dated 5.5.2010, copy endorsed to all DFOs vide this office Endst. No. D-I-27/Notification/ 2068-72 dated 28-05-2010, shall be followed/ adhered to in letter and spirit by all concerned.

## Appendix VII- Leases, Contracts and Transfers

### A) Information of approved FCA cases.

| Sr. No. | Year | Name of proposal | FCA Proposal No. | Date of Final approval | Total area diverted (in ha.) | Total No of tress handed over HPSFDC | Volume |
|---|---|---|---|---|---|---|---|
| 1 | 2013-14 | Construction of link road from Bohlion to Haripur via Nalka Samalka road upto village Nalka | FP/HP/ROAD/ 8013/2014 | 31.07.2020 | 2.403 | 0 | 0 |
| 2 | | Construction of link road from Khajurna to Malonwala road | FP/HP/ROAD/ 8014/2014 | 15.09.2021 | 0.624 | 0 | 0 |
| 3 | | Construction of link road from village Surla to Bakarla km. 0/0 to 5/0 | FP/HP/ROAD/ 7738/2014 | 20.09.2021 | 3.979 | 394 | 126.733 |
| 4 | | Construction of link road from village Bheron to Adi Badri | FP/HP/ROAD/ 7449/201 | 10.10.2017 | 4.765 | 80 | 61.766 |
| 5 | 2015-16 | Construction of link road from Upper Surla km. | FP/HP/ROAD/ 9676/2015 | 27.07.2020 | 1.275 | 91 | 25.83 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6 | 2015-16 | Construction of link road from Thana Kasoga to Trimali Dayar road km. 0/0 to 15/200 | FP/HP/ROAD/ 9738/2015 | 13.08.2020 | 1.659 | 0 | 0 |
| 7 | | LILO of existing 400kV Double Circuit Karcham Wangtoo-Abdullapur Transmission Line near Kala Amb (HP) | FP/HP/TRANS/ 14566/2015 | 21.12.2016 | 4.094 | 110 | 11.897 |
| 8 | | Providing LWSS to Nahan Town (From Giri River at Dadahu) in Tehsil Nahan | FP/HP/WATER /16701/2015 | 23.05.2016 | 2.4126 | 215 | 34.38 |
| 9 | 2016-17 | Construction of link road to village Pudla from Banog Surla road km. 0/0 to 3/705 | FP/HP/ROAD/ 19486/2016 | 27.07.2020 | 2.538 | 303 | 110.067 |
| 10 | 2017-18 | Construction of link road from Jabbal kanoti to Surla Amta road km. 0/0 to 3/705 | FP/HP/ROAD/ 25369/2017 | 08.05.2020 | 2.676 | 497 | 122.9114 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11 | | Construction of link road from Jhainthal Ghat to Dhandor road km. 0/0 to 8/655 | FP/HP/ROAD/ 25365/2017 | 09.03.2020 | 2.952 | 256 | 50.4207 |
| 12 | 2018-19 | Construction of link road from Nahan to Gadda upto vill Kotri km. 0/0 to 3/130 | FP/HP/ROAD/ 25378/2017 | 04.08.2021 | 2.304 | 303 | 110.067 |
| 13 | | C/o 220/132 kV ,2x160/200 MVA Substation at Andheri (Kala Amb), Distt. Sirmour H.P. | FP/HP/Sub-Station/37534/ 2018 | 02.01.2020 | 5.494 | 208 | 79.683 |
| 14 | 2019-20 | C/o Hospital Block of Dr. YSPGMC, Nahan, Distt. Sirmaur, H.P. | FP/HP/DISP/43462/2019 | 25.01.2021 | 0.8514 | 58 | 33.587 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15 | 2021-22 | CONSTRUCTION OF 180.00 METRE SPAN BOWSTRING BRIDGE ON MARKANDA AT RD. 64/630 ON NH-72(NEW NH-07) | FP/HP/ROAD/ 140739/2021 | 28.10.2021 | 0.1953 | 0 | 0 |
| | | | | **Grand Total** | **38.2223** | **2515** | **767.067** |

**B) Information of Approved FRA cases.**

| Sr. No | Year | Name of proposal | Date of Final approval | Total area diverted (in ha.) | Total No tress handed over HPSFDC | Volume |
|---|---|---|---|---|---|---|
| **1** | **2016-17** | Construction of link road Salni to Tedi Baroti. | 19.12.2016 | 0.231 | 13 | 2.200 |
| **2** | | Construction of link road from Rain Pirgari to Serbadon | 27.01.2017 | 0.504 | 29 | 5.804 |
| **3** | | Construction of link road from Tedi Baroti to Trilokpur. | 27.01. 2017 | 0.655 | 48 | 13.220 |
| **4** | | Construction of link road Sher Resla (Gopita) to Ser Badon | 17.3. 2017 | 0.26 | 14 | 8.858 |
| **5** | | Construction of link road from Runja Yonn. | 17.03. 2017 | 0.435 | 25 | 5.038 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **6** | **2017-18** | Construction of link Road from Dhaun to Sanoga- Bagrath upto Mandhari Ghat. | 22.4. 2017 | 0.804 | 29 | 13.976 |
| **7** | | Construction of link Road from Badion to Pudla. | 26.4. 2017 | 0.56 | 40 | 13.853 |
| **8** | | Construction of link road from Ashram Tapad to Teeb via Katalin. | 26.4. 2017 | 0.45 | 25 | 14.355 |
| **9** | | Construction of link road from Birla to Dhayali | 24.11. 2017 | 0.564 | 15 | 8.424 |
| **10** | **2018-19** | Construction of Katcah link road from Rama Dhaun road to Village Bhagoor. | 2.7.2018 | 0.521 | 39 | 4.638 |
| **11** | | Construction of GPS. Neron. | 4.8.2018 | 0.159 | 9 | 2.585 |
| **12** | | Construction of Katcha link road Lawasa Dosarka to Bhong upto Tuind Bhuid. | 6.8.2018 | 0.752 | 8 | 3.0367 |
| **13** | | Construction of Katcha link road Shimla Road to village Sarahan johri to village Sarhan. | 21.8.2018 | 0.23 | 16 | 1.2054 |
| **14** | | Construction of link road from village Pipal wala to H/O Sh Lalit Kumar, Deepak Kumar etc.G.P. Surla. | 12.9.2018 | 0.193 | 12 | 2.303 |
| **15** | | Construction of link road from salani to bankawara. | 20.9.2018 | 0.877 | 19 | 7.7508 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **16** | | Construction of link road from Kangar Ghoond to Dagjar G.P. Banethi | 6.10.2018 | 0.9765 | 13 | 3.1395 |
| **17** | | Construction of link road Bahrog to Bhorli Ghat. | 28.12.18 | 0.875 | 27 | 8.566 |
| **18** | | Construction of link road from Kranwali to Thappal Dhanot. | 3.1. 2019 | 0.570 | 13 | 5.201 |
| **19** | | Construction of link road from Sinduria to Dhar Sanoga. | 3.1. 2019 | 0.225 | 2 | 0.736 |
| **20** | | Construction of link road from chunjer johri to Kyarta via Aam ka Dhal. | 21.2. 2019 | 0.4455 | 18 | 2.788 |
| **21** | | Construction of katch link road from Rama Dhaun to halt of Sh. Kamal Dutt & Bhagat Ram. | 23.2. 2019 | 0.175 | 6 | 3.233 |
| **22** | **2019-20** | Construction of Skill Up-Gradation Center Nahan. | 30.7. 2019 | 0.318 | 7 | 3.214 |
| **23** | | Construction of Community Hall in Ambwala. | 5.8. 2019 | 0.112 | 13 | 5.900 |
| **24** | | Construction of link road Gusan Kambal to Badal Amta. | 06.11.2019 | 0.225 | 6 | 3.214 |
| **25** | | Construction of link road from Sadorghat to Triboni Temple. | 25.11.2019 | 0.915 | 29 | 12.448 |
| **26** | | Construction of link road Jamroti to Nagali. | 26.11.2019 | 0.4235 | 5 | 1.2495 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **27** | | Construction of link road from main road vill. Pila Khil to Pachhighat. | 03.02.2020 | 0.597 | 9 | 2.004 |
| **28** | | Construction of link road from Bheraghat to Gaonth. | 03.02.2020 | 0.994 | 26 | 7.8142 |
| **29** | **2021-22** | Construction of Industrial Training Institute Kaulanwala Bhood. | 23.4.2021. | 0.960 | 28 | 21.115 |
| **30** | **2022-23** | C/o Link Road from Amb ka Dhal to Dhandoli, Bajyun & Patahar | 10.08.2022 | 0.368 | 28 | 3.808 |
| **31** | | C/o Link Road from Nauni Johdidhar to Ganodi Near H/o Upender Singh | 15.07.2022 | 0.389 | 24 | 3.3739 |
| **32** | | C/o Link Road from Dakyon to Shirgul Mandir | 13.10.2022 | 0.343 | 16 | 6.2432 |
| **33** | | C/o Link Road from Kundli to Najrani | 10.10.2022 | 0.255 | 13 | 3.544 |
| **34** | | C/o Link Road from Dagrahan to Amba | 13.10.2022 | 0.16 | 5 | 1.6183 |
| **35** | | C/o Link Road from Katal to Mandlahan | 14.10.2022 | 0.897 | 49 | 6.4463 |
| **36** | | C/o of Link Road from main Road (Sihard Ghat) to Dagana Gram Panchyat | 28.02.2023 | 0.14 | 20 | 3.6372 |
| **37** | | Construction of Link Road from Aam ka Dhal to kanoti | 27.02.2023 | 0.1368 | 03 | 0.552 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **38** | | Construction of Link Road Chakli to SC Basti Thudkyarkhdi | 22.03.2023 | 0.207 | 15 | 3.696 |
| **39** | | Construction of Link Road from Panchayat Ghar Kayari to Amta Katal | 28.02.2023 | 0.385 | 15 | 5.799 |
| **40** | | Construction of Link Road from Ladu to Gillat | 27.02.2022 | 0.29 | 14 | 1.205 |
| **41** | | Construction of Road from Shimla main road to Baga | 27.02.2023 | 0.3185 | 25 | 4.938 |
| **42** | | Construction of Link Road Dagrahan to Sehyat. | 04.03.2023 | 0.192 | 26 | 2.1168 |
| **43** | | Construction of Link Road from NH Chabahan to Shillar | 28.02.2023 | 0..788 | 06 | 0.978 |
| **44** | | Construction of Link Road from Kundli Najrani to Suin Pudla via Shamshan Ghat | 04.03.2023 | 0.418 | 05 | 0.914 |
| | | | **Total** | **20.2938** | **807** | **236.7388** |

## Appendix VIII – Forest Roads, Buildings & F.R.H etc.

| A- Forest Roads | | | | |
|---|---|---|---|---|
| **Year** | **Range** | **Name of Forest Road** | **Length in kms** | |
| 1998-99 | Nahan | Lower Ambwala | 390 mtr | |
| 2001-02 | Nahan | Khajurana to Ganeshwala | 1km | |
| 2002-03 | Nahan | Bheron link Road | 450mtrs | |
| 2002-03 | Trilokpur | Approach Road to FRH Trilokpur | 140 mtrs | |
| 2005-06 | Trilokpur | Rigerwalabauri to Neewala | 1.200 kms | |
| 2005-06 | Nahan | Mattar Road | 200mtrs | |
| 2007-08 | Nahan | Konthron-Dandipur Road | 450 mtrs | |
| 2007-08 | Nahan | Salani-Trilokpur via Tedibaroti | 940mtrs | |
| 2008-09 | Kolar | Mattar to Mantra Devi | 2 kms | |
| 2010-11 | Nahan | Bogria Road | 1.825 kms | |
| 2016-17 | Jamta | Road for Sehat Nursery | 300 mtrs | |
| 2016-17 | Nahan | Development of Road to Fgd hut Toderpur IInd | 120mtr | |

| B-Residence | | |
|---|---|---|
| **Sr. No.** | **Name of Building** | **Place** |
| 1. | C.F. Residence | G.A Colony Nahan |
| 2. | D.F.O Residence | G.A Colony Nahan |
| 3. | D.F.O H/Q Residence | Near fire station |
| **C-Office** | | |
| Sr. No. | Name of Building | Place |
| 1. | C.F. Office | Nahan |
| 2. | D.F.O office | Nahan |
| 3. | Conference hall | C.F. Office Nahan |
| **F.R.H** | | |
| Sr. No. | Name of Building | Place |
| 1. | Forest Rest house | Banethi |
| 2. | Forest Rest house | Trilokpur |
| **INSPECTION HUT** | | |
| Sr. No. | Name of Building | Place |

| | | |
|---|---|---|
| **1.** | Inspection hut | Suketi |
| **GUARD HUT** | | |
| Sr. No. | Name of Building | Place |
| 1. | Guard hut, Trilokpur | Trilokpur |
| 2. | Guard hut, Gurudwara | Gurudwara |
| 3. | Guard hut, Mainthpal | Mainthpal |
| 4. | Guard hut, Burma Papari | BurmaPapari |
| 5. | Guard hut, Kundla | Kundla |
| 6. | Guard hut, Surla | Surla |
| 7. | Guard hut, Kiyari | Kiyari |
| 8. | Guard hut, Kotla | Kotla |
| 9. | Guard hut, Nauni | Nauni |
| 10. | Guard hut, Tallon | Tallon |
| 11. | Guard hut, Jaitak | Jaitak |
| 12. | Guard hut, Panjahal | Panjahal |
| 13. | Guard hut, Patandi | Patandi |
| 14. | Guard hut, Lawasa | Lawasa |
| 15. | Guard hut, Jattanwali | Jattanwali |
| 16. | Guard hut, Kolar | Kolar |
| 17. | Guard hut, Kodewala | Kodewala |
| 18. | Guard hut, Haripur | Haripur |
| 19. | Guard hut, Lohgarh | Lohgarh |
| 20. | Guard hut, East Bheron | EastBheron |
| 21. | Guard hut, Jamretwa | Jamretwa |
| 22. | Guard hut, Mattar | Mattar |
| 23 | Guard hut, Periwala, Double story | Range colony |
| 24. | Guard hut, Jabbal, Double story | Range colony |
| 25. | Guard hut, Bikrambagh | Bikrambagh |
| 26. | Guard hut, Rama | Rama |
| 27. | Guard hut, Dhaun | Dhaun |
| 28. | Guard hut, Bankala | Bankala |
| 29. | Guard hut, Uttamwala | Uttamwala |
| 30. | Guard hut Toderpur IInd | Toderpur |
| 31. | Guard hut, Sangholi IInd | Toderpur |

| | | |
|---|---|---|
| 32. | Guard hut, Kangniwala | Kangniwala |
| 33. | Guard hut, Ambwala | Ambwala |
| 34. | Guard hut, Kotri | Kotri |
| **RANGE OFFICE BUILDING** | | |
| Sr. No. | Name of Building | Place |
| 1. | Range office | Trilokpur |
| 2. | Range office | Jamta |
| 3. | Range office | Kolar |
| 4. | Range office(Old Building) | Kolar |
| 5. | Range office Nahan | Nahan |
| **R.O RESIDENCE** | | |
| Sr. No. | Name of Building | Place |
| 1. | R.O.Residence | Trilokpur |
| 2. | R.O.Residence | Jamta |
| 3. | R.O.Residence | Kolar |
| 4. | R.O.Residence | Near fire station, nahan |
| **B.O QUARTERS** | | |
| Sr. No. | Name of Building | Place |
| 1. | B.O. Quarter | Trilokpur |
| 2. | B.O. Quarter | Kaulanwala bhood |
| 3. | B.O. Quarter | Jamta |
| 4. | B.O. Quarter | Banethi |
| 5. | B.O. Quarter | Panjahal |
| 6. | B.O. Quarter | Kolar |
| 7. | B.O. Quarter | Lohgarh |
| 8. | B.O. Quarter | Sambhalka |
| 9. | B.O. Quarter, Nahan | Range colony Nahan |
| 10. | B.O. Quarter, Bikrambag | Bikrambag |
| 11. | B.O. Quarter, shanbhuwala | Shambhuwala |
| **GANG HUT** | | |
| Sr. No. | Name of Building | Place |
| 1. | Gang hut | Majri |
| 2. | Gang hut | Banethi |
| 3. | Gang hut | Lohgarh |

| | | |
|---|---|---|
| 4. | Gang hut | Nalka |
| 5. | Gang hut | W/Bheron |
| **CHECK POSTS** | | |
| Sr. No. | Name of Building | Place |
| 1. | Check posts | Majri |
| 2. | Check posts | Kala-amb |
| 3. | Check posts | Haripur |
| 4. | Check posts | Suketi |
| **STORE** | | |
| Sr. No. | Name of Building | Place |
| 1. | Range office store | Trilokpur |
| 2. | Seed Store | Dholghati Nursery |
| 3. | Seed Store | Mainthpal |
| 4. | Seed Store | Jamata |
| 5. | Seed Store | Haripur |
| 6. | Seed Store | Lohgarh |
| 7. | Store | Salani Nursery |
| 8. | Seed Store | Bikrambag |
| **FIRE PROTECTION ROOM** | | |
| Sr. No. | Name of Building | Place |
| 1. | Fire control room | Lohgarh |

| **MINISTERIAL STAFF RESIDENCE** | | | |
|---|---|---|---|
| Sr. No. | Name of Building | No. | Place |
| 1. | Type III | 8 | Forest colony,Nahan |
| 2. | Type II | 4 | Forest colony,Nahan |
| 3. | Type I | 6 | Forest colony,Nahan |
| 4. | Type III | 2 | Settlement office,Nahan |
| 5. | Type I | 1 | Settlement office,Nahan |
| 6. | Gang hut | 1 | Settlement office,Nahan |
| 7. | Chowkidar quarter Nahan | 1 | DFO office nahan |

| **OTHERS** | | |
|---|---|---|
| Sr. No. | Name of Building | Place |
| 1. | Chowkidar Quarter | F.R.H Trilokpur |
| 2. | Mali hut | Sehat |

| | | |
|---|---|---|
| 3. | Rescue Room | Kolar |
| 4. | Mali hut | G.A. Colony |
| 5. | Out house | Near fire station |
| 6. | Mali Hut | Salani Nursery |
| 7. | Staff quarter | Range Colony |
| 8. | Pump house | Salani Nursery |
| 9. | Soil mixing shed | Salani Nursery |
| 10 | Garage, C.F. Vehicle | G.A.Colony |
| 11 | Garage, C.F. Vehicle | G.A.Colony |
| 12. | Fire watch tower | Nahan Division Office |
| 13. | Fire watch tower | Kangniwala |

## Appendix IX- Divisional Forest Officers

### DIVISIONAL FOREST OFFICERS NAHAN FOREST DIVISION

| S.N. | Name | From | To |
|---|---|---|---|
| 1 | Sh. P. N. Taklani, PFS | Aug - 1939 | Aug – 1939 |
| 2 | Sh. Narain Singh, PFS | Sep - 1942 | Apr – 1943 |
| 3 | Sh. P. N. Taklani, PFS | May - 1943 | Jun – 1945 |
| 4 | Sh. Randev Singh, PFS | Jun - 1945 | Oct – 1945 |
| 5 | Sh. R.K. Hardata, PFS | Oct – 1945 | Nov – 1946 |
| 6 | Sh. Gurmukh Singh, PFS | Nov - 1946 | Dec – 1946 |
| 7 | Sh. G. C. Madhok, PFS | Dec - 1946 | Sep – 1947 |
| 8 | Sh. Jagdish Chander, PFS | Oct - 1947 | Aug – 1948 |
| 9 | Sh. G. C. Madhok, PFS | Aug. 17 - 1948 | Sep 08- 1948 |
| 10 | Sh. Yag Dev, PFS | Sep. 09 - 1948 | Jul 21- 1949 |
| 11 | Sh. G.C. Madhok, PFS | July 21 - 1949 | Aug 01- 1949 |
| 12 | Sh. Suridass, PFS | Aug. 01 - 1949 | Jun 30- 1950 |
| 13 | Sh. B. S. Parmar, PFS | June 30 - 1950 | Sep 22- 1951 |
| 14 | Sh. V. K. Sharma, PFS | Sep. 22 - 1951 | Feb 09- 1952 |
| 15 | Sh. B. S. Parmar, PFS | Feb. 09 - 1952 | Apr 17- 1954 |
| 16 | Sh. N.M. Mahajan, PFS | Apr 18 - 1954 | Apr 29- 1954 |
| 17 | Sh. V. K. Sharma, PFS | Jul 30 - 1954 | Apr 09- 1957 |
| 18 | Sh. S. G. Gaur, PFS | Apr 10 - 1957 | Mar 27- 1958 |
| 19 | Sh. T. S. Patya , PFS | Mar 28 - 1958 | Jul 15 - 1962 |
| 20 | Sh. D. C. Sehgal, PFS | July 16 - 1962 | Oct 11- 1962 |
| 21 | Sh. V. M. Mohan, PFS | Oct. 12 - 1962 | Oct 20.- 1962 |
| 22 | Sh. D. C. Sehgal, PFS | Oct. 21 - 1962 | May 18- 1964 |
| 23 | Sh. R. C. Sharma, PFS | May 19 - 1964 | Aug 09 - 1964 |
| 24 | Sh. D. C. Sehgal, PFS | Aug. 10- 1964 | May 20- 1965 |
| 25 | Sh. S. R. Arya, PFS | May 21- 1965 | Jul 07- 1965 |
| 26 | Sh. I.D. Sharma, PFS | Jul 08 - 1965 | Apr 26 - 1966 |
| 27 | Sh. S. R. Arya, PFS | Apr 27 - 1966 | Jul 20- 1966 |
| 28 | Sh. Sant Ram , PFS | Jul 21- 1966 | Aug 19- 1967 |
| 29 | Sh. S. R. Arya , PFS | Aug. 20- 1967 | Aug 29- 1967 |
| 30 | Sh. Sant Ram, PFS | Sep. 30 - 1967 | Aug. 14- 1974 |
| 31 | Sh. S. R. Masson, PFS | Aug. 14- 1974 | Sep. 21- 1974 |

| | | | |
|---|---|---|---|
| 32 | Sh. S. C. Sharma , PFS | Sept. 21 - 1974 | Apr27 - 1977 |
| 33 | Sh. R.D Rawal, IFS | Apr 27- 1977 | Nov 09- 1977 |
| 34 | Sh. Baldev Singh , IFS | Nov. 09- 1977 | Dec 12- 1977 |
| 35 | Sh. R.D. Rawal, IFS | Dec 12 - 1977 | Jun 16- 1978 |
| 36 | Sh. B. S. Chauhan, IFS | Jun 16- 1978 | Jan - 1979 |
| 37 | Sh. Joginder Singh, PFS | Feb - 1979 | Mar – 1981 |
| 38 | Sh. A.K. Gupta, IFS | Apr -1981 | Nov 06- 1982 |
| 39 | Sh.. M. Nanda, PFS | Nov. 06 -1982 | Nov 04- 1987 |
| 40 | Sh. S. C. Srivastava, IFS | Nov 4- 1987 | Oct 24- 1989 |
| 41 | Sh. V. K. Singh , IFS | Oct. 24- 1989 | Mar 06- 1990 |
| 42 | Sh. S. C. Srivastava, IFS | Mar 06- 1990 | Oct 22- 1991 |
| 43 | Sh. Vineet Kumar, IFS | Oct 23- 1991 | Dec 20- 1993 |
| 44 | Sh. S. C. Srivastava, IFS | Dec. 20- 1993 | Jul 15- 1995 |
| 45 | Sh. H. S. Kanwar, IFS | Jul 12- 1995 | Nov 09- 1995 |
| 46 | Sh. R. K. Singh , H.P.F.S | Nov. 10 - 1995 | Jan. 23- 1996 |
| 47 | Sh. Dr. M. Naravanappa, IFS | Jan. 24- 1996 | Mar.25- 1999 |
| 48 | Sh. Avtar Singh, IFS | Jun 09- 1999 | Mar 25- 2001 |
| 49 | Sh. Anil Thakur, IFS | Mar 26- 2001 | Jun 01- 2003 |
| 50 | Sh. D. P. Chandra, IFS | Jun 02- 2003 | Feb. 05- 2004 |
| 51 | Sh. Y. P. Gupta, IFS | Feb. 05- 2004 | Apr 02- 2007 |
| 52 | Sh. H.V. Kathuria, IFS | Apr 02-2007 | May 19- 2008 |
| 53 | Smt. Upasna Patial, IFS | May 19- 2008 | Mar 09- 2009 |
| 54 | Sh. H.V. Kathuria, IFS | Mar 09- 2009 | Aug . 25- 2012 |
| 55 | Sh. D.D. Verma, H.P.F.S | Aug 25- 2012 | Sep. 04- 2012 |
| 56 | Sh. R.C. Goma, H.P.F.S | Sep 04- 2012 | Mar 06- 2013 |
| 57 | Sh. Anjani Kumar, H.P.F.S | Mar 06-2013 | Jun 16- 2015 |
| 58 | Sh. Nishant Mandhotra, IFS | Jun 17- 2015 | Sep. 21 - 2017 |
| 59 | Sh. T. Venkatesan, IFS | Sep 21- 2017 | Aug. 07- 2020 |
| 60 | Sh. Sourabh, IFS | Aug 07- 2020 | |

## Appendix X- List of JFMCs.

In Nahan division, these committees play an important role to help the forest department during the fire season. They also suggest and propose the areas for plantations and Afforestation programmes. They also help in developmental activities for example improvement of school/ panchayat buildings, training of women, repairs of traditional water resources like bauris, village ponds, earthen dams etc.

| Sr. No. | Year | Name of Scheme | Name of Range | Name of JFMC |
|---|---|---|---|---|
| 1 | 2008-09 | N.B.M. | Nahan | Mohilia Jamnawala |
| 2 | | | Kolar | Devwla Mehtawla |
| 3 | | | Kolar | Jamnighat |
| 4 | | | Kolar | Kandaiwala |
| 5 | 2009-10 | Fire Protection | Trilokpur | JFMC Mai |
| 6 | | | Trilokpur | Burmapari |
| 7 | | | Trilokpur | Trilokpour |
| 8 | | | Trilokpur | Devkapurla |
| 9 | | | Trilokpur | Surla |
| 10 | | | Trilokpur | Kiary |
| 11 | | | Trilokpur | Kaulawala Bohood |
| 12 | | | Trilokpur | Pallion |
| 13 | | | Trilokpur | Kundla |
| 14 | | | Trilokpur | Churan |
| 15 | | | Trilokpur | Neron |
| 16 | | | Trilokpur | Gumti |
| 17 | | | Kolar | Kolar |
| 18 | | | Kolar | Haripurkhol |
| 19 | | | Kolar | Shambhalka |

| | | | | |
|---|---|---|---|---|
| 20 | | | Kolar | Logarh |
| 21 | | | Kolar | Bheron |
| 22 | | | Jamta | Banethi |
| 23 | | | Jamta | Sen-Ki-Ser |
| 24 | | | Jamta | Nauni |
| 25 | | | Jamta | Chakli Shiyar |
| 26 | 2010-11 | NMPB | Trilokpur | Kandaiwala |
| 27 | | | Nahan | JMFC Jamanwala |
| 28 | | | Kolar | JMFC Matter Bheron |
| 29 | | | Jamta | JMFC Nauni |
| 30 | 2010-11 | F.D.A. | Kolar | JMFC Jheel Bankabara |
| 31 | | | Kolar | JMFC Bheron |
| 32 | | | Kolar | JMFC Shambhalka |
| 33 | | | Kolar | JMFC Lohgarh |
| 34 | | | Nahan | Rama-II |
| 35 | | | Nahan | Satiwala |
| 36 | | | Nahan | Uttamwala |
| 37 | 2011-12 | | Nahan | JMFC Bikrambag |
| 38 | | | Jamta | JMFC Sen Ki Ser |
| 39 | | | Trilokpur | JMFC Jheera |
| 40 | | | Kolar | JMFC Sambhalka |
| 41 | | | | JMFC Bheron |
| 42 | 2012-13 | SHG | Jamta | Mahila Swayam Sahayta Samuh, Nauni |
| 43 | 2016-17 | NMPB | Nahan | JMFC Meerpur Kotla |

## Appendix XI- List of Fire Incidence

**List of forest fire incidents in Nahan Forest Division from calendar year 2010 to 2021-22.**

| Year | No. of incidences | Area in hectares | Loss (in thousands) |
|---|---|---|---|
| 2010-11 | 22 | 366.41 | 95.7 |
| 2011-12 | 0 | 0 | 0 |
| 2012-13 | 123 | 146 | 76 |
| 2013-14 | 7 | 46.50 | 0 |
| 2014-15 | 29 | 166 | 39.5 |
| 2015-16 | 3 | 21 | 0 |
| 2016-17 | 43 | 242 | 0 |
| 2017-18 | 7 | 117 | 30 |
| 2018-19 | 54 | 628.84 | 519 |
| 2019-20 | 11 | 133 | 325 |
| 2020-21 | 10 | 61.8 | 0 |
| 2021-22 | 16 | 132.5 | 104.5 |
| **Total** | **325** | **2061.05** | **1189.7** |

## Appendix-XII Rules governing the axing of trees falls under 10 year felling programme

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*(Authoritative English text of this Department Order No. FFE-B-A(3)4/99 dated 10th September, 2002 as required under clause (3) of article 348 of the Constitution of India)*

NO. FFE-B-A(3)4/99 Dated Shimla-2, the 10th September, 2002.

ORDER

WHEREAS Notifications No. 13-4/71-SF dated the 19th January, 1979 in respect of Solan district, 3rd February, 1979 in respect of Chamba & Bilaspur districts, 6th February, 1979 in respect of Sirmour, Shimla, Hamirpur and Mandi Districts, 3rd May 1979 in respect of Kullu district, 30th May, 1979 in respect of Una and Kangra districts and 27th August, 1980 in respect of Kinnaur district o Himachal Pradesh respectively issued by the State Government in pursuance of the provisions of Section 3 of the Himachal Pradesh Land Preservation Act, 1978 directing therein that the areas shown in the Scheduled to each of them were either subject to erosion or were likely to become subjected to erosion and to provide for the conservation of the sub-soil water and for prevention of erosion on the said areas and new specified in the Scheduled appended to this order;

AND whereas the State Government is satisfied that after due enquiry under section 7 of the said Act that regulations, restrictions, prohibitions and directions contained in this order are necessary for the purpose of giving effect to the provisions of the Act supra;

NOW, therefore, in exercise of the powers conferred by section 4 of the said Act, the Governor, Himachal Pradesh is pleased to temporarily regulate, restrict, prohibit throughout the areas in Himachal Pradesh (Except the areas falling within the limits of Municipal Corporation, Municipal Councils, Nagar Panchayats and Cantonment Boards) as specified in Schedule appended to this order, the following acts for a period of 30 years from the publication of this order in the Rajpatra, Himachal Pradesh, namely :-

1. The cutting of trees or timber and removal thereof in such areas shall be prohibited:

Provided that there will no restrictions on the number of trees to be felled for purposes of bonafide domestic uses of fodder and fuel:

Provided further that the owners may for their bonafide domestic and agricultural use fell three trees of coniferous (except chil trees) and in case of chil and other trees five trees each year without permission and upto ten trees with the written permission of the Range Officer concerned and more than ten trees with written permission of the Divisional Forest Officer concerned. In case of bamboos there shall be no restrictions on number to be felled for bonafide domestic purposes or for use in their own cottage industries.

Provided further that the trees for sale shall be felled in accordance with the ten Years felling progamme which shall be framed by the Officers of the Forest Department and approved by the State Government and the trees shall be felled after obtaining the permission of the following authorities, namely:-

(a) for *Khair*, bamboos & other miscellaneous broad leaves species :-

| No. of trees [1] | Competent authority of grant Permission to fell the trees. (2) |
|---|---|
| upto 200 trees in a year | Divisional Forest Officer concerned. |
| -above 200 trees in a year | Concerned Conservator of Forests |

(b) for all other species.

| | | |
|---|---|---|
| -upto 50 trees in a year | : | concerned Divisional Forest Officer. |
| -upto 100 trees in a year | : | concerned Conservator of Forests. |
| -upto 200 trees in a year | : | Principal Chief Conservator of Forests, Himachal Pradesh. |
| -above 200 trees in a year: | | Himachal Pradesh Government. |

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Provided further that any person felling the trees either for domestic or agricultural use or for sale shall be required to plant at least three trees for one tree felled. In case, however, a fruit orchard is planted in such area, it shall be planted according to the norms laid down by the Horticulture Department, Himachal Pradesh for complete stocking of the area.

2. After the permission to fell the trees is given by competent authority under para 1 of this order, the Divisional Forest Officer concerned shall issue felling order;

Provided that the felling of bamboos shall be regulated according to three years felling programme, which shall be framed by the officers of the Forest Department and approved by the State Government and that the permission for felling of bamboos for sale shall be granted by the Divisional Forest Officer concerned in accordance with 3 years felling programme.

3. The forest produce passing out of the areas permitted for felling of trees may be checked by any Forest Officer and no forest produce shall be extracted by any person without obtaining an export pass obtained from the Divisional Forest Officer concerned.

4 The authority competent to grant permission for felling of tree may, while granting permission, impose such conditions as it may deem necessary in the interest of forest conservancy and to avoid misuse of the forest produce so extracted.

5. Notwithstanding anything to the contrary contained in the foregoing paragraphs, the State Government may, be general or special order, allow the cutting or removal of any trees or class of trees subject to such condition as it may deem fit to impose, wherever it is expedient to do so in the public interest i.e. for the purpose of;

(a) grant of Nautor land; or
(b) consolidation of holding; or
(c) dry/fallen trees.

6. In case the trees are not felled within the prescribed year, the Principal Chief Conservator of Forests may extend the period upto one year in the following circumstances:-

(i) where the process of demarcation of land and marking of trees have been completed during the prescribed year of felling and felling orders stand issued by the Divisional Forest Officer concerned, but felling of trees has not been done or has been done partly; and

(ii) where the process of demarcation of land and marking of trees has been completed during the prescribed year of felling but felling orders have not been issued.

Explanation: "Prescribed year" means the financial year in which trees are to be felled in respect of the particular area in accordance with ten years felling programme approved by the State Government.

7. In all other cases other than those mentioned in sub-para (i) and (ii) of para 6 of this order, the competent authority to grant permission to fell the trees may allow felling of trees, irrespective of approved ten years felling programme of the concerned area, in the following circumstances, namely:-

(i) where trees have fallen or have dried due to natural calamities, disease or insect attack etc. and their retention may result in loss of value;
(ii) where the land holdings in a particular revenue estates are under consolidation operations, the year following the one in which these operations have been concluded shall be treated as prescribed year of felling;
(iii) where Government/private land has been acquired or leased or purchased or transferred for a public purpose such as creation of infrastructure facilities

or laying of irrigation and water supply lines or transmission lines or any other conveying systems or setting up to industries, hydro-power projects, tourism resorts or educational institutions or any other facilities which are in the public interest, and

(iv) where the Government of India's approval for diversion of the forest land for non-forest land for non-forest purposes has been received

8. In all cases (other than those mentioned in para 6 & 7 of this order), where demarcation of land and marking of trees have not been done during the prescribed year in accordance with the approved ten years felling programme, permission to demarcate the land, marking and felling of trees may be granted beyond prescribed year of felling by the;

(i) the Principal Chief Conservator of Forests upto one year; and
(ii) State Government upto two years subject to their being satisfied that sufficient reasons exist for granting such permission.

9. Where the permission has been granted under para-8 of this order, the Divisional Forest Officer concerned after demarcation of land and marking of trees shall issue felling order accordingly;

10. Application for demarcation of the land form which felling is proposed to be done may be filed before the Divisional Forest Officer concerned one year in advance from the prescribed year of felling and the Divisional Forest Officer concerned may process the case for demarcation of land.

11. In no case advance felling of trees shall be permitted before the prescribed year as fixed in the approved ten years felling programme;

12. In order to complete the felling and extraction of trees from private areas within the prescribed year of felling and not to seek frequent extensions, extension fee shall be levied on the balance number of trees/volume to be felled in the following rates:-

| | |
|---|---|
| 1. Scheduled species | Rs. 100/- per cubic meters. (standing volume) |
| 2. Khair. | Rs. 30/- per meter Girth (MG) |
| 3. Broad leaves species | Rs. 10/- per cubic meter. |

***SCHEDULE***

| Sr. | District. | Notification No. & date under Section 3 | Tehsil | Village. |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| 1. | Solan | No. 15-4/71-SF 19th January,1979 | 1. Solan<br>2. Kandaghat<br>3. Arki<br>4. Nalagarh<br>5. Kasauli | Whole of private areas in these Tehsils. |
| 2. | Chamba | No. 15-4/71-SF 3rd February, 1979 | 1. Chamba<br>2. Churah<br>3. Dalhousie<br>4. Pangi<br>5. Bharmour<br>6. Salooni<br>7. Bhatiyat | Whole of private areas in these Tehsils. |
| 3. | Bilaspur | No.15-4/71-SF 3rd February, 1979 | 1. Ghumarwin<br>2. Bilaspur<br>3. Jhandutta | Whole of private areas in these Tehsils. |
| 4. | Sirmour | No. 15-4/71-SF 6th February, 1979. | 1. Nahan<br>2. Paonta<br>3. Sangrah<br>4. Rajgarh<br>5. Shillai<br>6. Pachhad | Whole of private areas in these Tehsils. |

| | | | | |
|---|---|---|---|---|
| 5. | Shimla | No. 15-4/71-SF 6th February, 1979 | 1. Shimla (Urban)<br>2. Shimla (Rural)<br>3. Suni<br>4. Theog<br>5. Kumarsain<br>6. Rampur<br>7. Chopal<br>8. Kotkhai<br>9. Jubbal<br>10. Rohru<br>11. Chirgaon<br>12. DodraKawar | Whole of private areas in these Tehsils. |
| 6. | Hamirpur | No. 15-4/71-SF 6th February, 1979 | 1. Hamirpur<br>2. Barsar<br>3. Nadaun<br>4. Bhoranj<br>5. Sujanpur Tihra | Whole of private areas in these Tehsils. |
| 7. | Mandi | No. 15-4/71-SF 6th February, 1979 | 1. Mandi (Sadar)<br>2. Sundernagar<br>3. Joginder nagar<br>4. Sarkaghat<br>5. Karsog<br>6. Thunag<br>7. Chachiot (Gohar)<br>8. Paddar<br>9. Ladbharol | Whole of private areas in these Tehsils. |
| 8. | Kullu | No.15-4/71-SF 3rd May,1979 | 1. Kullu<br>2. Banjar<br>3. Manali<br>4. Nirmand | Whole of private areas in these Tehsils. |
| 9. | Una | No. 15-4/71-SF 30th May, 1979 | 1. Amb<br>2. Bangana<br>3. Una | Whole of private areas in these Tehsils. |
| 10. | Kangra | No. 15-4/71-SF 30th May, 1979 | 1. Kangra<br>2. Dharamshala<br>3. Dehra<br>4. Nurpur<br>5. Jawali<br>6. Indora<br>7. Jaisinghpur<br>8. Palampur<br>9. Baijnath<br>10. Baroh<br>11. JaswanKotla<br>12. Shahpur<br>13. Khundian<br>14. Fatehpur | Whole of private areas in these Tehsils. |
| 11. | Kinnaur | No. 15-4/71-SF 27th August, 1980 | 1. Kalpa<br>2. Nichar<br>3. Moorang<br>4. Pooh<br>5. Sangla | Whole of private areas in these Tehsils. |

This supersedes this Department Orders No. 15-4/71-SF dated 13th March,1979, 27th August and 25th February, 1981 published in the Rajpatra, Himachal Pradesh (Extraordinary) dated 28th April, 1979, 13th September, 1980 and 12th March, 1981 respectively and all subsequent amendments made thereto.

By order

(Avay Shukla),
Principal Secretary (Forests) to the
Government of Himachal Pradesh.

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*(Refer to the further Amendment made by GoHP to the above Notification vide Notification No. FFE –B-A (3)-4/99-Loose Dated Shimla -02 the, 11th November, 2013 as below)*

**Government of Himachal Pradesh**
**Department of Forests**

**No. FFE-B-A (3)-4/99 – Loose Dated: Shimla – 02, the 11th November, 2013**

**ORDER**

Whereas, the Governor of Himachal Pradesh is satisfied that it is expedient to amend the Order No. FFE-B-A-(3)-4/99, dated 10-09-2002 (hereinafter referred to as the said order) which has been issued in exercise of the powers conferred by Section 4 read with Section 7 of the Himachal Pradesh Land Preservation Act, 1978;

Now, therefore, in exercise of the powers conferred by Section 4 read with Section 7 of the Act ibid, the Governor of Himachal Pradesh is pleased to amend the said order in the following manner and the same is published in the Rajpatra, Himachal Pradesh as required under Section 7 of the Act ibid;

For the provisions contained in Clauses (a) and (b) under third proviso to para 1, the following shall be substituted; namely:-

| No. of trees | | Competent authority of grant permission to fell the trees. |
|---|---|---|
| -upto 50 trees in a year | : | Concerned Divisional Forest Officer. |
| -upto 100 trees in a year | : | Concerned Conservator of Forests. |
| -upto 200 trees in a year | : | Principal Chief Conservator of Forests, HP |
| -above 200 trees in a year | : | Himachal Pradesh Government. |

By Order

Tarun Shridhar
Principal Secretary (Forests) to the
Government of Himachal Pradesh

*Authoritative English text of this Department Notification No. FFE- B-A (3)/99 – dated 29.4.2003 of the constitution of India under clause (3) of article 348 of the Constitution of India.*

**GOVERNMENT OF HIMACHAL PRADESH**
**DEPARTMENT OF FORESTS.**

**No. FFE-B-A (3)/99 – Dated Shimla-2 the 29th April, 2003.**

ORDER

In exercise of the powers conferred by Section 4 of the Himachal Pradesh Land Preservation Act, 1978 (Act No. 28) of 1978 read with section, 20 of the Himachal Pradesh Central Clauses Act, 1968 (Act No. 16 of 1969) The Governor, Himachal Pradesh is pleased to amend this Department Order No. FEE-B-A(3)-4/99 - dated 20th September, 2002 published in the Himachal Pradesh Rajpatra (Extra ordinary) dated 4th October, 2002 (hereinafter called the said order) to the following extend namely:-

AMENDMENT

1. Amendment of Para-I.

In para-I of the said order –
(i) Before the existing first proviso, the following new proviso shall be inserted namely:-

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"Provided that there shall be no prohibition or restriction on felling of species of trees of Popular, Eucalyptus, Albizzia, Bahunia, Willow and Mulberry:", and

(ii) In the existing first provisio of the said order after the word "provided" before the word "that" the word "further" shall be inserted.

By order

Principal Secy (Fts) to the
Govt. of Himachal Pradesh.

*Authoritative English text of this department Order as required under clause (3) of article 348 of the Constitution of India)*

**Government of Himachal Pradesh**
**Department of Forests**

**No. FFE-B-A (3)4/99** **Dated Shimla-2, the 24-9-03**

**ORDER**

Whereas order of even number dated 10-9-2002 of this department was issued under section 4 of the Himachal Pradesh Land Preservation Act, 1978 (Act No. 28 of 1978) and published in the Rajpatra Himachal Pradesh )Extra Ordinary) dated 4-10-2002 after complying with the Provisions of section 3 and 7 of the Act ibid;

And whereas State Government is satisfied after due inquiry under section 7 of the said Act that it is necessary and expedient further to amend the said order;

Now, therefore in exercise of the powers conferred by section 4 of the said Act, the Governor of H.P. is pleased to made following amendments in the said order, namely:-

Insertion of Para 6-A

1. After para 6 of the order of the even number dated 10-9-2002 of (hereafter referred to as the "said order", the following new para 6- A shall be inserted namely :-

1. "6A. If the trees are not felled within extended period of one year granted by the Principal Chief Conservator under para 6 of this order the State Government may extend the period for one year if there are sufficient reasons for granting such extension.

Amendment of para-8

2. In par-8 of the said order for sub-para (ii) of para-8 of the said order, the following shall be substituted, namely :-

(ii) The State Government upto two years subject to its being satisfied that there exists any of the following reasons for granting such permission namely :-

(a) If there is dispute over the title or ownership or possession of land on the production of a documentary evidence such as orders/certificate of the Court etc; or.

(b) If the area is in the ten years felling programme but the same has not been shown therein the certificate from the Divisional Forest Officer concerned; or

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(c) If the d demarcation of land could not be made due to non-availability of staff on furnishing a certificate from the Sub-Divisional Officer (Civil) or the Divisional Forest Officer concerned as the case may be to this effect; or

(d) If the process of demarcation of land, marking and felling or trees has not been completed due to a natural calamity; or

(e) If the settlement of rates of trees has not been arrived at during the prescribed year of felling; or

(f) It there is any other reason beyond the control of the land owner.

Provided that the State Government may allow felling of the trees upto two years and six months after the prescribed year of felling in the snow bund areas" .

Addition of paras 13, 14 & 15

3. After para 12 of the said order, the following paras shall be added, namely :-

(1) The felling and conversion of Deodar, Kail, Fir and Spruce shall be completed within a period of two years and that of Chil and other scheduled species within a period of one year.

(2) The felling and conversion of trees of non scheduled species shall be completed within three months from the date of issuance of felling order by the Divisional Forest Officer or at the end of financial year whichever is later, as the case may be.

14. The State Government may allow demarcation of land, marking and felling of trees on the land recorded as Shamlat Deh/Tika Hasab-Rasad-Mallguzari in favour of the co-sharer on their furnishing of a certificate issued by the Sub-Divisional Officer (Civil) concerned to the effect that they are in continuous possession of the land prior to 26-1-1950 and further that they have become absolute owners in proportion to the land revenue paid by them and the said land has never been vested in the Government under any enactment.

15. Working plans for the felling trees shall be prepared for private land falling within the ten years felling programme adjoining to the Government "Forests" which shall be verified at the spot by an officer not below the rank of Divisional Forest Officer.

By Order

J.P. Negi,
Principal Secretary (Fts.) to the
Government of Himachal Pradesh.

**Appendix-XIII**

**NURSERY SEED MANUAL PREPARED FOR**

**NAHAN FOREST DIVISION**

## LIST OF SPECIES

1. **Aam**

**Aam (*Mangifera indica)***

| English Name: Mango | Family: Anacardiaceae |
|---|---|


**1. Distribution:** Found throughout the Lower Siwalik range in Himachal Pradesh, preferably growing in deep well drained loamy soils. It is a large size evergreen tree. Found upto an altitude of 1000 meters.
**2. Flowering:** Creamy white color flowers in large panicles appear from March to May
**3. Fruit ripening:** June-July
**4. Seed collection & Storage:** Seeds are collected after de-pulping; seeds quickly lose viability, therefore early sowing is recommended after collection. Mango kernels are mixed with charcoal, stored in sealed Polythene Bags at 20-30 degree centigrade.
**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 50-60/kg | 80-90% | 14-24 days | 80 |

**6. Seed pre-treatment:** The seeds are soaked in cold water for 24 hours resulting in better germination.
**7. Seed sowing:** Sowing in poly-bags is done in June or in raised primary beds in rows about 20-30cm apart and 10 cm spacing in between.
**8. Transplanting:** Pricking may be collected from trees in September –October and are to be transplanted in poly-bags.
**9. Plantable seedling:** One year seedlings are plantable during next year monsoon, attaining a height of around 60 cm.

**2. Ambara**

| Ambara (*Spondias pinnata)* | |
|---|---|
| **English Name: Wild Mango** | **Family: Anacardiaceae** |

**1. Distribution:** A moderate sized to large deciduous tree with a pleasant aromatic smell. It attains a height of 15 to 30 m and a girth of around 1.2 to 3.0 m with spherical crown. It is widely distributed throughout the country in the tropical wet evergreen and tropical dry deciduous forests. The species occurs up to 3000 feet elevation.

**2. Flowering:** March - May when inflorescences of whitish flowers cover the trees

**3. Fruit ripening:** December-February

**4. Seed collection & Storage:** Collection period January onwards. The fruit stone is semi-woody, fibrous outside and with cavity. Each stone has 2 to 5 seeds. Completely ripened fruits are collected by lopping the small branches. Fruits are heaped for 2 to 5 days to allow the pulp to rot. The pulp is then macerated and washed under the tap water to clean the stones. The seeds collected are then dried. Seed viability is for 3 months.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 290 per kg | 40-60 % | 20-60 days | 40 |

**6. Seed pre-treatment:** Clipping of seeds break the dormancy, enhance the germination and reduce the germination period.

**7. Seed sowing: -** Seeds are sown directly in polythene bags vertically by keeping the pore end upward at a depth of 1.5 to 2.0 cm in January. One to three seedlings may emerge from the same stone, sufficient watering is required.

**8. Transplanting: -** Sowing in mother beds is advantageous because the process of germination of seedlings and maintenance of seedlings up to transplanting stage can be easily and effectively cared. Transplanting is typically done with moisture in soil.

**9. Plantable seedling: -** Seedlings become ready for plantation after one year of sowing. Stump planting has also been found to be effective.

### 3. Amla

| **Amla (*Phyllanthus emblica/ Emblica officinalis)*** | |
|---|---|
| **English Name: Indian Gooseberry** | **Family: Euphorbiaceae** |

**1. Distribution:** It is widely distributed in most tropical and subtropical countries. It grows in tropical and subtropical parts of India. It is a common species of dry deciduous forest. It is a light demander and sensitive to drought.

**2. Flowering: -** Yellow flowers in dense panicles develop during March- April.

**3. Fruit ripening: -** October to February

**4. Seed collection & Storage:** Ripe fruits are collected during January−February and seeds are obtained after de-pulping. Seeds can retain viability up to 1 year .

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 6800-8900/kg | 40-50% | 15-24 days | 70% |

**6. Seed pre-treatment:** Float test is done and seeds are soaked in hot water for 3-5 minutes or in normal water for 12-24 hours before sowing.

**7. Seed sowing:** Seeds are sown during March in raised mother beds having soil mixture of soil, sand and vermi-compost (1:2:1).

**8. Transplanting: -** Seedlings are transplanted when 2-4 cm in height to poly-bags having soil mixture of soil, sand and vermi-compost in a proportion of 1:1:1. Root cutting, grading, re setting of poly-bag seedlings are done at a regular interval of about 45 days. The poly-bags are kept on polythene sheet to prevent root penetration into soil.

**9. Plantable seedling: - :** Seedlings may be ready for planting during next year monsoon when the average height will be about 45cm.

## 4. Amrood

| **Amrood (*Psidium guajava)*** | |
|---|---|
| **English Name: Guava** | **Family:Myrtaceae** |


**1. Distribution:** Guava is an important fruit of subtropical countries. It is a hardy crop and is cultivated successfully even in poor quality soils. In India, guava is grown almost in all states, including Lower Shivalik belts of Himachal Pradesh.

**2. Flowering:** May-June (Monsoon flowering during June called 'Mrig Bahar')

**3. Fruit ripening**: July- August

**4. Seed collection & Storage:** Ripe fruits are collected during August& September. Seeds are to be extracted from fruits immediately after collection; must be sun-dried and stored.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 20,000-25,000/kg | 55-60% | 25-35 days | 80 |

**6. Seed pre-treatment:** Scarification (to break seed dormancy) with 10% Hydrochloric acid for 2 minutes.

**7. Transplanting:** Seedlings are transplanted when 2 - 4 cm in height to poly-bags having soil mixture of soil, sand and vermicompost in a proportion of 1:1:1. Root cutting, grading, re-setting of seedlings are done at a regular interval of about 45 days. The poly-bags are kept on a polythene sheet to prevent root penetration into soil.

**8. Plantable seedling:** Seedlings may be ready for planting when average height will be about 45cm.

**5. Arjun**

| **Arjun (*Terminalia arjuna)*** | |
|---|---|
| **English Name: Arjuna** | **Family: Combretaceae** |

**1. Distribution:** - Deciduous tree, up to 30 m tall. Bark whitish grey to pinkish grey, thin, smooth. It is distributed in forest of foot hill/ Shivalik hills of Himalaya throughout of Himachal Pradesh.

**2. Flowering: -** Small whitish flowers in spikes appear in summers.

**3. Fruit ripening: -** Winged fruit start ripening in March-April.

**4. Seed collection & Storage:** Ripen fruits are collected during April-May by lopping the braches or from previously cleaned ground. Fruits are than dried in Sun for 2 to 3 days and stored in gunny bags. Viability remains up to one year.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 400 to 700 per Kg | 40 to 50 | 15 to 20 days | 40 |

**6. Seed pre-treatment**:- Pre soaking in warm water for 48 hours. The seeds are heaped and watered twice a day. When the seeds begin to sprout, they are removed and sown/ dibbled in poly bags.

**7. Seed sowing: -** Pre treated seeds are dibbled in polythene bags during March having mixture of soil and sand and vermin-compost (1:1:1). Mulching is to be provided to facilitate germination. Seeds are normally dibbled at the center of the poly-bag.

**8. Transplanting:** Through Root-Shoot Method. Seedlings can be collected from forest area in July to December and root shoot cutting can be prepared.

**9. Plantable seedling: -** Seedlings usually reach normal & tall plantable size in 1.5 & 2.5 years respectively.

**6. Ashoka**

| **Ashoka(*Saraca asoca)*** | |
|---|---|
| **English Name: Ashok tree** | **Family: Fabaceae** |

**1. Distribution:** Generally found wild along streams and in shades of evergreen forests. Found in lower Shivalik regions as well. It is a tree of high religious significance in India.

**2. Flowering: -**February-May

**3. Fruit ripening: -** August-September

**4. Seed collection & Storage: -**Collection from mature pods in September. Seed viability is only for two months.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 100/kg | 60-70% | 30 to 60 days | 55 |

**6. Seed pre-treatment:** Not required.

**7. Seed sowing& transplanting:** Seeds are sown in poly-bags with mixture of soil, sand and vermicompost in the ratio of 1:1:1. They are covered with dried leaves for better germination and regular watering. Germination completes by $12^{th}$ week.

**8. Plantable seedling: -** Seedlings are ready for planting in the beginning of next year monsoon.

**7. Ashwagandha**

| **Ashwagandha(*Withania somnifera*)** | |
|---|---|
| **English Name:Indian Winter Cherry** | **Family:Solanaceae** |

1. **Distribution: -** It is found throughout the drier parts in subtropical regions (upto Middle Himalayas) and upper Gangetic Plains up to altitude of 1200m. Ashwagandha is grown on sub-marginal wastelands, sandy loam or light red soil with good drainage.

2. **Flowering:** - December-January

**3. Fruit ripening:** March-April onwards

**4. Seed collection & Storage:** May onward and store in open dry conditions.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 5000 to 7000/kg | 70-80% | 7 to 10 days | 70 |

6. **Seed pre-treatment:** Mechanical scarification of seeds to break seed dormancy. A light shower after sowing ensures good germination.

7. **Seed sowing:** Seeds can be directly sown in the poly-bags or raised nursery beds. When the seedlings are to be raised for transplanting, they should to be sown in well-prepared, raised nursery beds. The seeds are usually sown about 1-3 cm deep in June-July in nursery.

**8. Transplanting:** The seedlings after 25-35 days are transplanted in polybags after sprouting. After onset of monsoon, transplanting should be completed.

**9. Plantable seedling:** - Seedlings are ready for planting out in next monsoon season.

### 8. Bana

| **Bana, Shamalu (*Vitex negundo)*** | |
|---|---|
| **English Name: Chaste tree** | **Family: Verbenaceae** |

**1. Distribution:** Bana is an erect shrub or small tree growing from 6 to 10 feet in height. Found throughout the Lower Siwalik in Himachal, preferably grows in deep well drained loamy soils. It can be found up to an altitude of 1500 meters.

**2. Flowering:** June- July and December-January

**3. Fruit ripening:** It is preferably propagated through cuttings.

**4. Seed collection & Storage:** Cuttings can be prepared of this plants during July and December-January.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 40-50 Cuttings per Kg Seeds are very minute. | 70-90% | - | 50-60 |

**6. Seed pre-treatment:** Not required

**7. Seed sowing & transplanting: -**February-March

1. Seeds are directly dibbled into polybags with soil, sand and vermi-compost.
2. Fresh seeds should be graded and large size seeds are sown in polybags at the rate of two seeds per bag.
3. Two leaf stage seedlings are transplanted into poly-bags.

**8. Plantable seedling: -** Cuttings may directly be planted at planting site or nursery raised cutting are planted out during next monsoon (July-August).

**9. Baheda**

| **Baheda (*Terminalia bellirica)*** | |
|---|---|
| **English Name: Belleric Myrobalan** | **Family:Combretaceae** |


**1. Distribution:** It is widely distributed across India and lower region of Himachal Pradesh, forming a part of deciduous forests upto an altitude of 1000 m. The tree is a common associate of Sal, Teak and other important trees of tropical moist and dry deciduous forests. It grows well in fertile alluvial soil.

**2. Flowering:** April to June

**3. Fruit ripening**: Fruits ripen from November to March

**4. Seed collection & Storage:** - Ripened fruits are collected from healthy trees or freshly fallen ones on the ground. Fruits are then de-pulped and the seeds dried in the sun before storage. Seeds can be stored for about a year.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 430-450 per kg(dried de-pulped seeds), 60-75 seeds/kg(with pulp) | 60-65% | 15-25 days | 50-55 |

**6. Seed pre-treatment:** Seeds are soaked in water for 24 hours to increase germination percentage. Seeds may also be treated with concentrated sulphuric acid for 10 minutes before sowing for better results. The seeds may be heaped and watered twice a day. When the seeds begin to sprout, they are removed and sown/ dibbled in polybags.

**7. Seed sowing:** Pre-treated Bahera seeds are dibbled in polybags during the month of February-March in a mixture of soil, sand & vermicompost (1:1:1). Potting mixture must be must be watered twice a day in hot conditions. Shade should be provided depending on the intensity of sun light.

**8. Transplanting:** Root cutting, grading, re-setting of polybags seedlings are done at regular interval of about 30days. The polybags are kept in the nursery bed on polyethene sheets to prevent root penetration into soil.

**12. Plantable seedling:** Seedlings are ready for planting out in next June-July when they attain a height of about 50cm.

### 10. Bargad

| **Bargad (*Ficus bengalensis* )** | |
|---|---|
| **English Name: Banyan tree** | **Family: Moraceae** |


**1. Distribution:** It an indigenous Indian tree found in sub-tropical areas of Himachal Pradesh mostly near temple & villages. This species is a light demander and grows on a variety of soils.

**2. Flowering:** April-May

**3. Fruit ripening:** May-June

**4. Seed collection & Storage:** - Fruits become red when ripe containing minute seeds with low viability. Ripe fruits are collected during May - June, preferably from excreta of birds. The ripe fruits are collected, rubbed and dried in the sun for 2 to 3 days. These dried fruit parts are mixed with cowdung and cakes are prepared which are again dried in sunlight for 5-7 days as a method of pre-treatment. The dried cakes are made into powder and used for broadcast sowing.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| App.10,00,000 per kg | 30 to 40 % | 20 to 30 days | 20 to 30 |

**6. Seed Sowing:** Cakes of ripe fruits with cow dungare sown in mother bed with mixture of soil sand and vermicompost (1:1:1). Watering is done carefully in a regulated manner to preventwashout, damping off & insect attack. Partial shade is provided to the germination bed in areas with hot climate.

**7. Transplanting:** Seedlings of 2 to 4 cm height are transplanted to polythene bags filled with soil mixture. Regular watering twice a day is followed. Root cutting, grading and re-setting of polybag seedlings are done in the nursery at regular interval of about 30 days. Shade is provided using green shade net in areas with hot climate.

**8. Plantable seedling:** Seedlings are fit for planting during next year monsoon.

### 11. Champa

| **Champa (*Michelia champaca/Magnolia champaca)*** | |
|---|---|
| **English Name: Champak** | **Family: Magnoliaceae** |

**1. Distribution:** It prefers humus-rich, fertile soil for its optimum growth. It is well suited for sandy loam soil and also occurs on moist deep, well drained, good quality soil. They grow well in hot and humid climate.Cultivated throughout Himachal in Bilaspur, Chamba (Bhatiat, Dalhousie), Hamripur, Kangra, Kinnaur, Mandi, Sirmaur, Solan upto an altitude of 1500 m.

**2. Flowering: -** January-Febuary

**3. Fruit ripening: -** September -November

**4. Seed collection & Storage:** The mature fruits are spread on tarpaulin for about 4 days and allowed to split open to release the seeds. Seeds are viable upto 2 months at room temperature.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| /kg | 26-30% | 25 days | 25 |

**6. Seed pre-treatment:** Soaking seeds in water for 24 hours improves the germination.

**7. Seed sowing: -** It requires full sun and regular watering. Trees propagated from seed take 8-10 years to flower whereas asexually propagated trees flower in 2-3 years.

**8. Transplanting: -**

**9. Plantable seedling: -** The most successful method of propagating is planting of one-year old seedlings at the break of the monsoon.

## 12. Chandan

| **Chandan (*Santalum album)*** | |
|---|---|
| **English Name: Indian Sandalwood** | **Family: Santalaceae** |

**1. Distribution:** Chandan is a small evergreen tree, a partial root parasite, attaining a height of 12- 13m. & girth of 1-2.4 m with slender druping as well as erect branching. The tree starts flowering at an early age of 2 to 3 years. Fruit is drupe, purplish when fully matured and single seeded.In Himachal, found in tracts of Bilaspur and Jwalamukhi, as well as Hamirpur. It grows well in properly-drained loamy soil & warm temperature.

**2. Flowering: -** May-June

**3. Fruit ripening: -** December- January

**4. Seed collection & Storage:** Ripened fruits are collected during January, soaked in water and rubbed vigorously to remove the soft pulp and seeds. Then they are sundried for a few days. Chandan can be propagated through cuttings of root-suckers as well.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 4000 to 5000 per kg | 20 to 30% | 40 to 60 days | 10-15 |

**6. Seed pre-treatment:-** Due ***to hard seed coat, seeds are treated with dipped in warm water for 3 days for softening, regular water change is necessary.***

**7. Seed sowing: -** Two types of seed beds are used to raise sandal seedlings: sunken and raised beds. Seed beds are formed with sand and soil in the ratio 3:1. Around 2.5 kg seed is spread uniformly over the bed, covered with straw, which should be removed when the leaves start appearing on the seedlings.

**8. Transplanting: -** When seedlings have reached 4-6 leaf stage they are transplanted to poly-bags along with a seed of "tur dal" (*Cajanus cajan*), the primary host for better growth of sandal. Seedlings are carefully removed from beds, roots should not be allowed to dry. Shade can be provided for a week immediately after transplantation. Watering is to be done once a day, but excess moisture is to be avoided. Host plants are to be pruned frequently, so that they do not over grow sandal and hamper its growth. Poly-bags should contain soil mixture of ratio 2:1:1 (Sand: Red earth: vermicompost).

**9. Plantable seedling: -** Plantable seedlings of about 30cm height can be raised in 6-8 months' time. A well-branched seedling with a brown stem is ideal for planting

**13. Dadu**

| **Dadu(*Punica granatum*)** | |
|---|---|
| **English Name: Wild Pomegranate** | **Family: Lythraceae** |

**1. Distribution:** It is a fruit bearing deciduous shrub/ small tree that grows between 5 to 10 m tall. Daru is believed to have originated long ago in Middle East. Today, pomegranate trees are found throughout the world except in temperate regions but they excel in sub-tropical regions. In North India it is mostly found between 600m to 2000m in Western and Eastern Himalayas.

**2. Flowering: -**March-April to June

**3. Fruit ripening: -** July-September

**4. Seed collection & Storage: -**Mature fruits should be directly harvested from trees and dried and cut open for seeds. Seeds must be then dried in sun and stored at a cool place in earthen pots.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 3500 to 4000/kg | 70-80% | 30 to 45 days | 60-70 |

**6. Seed pre-treatment:** Seed should be dipped in water for 48 hours before sowing and hand rubbed so that pulp/ fleshy portion of the seed are removed. This will enhance as well as fasten the process of germination.

**7. Seed sowing:** Mainly sown during the month of January- February in poly-bags in a potting mixture of soil, sand & vermicompost (1:1:1). It can also be raised by stem cuttings but as the results through seed sowing is good so cuttings are not preferred.

**8**. **Transplanting: -**Plants in poly-bags are shifted from time to time (every 3 months) in nursery beds, so that roots do not get entangled in soil. Usually, a polyethene sheet is laid beneath poly-bags for avoiding root penetration to nursery beds.

**9. Plantable seedling: -** Plantable size for normal plant is usually attained in 1.5 years and for tall plants it takes about 2.5 years. Plantation must preferably be done during the month of July and August (onset of monsoon).

### 14. Gular

| **Gular(*Ficus glomerata)*** | |
|---|---|
| **English Name: Cluster Fig** | **Family: Moraceae** |

**1. Distribution:** Moderate-sized to large deciduous tree with a spreading crown. Found throughout India in moist localities along banks of streams, the sides of ravines and similar places. It is sometimes found gregariously found on rocky hill slopes and sporadically in Sal forests and mixed forest of various types.

**2. Flowering: -**January to April

**3. Fruit ripening: -** May to June

**4. Seed collection & Storage:-**The fruits are sub-globose, 1-1.5 in in diameter, red when ripe, found in large clusters on short leafless branches emerging from the trunk and main branches. Collection is done in June. The seeds lose viability very soon, so must be sown at the earliest.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| ____ per Kg | 10 to 15% | 60-70 days | 10 |

**6. Seed pre-treatment:** Seeds need to be sorted out by floating in water. Good seeds absorb water, swelling to twice their size.

**7. Seed sowing:** Seeds should preferably be sown in raised nursery beds as the germination capacity of figs is very low.

**8**. **Transplanting: -**The seedlings are pricked from nursery beds to Poly bags of size 5x9 inch during the month of July-August. The Poly bags should be kept under shade during heat till the arrival of monsoon. The plants should be watered and weeded regularly.

**9. Plantable seedling: -** One year seedlings are planted during next year monsoon attaining a height of around 60 cm.

**15. Harad**

| **Harad (*Terminalia chebula*)** | |
|---|---|
| **English Name: Chebulic myrobalan** | **Family: Combretaceae** |


**1**. **Distribution: -** It is commonly found in mixed, dry and deciduous forests. It grows well in loose, well drained and fertile soil such as sandy loam & clayey loam.

2**. Flowering:** -Greenish, white flowers in spikes appear from April to June.

3. **Fruit ripening:** -Fruits ripen from December to Februaryfollowing year and fall.

4**. Seed collection & Storage**: -After removal of the fibrous pericarp, seeds are used for germination. Fresh and ripe fruits are collected from previously cleaned ground. The fruits are then de-pulped, dried under shade for 2-3 days and stored in gunny bags. Viability remains up to one year, however fresh seeds germinate better.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 150 to 180 per kg. | 40 to 50 % | 20 to 30 days | 40 % |

**6. Seed pre-treatment:** Pre-soaking in warm water for 24 hours. The seeds are mixed with cow dung heaped and watered twice a day. When the seeds begin to sprout they are removed and sown in poly-bags.

**7. Seed sowing:** -One or two healthy pre-treated seeds are dibbled in the center of poly-bags filled with soil mixture during March. Regular wateringtwice a day is followed. Root cutting, grading and re-setting of poly pot seedlings are done in the nursery at regular interval of about 30 days. The polybags are kept, in the nursery beds, on polythene sheet to prevent root penetration into the soil. Shade is provided using agro green shade net in areas with hot climate.

**8. Transplanting:** Root cutting, grading and re-setting of poly-bag seedlings are done in the nursery at regular interval of about 30 days.

**9. Plantable seedling:** -Seedlings are ready for planting out during next year monsoon.

### 16. Jamun

| **Jamun (*Syzygium cumini*)** | |
|---|---|
| **English Name: Black Plum** | **Family:Myrtaceae** |


**1. Distribution:** It is an evergreen tropical tree favored for its fruit, timber and ornamental value. It is native to the Indian subcontinent and found in plenty across Sivalik belt of Himachal Pradesh.

**2. Flowering:** Off-white fragrant flowers in trichotomous panicles appear in March−April.

**3. Fruit ripening:** Fruits (Drupes) ripen in June to August

**4. Seed collection and Storage:** Seeds are collected either from the ground or from the tree and then the pulp is washed from the seed, seed are dried under shade for 10 to 15 days.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 1000- 1100per kg | 90 % | 15 to 20 days | 50 |

**6. Seed Sowing:** InJune – July after drying, seed sowing done in nursery beds / polybags. Root-shoot cuttings are also preferable for raising in nurseries.

**7. Transplanting:** Seeds may also be sown during June−July in raised mother beds having soil mixture of soil, sand and vermicompost (1:2:1) preferably using sandy loam soil. Mulching with hay & overhead shade is to be provided to facilitate germination. Regular watering twice a day is to be followed. Seedlings can be transplanted from mother beds to poly-bag when 2 to 4 cm in height and maintained as stated above. Root cutting, grading, re-setting of Poly-bag seedlings are done at regular interval of about 30 days. The poly-bags are kept in the nursery bed on polythene sheet to prevent root penetration into soil.

**8. Plantable seedling**: Seedlings are ready for planting out during next year monsoon after attaining a height of around 60 cm. It is recommended to use poly-bags of size 5"x9" size.

**17. Kanchan**

| **Kanchan (*Bauhinia racemosa)*** | |
|---|---|
| **English Name: Bidi Leaf tree** | **Family: Leguminosae (Caesalpinioideae)** |

1. **Distribution:** The tree is found throughout the greater parts of India from Ravi eastwards to West Bengal. It frequently occurs in the grassy blanks and open places. A short crooked tree with persistent fruit in the cold season, common in all forests, frequently found in villages.
2. **Flowering:** March to June
3. **Fruit ripening:** Pods ripen in November –December and remain on the tree for several months, falling towards the end of the summer season.
4. **Seed collection and storage:** Ripe pods are plucked off the tree in January to March, dried in the sun, beaten with a wooden mallet to release the seeds which are cleaned and stored. Seeds can be stored for one year.Seeds are stored at room temperature. Seed viability: 1-2 years.
5. **Seed Biology:**

| **Seed weight (No of seeds per Kg)** | **Germination Percentage** | **Germination Period** | **Plant Percent** |
|---|---|---|---|
| 6440- 7900 per kg | 60 -90 | 4-10 days | 25-70 |

6. **Seed Pre-treatment:** Boiling water treatment or soaking in cold water for 24 hours.
7. **Seed sowing:** Seeds are sown in April – May and covered with a fine soil to a depth of 5-6 mm.
8. **Transplanting**: Roots are sensitive to transplanting and therefore, handled with utmost care.
9. **Plantable seedlings:** Nursery raised entire plants are planted out with ball of earth in pits in monsoon. 12 to 15 month old plants are suitable for stump planting.

**18. Kaphal**

| **Kaphal (*Myrica esculenta*)** | |
|---|---|
| **English Name:Bayberry, Box myrtle** | **Family:Myricaceae** |

**1. Distribution:** - This species is native to India and is found in Himachal Pradesh, Uttarakhand and North Eastern India in between 900-2100 m above the sea level.

**2. Flowering:** - February to March

**3. Fruit ripening: -** April to May

**4. Seed collection & Storage: -** April to May

**5. Seed Biology:**

| **Seed weight (No. of seeds per kg)** | **Germination percentage** | **Germination period** | **Plant percent** |
|---|---|---|---|
| 3500- 4000 seeds/kg | 25-30% | 60 days | 10 - 20 |

**6. Seed pre-treatment:** - Seed soaking in 5 to 10% sulphuric acid for 10 minutes so that the hard seed coat softens for germination. Mechanical scarification can be done from the open pore side of the seed (micropyle), before soaking in hot water for 48 to 72 hours to increase germination.

**7. Seed sowing:** July-August

**8. Transplanting: -** Once the seeds are germinated in mother beds, seedlings are then pricked to Poly-bags after 6 months, with a mixture of soil, sand & FYM (1:1:1). Pricking of root suckers from previously identified male or female trees after onset of monsoon season in Poly-bags can also be tried.

**9. Plantable seedling:** 2 years old seedlings are ready for planting out.

## 19. Kathal

| Kathal(*Artocarpus heterophyllus*) | |
|---|---|
| **English Name:Jack fruit tree** | **Family:Moraceae** |


**1. Distribution:** - A large semi-evergreen tree with spreading crown found in deep moist and well-drained soils. Occurs widely in plain areas of Shivalik, Himachal Pradesh.Found close to human habitation due to high consumption.

**2. Flowering:** - Light green flowers appear in December to February.

**3. Fruit ripening:** - June-August.

**4. Seed collection & Storage:** - Seeds are embedded in a sweet pulp. Ripe fruits are collected from the trees, de-pulped, cleaned and dried in the sun for a day or two and stored in gunny bags in cool and dry place. Seeds do not retain viability for long period.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 100-150 seeds/kg | 60-70% | 15-30 days | 50 |

**6. Seed pre-treatment**: - Not required owing to the soft coating.

**7. Seed sowing:** - 2- 3 healthy seeds are dibbled in the centre of poly-bags filled with soil mixture during July. Mulching is provided to facilitate germination. Regular watering twice a day is to be followed. Root cutting, grading and re-setting of seedlings are done in the nursery at regular interval of about30 days. The poly-bags are kept in the nursery beds, on polythene sheet to prevent root penetration into the soil. Shade is provided preferably using agro green shade net in areas with hot climate.

**8. Plantable seedling:** - Poly-bag seedlings are suitable for planting during the following year monsoon after the seedling height reaches at least 60 cm.

**20. Kharpat**

| **Kharpat/Kakad (*Garuga pinnata)*** | |
|---|---|
| **English Name: Garuga** | **Family: Burseraceae** |

**1. Distribution:** Deciduous trees, to 25 m high, bark grey or brown**,** found in Ambala and Siwaliks of Punjab, Sirmaur and Himalayan foothills and eastwards in Assam upto an altitude of 1050 m.

**2. Flowering: The** flower buds appear at the ends of the branches in February or March and in March – April the leafless trees are conspicuous with feathery masses of greenish white flowers.

**3. Fruit ripening:**Fruits become full sized by June but are not ripe while July and August and do not fall until September.

**4. Seed collection and storage:** The ripe fruits should be collected about July and they do not fall until September. The fruit is a globose drupe, yellowish green when ripe, and contains 2-4 extremely hard stones.

**5. Seed Pre-treatment:** Mechanical scarification can be done to enhance germination.Hard seed coat can be treated by rubbing with sand paper, nail clipping and immersion in water and Sulphuric acid.

**6. Seed sowing:** Ripe fruits collected about Julyare placed in drills in seed beds, very lightly covered with earth and regularly watered during dry season. Most of the seeds will germinate early in the rains of the following year.

**7. Transplanting**: The seedlings can be transplanted without difficulty about six weeks to two months after germination, when they are about 10 to 12 cm in height. Transplanting, however checks growth and better development is obtained by direct sowing.

8**. Plantable seedlings:** One year old seedlings are planted in next monsoon season.

**21. Maharukh**

| **Maharukh (*Ailanthus excelsa)*** | |
|---|---|
| **English Name: Tree of Heaven** | **Family: Simaroubaceae** |

**1. Distribution:**Found across Bihar, Gujarat, Madhya Pradesh, and in Himachal Pradesh across Bilaspur and Sirmaur upto an altitude of 1800 m. Trees grow upto 25 m height.
**2. Flowering:** January-March
**3. Fruit ripening:** March onwards
**4. Seed collection & Storage:** March – June. Seed viability is barely six months; should be used fresh as far as possible.
**5. Seed Biology:**

| **Seed weight (No. of seeds per kg)** | **Germination percentage** | **Germination period** | **Plant percent** |
|---|---|---|---|
| 10000 per kg | 10-15 % | 15 days | 10 |

**6. Seed pre-treatment:** Germination can be improved by removing the wrap on the seeds via light mechanical scarification.
**7. Seed sowing & transplanting: -** Fresh seeds are sown in May - June in light and porous soil, in raised beds with good drainage. Regulated watering is necessary as excessive water produces damping off diseases. Regular weeding is essential. Lack of weeding leads to large scale mortality. The seedlings attain 15-23 cm in first growing season (inadequate).
**8. Plantable seedling: -** Seedlings can be planted out in monsoon season of the following year.

**22. Mahua**

| **Mahua (*Madhuca longifolia*)** | |
|---|---|
| **English Name: Butter/Honey tree** | **Family:Sapotaceae** |


**1. Distribution:** - Tropical tree, found in moist & dry mixed deciduous forests of the state. Recommended for plantation in sandy soil but also grows in shallow & boulder soil.

**2. Flowering: -** Green colored scented flowers appear in March to May.

**3. Fruit ripening: -** July to September

**4. Seed collection & Storage: -** Ripe fruits (Drupes) are collected by shaking the branches and the seeds are separated from fruits and then dried out. Oily seeds lose viability early on storage.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 500 to 600 per kg | 20 to 30 % | 10 to 20 days | 15 |

6. **Seed pre-treatment:** Not necessary

7. **Seed sowing:** 1-2 healthy seeds are dibbled in the center of poly-bags filled with soil mixture during July-August. Regular watering, twice a day, is followed. Root cutting, grading and re-setting of seedlings are done in the nursery at regular interval of about 30 days. The poly-bags are kept, in the nursery beds, on polythene sheet to prevent root penetration into the soil. Root-shoot cuttings are also preferable for raising in nurseries.

**8. Transplanting:** Seeds can also be sown during June-July in raised mother beds having mixture of soil,sand and vermicompost (1:1:1). Mulching with hay & overhead shade is provided to facilitate germination. One month old seedlings are transplanted from mother beds to Poly-bags when 2-4 cm in height.

**9. Plantable seedling:** - Growth of seedlings is slow at nursery stage for which seedlings are planted during monsoon of the following year after attaining height of 50 - 60 cm.

### 23. Neeli Gulmohar

| Neeli Gulmohar (*Jacaranda mimosifolia)* | |
|---|---|
| **English Name: Jacaranda/Fern tree** | **Family: Bignoniaceae** |

**1. Distribution:** Deciduous tree, 6–12 m tall. It creates a diffused shade. Blue Jacaranda can be grown in almost every region of India including Lower Shivalik belt. It is known for utility in avenue plantations with mauve/ light blue flowers.

**2. Flowering:** April - June

**3. Fruit ripening:** July - October

**4. Seed collection & Storage:** November –December. Viability is for 3 months.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 2500 per kg | 60 % | 10-15 days | 55 |

**6. Seed pre-treatment:** Pods are dried and seed are extracted. Seeds are soaked in cold water for 24 hours.

**7. Seed sowing:** Sowing is to be done in raised mother beds in nursery. Germinated seedlings are then pricked out and transplanted in polythene bags with soil mixture of 1:1:1 (sand, soil and vermicompost).

**8. Plantable seedling:** Seedlings attain 6 feet in 8 months and can be planted out in next monsoon season of the following year.

**24. Neem**

| Neem (*Azadirachta indica*) | |
|---|---|
| **English Name: Margosa tree** | **Family:Meliaceae** |


**1. Distribution**: It grows on a variety of soils from sandy to clayey and black cotton soil. Commonly found in dry area with well-drained soil.

**2. Flowering:** April to May

**3. Fruit ripening:** June to August

**4. Seed collection & Storage:** -Ripe fruits are collected from the trees are swept from the floor under the trees. The pulp is washed up and seeds collected are dried in shade & used soon as viability is lost within 2 weeks.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 2,000 to 3,000 per kg | 70-90 % | 10 to 20 days | 40-50 |

**6. Seed pre-treatment:** -Pre-soaking in normal temperate water for 24 hours is done.

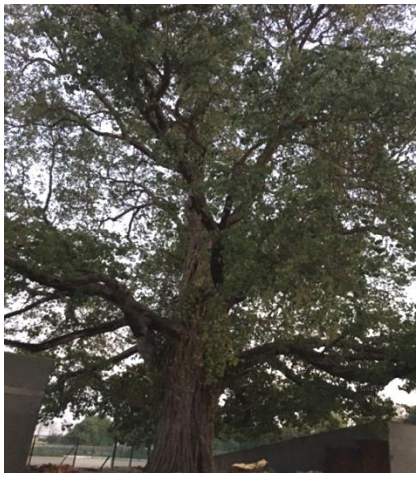
**7. Seed sowing**: Line sowing of seeds mixed with ash is done during June-July on raised beds with a bottom layer (8 cm to10 cm) of mixture of soil, sand and vermicompost in a proportion of 1:1:1 covered with a fine layer (2 cm) of sand. Regulated watering is done. Partial shade is provided to the germination bed in areas with hot climate.

**8. Transplanting:** Seedlings of 4 to 5cm height are transplanted to poly-bags. Regular watering twice a day is to be followed. Root cutting, grading and re-setting of poly-bags seedlings are done in the nursery at regular interval of about 30 days. The poly-bags are kept in nursery beds, on polythene sheet to prevent root penetration into the soil. Shade is provided using green shade net in areas with hot climate.

**9. Plantable seedling:** Poly-bag seedlings of one year old are suitable for planting during the following year monsoon after the seedling height reaches at least 60 cm.

**25. Peepal**

| **Peepal (*Ficus religiosa*)** | |
|---|---|
| **English Name: Sacred Fig** | **Family:Moraceae** |



**1. Distribution:** It is a large dry season-deciduous or semi-evergreen tree and found in foothills of Himalayas across Northern India. High religious significance leads to its presence in sacred groves/religious spaces.

**2. Flowering:** - January-February

**3. Fruit ripening:** - April- May

**4. Seed collection & Storage**: Ripen fruits are collected during rainy season. The figs always grow in pairs. The new leaves appear in the month of April. Viability remains up to one year.

**5. Seed Biology:**

| **Seed weight (No. of seeds per kg)** | **Germination percentage** | **Germination period** | **Plant percent** |
|---|---|---|---|
| Very high per kg | 20-30% | 30 to 40 days | 10-20 |

**6. Seed pre-treatment:** - Pre-soaking in warm water for 24 hours. The seeds are heaped and watered twice a day.

**7. Seed sowing:** - Freshly treated seeds are dibbled in polythene bags during March-April in mixture having sand, soil and vermicompost (1:1:1) .

**8. Transplanting:** Root shoot cutting can be prepared after obtaining seedlings from forest areas.

**9. Plant able seedling:** - One year seedlings are planted during next year monsoon after attaining a height of around 60 cm.

**26. Ritha**

| **Ritha (*Sapindus mukorossi*)** | |
|---|---|
| **English Name:Soap Nut Tree** | **Family:Sapindaceae** |

**1. Distribution:** The tree is native to China and Japan and much cultivated in North India, in moister tract along the foot hills of Himalayas from River Ravi eastward up to 1500 m.

**2. Flowering:** May- June

**3. Fruit ripening:** November - December

**4. Seed collection and Storage:** Seeds are collected either from the ground or from the tree during November to January;the outer skin is peeled off from the seeds, which are then dried for 10 to 15 days.

**5. Seed Biology**

| **Seed weight (No. of seeds per kg)** | **Germination percentage** | **Germination period** | **Plant percent** |
|---|---|---|---|
| 770 – 840 per Kg. | **90%** | 10 to 30 days | **60** |

***6.*** **Pre-treatment of seed*:*** Pre-soaking of Ritha seed in cold water for 24hrs or buried in cow dung for 2-3 days and then direct sowing in poly-bags**.**

***7.*** **Seed Sowing*:*** March – April. Direct sowing in polybags is done, and also sowing in nursery beds followed by pricking to poly-bags after 2 weeks.

***8.*** **Transplanting:** Root cutting, grading, re setting of polybag seedlings are done at regular interval of about 30 days. The poly-bags are kept in the nursery bed on polythene sheet to prevent root penetration into soil. 4 to 5inch seedling may be pricked in polybags.

**9. Plant able seedling:** Seedling reaches plant able size in 1.5 years for normal planting and in 2.5 years for tall planting.

## 27. Rudraksh

| Rudraksh (*Elaeocarpus angustifolius/ganitrus)* | |
|---|---|
| **English Name: Utrasum bean tree** | **Family: Elaeocarpaceae** |

**1. Distribution:** It is a tall evergreen tree with a large spreading crown and a clean bole of 12 to 15 m length. Bark fairly smooth and greyish. It is found up to 800 m in evergreen forests of North East India. It also grows in the Gangetic plains as well as the foothills of the Himalayas of Uttarakhand and Himachal, seed stones have high religious significance associated with Lord Shiva.

**2. Flowering: -** White flowers appear in April - June

**3. Fruit ripening: -** August-October.Fruit - drupe, usually 3-5 celled, deep blue at maturity, succulent. Birds eat fruit pulp.

**4. Seed collection & Storage:** Seeds are extracted by soaking the fruits in water; pulp is removed by macerating and washing of fruits. Clean seeds are dried in shade for 2 to 5 days. The seeds are covered by a very hard, round stone (nut). Each stone has generally 3 to 6 viable seeds. Seed viability is for almost 100 days.

**5. Seed Biology:**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 450/kg | 40-45% | 45-100 days | 35 |

**6. Seed pre-treatment:** Scarification usingsulphuric acid for 15 minutes or mechanical Scarification by hammer. Cleaned stones (seeds) are then washed in tapwater three to four times and then soaked in lukewarm water (40°C) for 48 hours.

**7. Seed sowing: -** Seeds are sown in shaded mother beds at a depth of 1.0 to 1.5 cm. The hard seed coat can also be cracked by hammer but care should be taken to cause minimum damage to the seed. The stone pieces having intact seeds are sown in beds which results in early and better germination. Sowing in shaded mother bed is more fruitful because it takes quite long time to germinate.

**8. Transplanting: -** Seedlings are transplanted in polythene bags at 2-3 leaves stage with sufficient watering.

**9. Plantable seedling: -** After 8 months of germination seedlings become ready to plant in field

**28. Safed Kikar**

| **Safed Kikar *(Acacia leucophloea)*** | |
|---|---|
| **English Name: White Barked Acacia** | **Family:Leguminosae** |

**1. Distribution:** The tree is found scattered in the dry regions of India from dry Shivalik hills of Punjab, Haryana and Himachal Pradesh. It occurs in Tropical dry deciduous forests, Tropical thorn forests and Tropical dry evergreen forests

**2. Flowering:** Yellowish white flowers appear from July to November.

**3. Fruit ripening:** Pods ripen from April to June or earlier in some localities.

**4. Seed collection and storage:** The tree produces seed abundantly every year. Pods ripen in North India from April to May. The ripe pods are beaten off the trees, spread in the sun for drying and seed extracted by beating with wooden mallets. The clean seeds free of husk and other impurities are stored in gunny bags. The seeds are stored at room temperature. Seed viability: One year.

**5. Seed Biology:**

| **Seed weight (No of seeds per Kg)** | **Germination Percentage** | **Germination Period** | **Plant Percent** |
|---|---|---|---|
| 37,000 to 49,390 | 42 | 8-27 days | 30 |

**6. Seed pre-treatment:** owing to hard seed coat, pre treatment is necessary to obtain uniform and quick germination. Soaking in concentrated Sulphuric acid for 10- 30 minutes and removing the acid by rinsing in cold water improves the germination capacity. Other method is by cutting the outer skin of the seed with a sharp knife, leaving an opening for the moisture to penetrate.

**7. Seed sowing:** Seedlings are raised in polythene bags by sowing the treated seeds about 1.5 cms deep in April-May. Excess watering is avoided after 2 months .Shade is provided to avoid surface cracking.

**8. Plantable seedling:** Young seedlings stand planting fairly well in the first rainy season. The species is suitable for afforesting low rainfall areas, where other species generally fail.

**29. Sagwan**

| **Sagwan(*Tectona grandis)*** | |
|---|---|
| **English Name: Teak** | **Family: Verbinaceae** |

**1. Distribution:** It is indigenous to many parts of India including Maharastra, Kerala, Tamil Nadu, Madhya Pradesh and some parts of Odisha. It grows in slightly alkaline soil and prefers well drained loamy soil.

**2. Flowering: -** White flowers, in panicles, appear during September-October.

**3. Fruit ripening: -** Fruits ripe during November-January.

**4. Seed collection & Storage:** Ripe fruits are collected from the ground below the tree, cleaned, and dried in the Sun for 2- 3 days and stored in gunny bags in a cool and dry place. Seeds remain viable for one or two years. But a freshly collected seed gives better germination percentage. Each fruit contains two to three seeds enclosed in a flattened bladder like calyx.

**5. Seed Biology:**

| **Seed weight (No. of seeds per kg)** | **Germination percentage** | **Germination period** | **Plant percent** |
|---|---|---|---|
| 1,500 to 2,500 per kg | 20 to 30% | 20 to 30 days | 10 to 20 |

**6. Seed pre-treatment:** Different methods of pre-treatment are followed. Common method is alternate drying and soaking for 21 days. Seeds are also pre-treated by mixing with a paste of cow dung in a pit followed by regulated watering for a few days.

**7. Seed sowing & transplanting:** Pre-treated seeds are sown in lines (10cm apart) during March-April in raised nursery beds.

**8. Plantable seedling: -** Pre-sprouted stumps, raised in polybags, are suitable for planting during July. Seedlings are ready for normal planting in 1.5 year and for tall planting in 2.5 years.

**30. Sahjan**

| Sahjan (*Moringa oliefera*) | |
|---|---|
| **English Name:Drumstick tree** | **Family:*Moringaceae*** |

**1. Distribution:** - Moderate sized tree, indigenous in the sub-Himalayan tract, growing plentifully on new alluvial land in or near sandy/shingly beds of rivers and streams.

**2. Flowering:** -The fragrant, white flowers, in numerous panicles near the ends of the branches, appear from January to March.

3**. Fruit ripening:** -March-April

**4. Seed collection & Storage: -**The fruit is a pendulous ribbed pod-like capsule, 9-20 cm long, with numerous three-cornered seeds winged at the angles. Pods are collected in the months of April end-May and are dried in sun, thrashed and winnowed to separate. The clean seeds are kept in air tight container. Seeds lose viability considerably during first year of storage.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 8000-9000 per Kg. | 60-70% | 10 to 15 days | 65 |

**9. Seed pre-treatment: -** Seeds are dried in sunlight for a day &soaked in water overnight.

**10. Seed sowing:** Seeds are sown in 5'x9' poly bags during March-April.

**11. Transplanting:** Seedlings are shifted from one place to other in nursery beds (every 3 months) and are graded according to size and health of the plants. Polyethene sheets are kept below poly-bags so that roots do not go beyond poly-bags.

**12. Plantable seedling:** Seedlings are fit for planting during the following year in the month of July (1.5-year-old seedlings).

**31. Sain**

| **Sain (*Terminalia tomentosa)*** | |
|---|---|
| **English Name: Indian Laurel Tree/Silver greywood** | **Family: Combretaceae** |

**1. Distribution:** It is a broad leafy deciduous plant of large size. Found in Sal forests as associates, grows well on fresh soil along river banks. The leaves fall in January – February and new leaves appear in June. It is mostly suitable for moist and dry deciduous forests. As the tree stands bare during winter (November to February), it can only be identified by its scissored and cracked bark and for this reason is sometimes known as crocodile bark tree.

**2. Flowering: -** February-March

**3. Fruit ripening: -** April-May

**4. Seed collection &Storage:-** Seeds are collected from the ground and dried in the sun for three to four days. Seedlings are collected in November and December.

**5. Seed Biology:**

| **Seed weight (No. of seeds per kg)** | **Germination percentage** | **Germination period** | **Plant percent** |
|---|---|---|---|
| 400-600 per Kg | 40-70% | 15 to 25 days | 40 |

**6. Seed pre-treatment:** The seeds are soaked in cold water for 24 hours for better germination.

**7. Seed sowing & transplanting:** The seed are sown in April-May in Polythene bags sizes of 5”x9” of soil: sand: vermicompost mix of 1:1:1.

**8. Plantable seedling: -** One year seedlings are planted during next year monsoon attaining a height of around 60 cm.

**32. Sal**

| **Sal (*Shorea robusta*)** | |
|---|---|
| **English Name:Sal tree** | **Family:Dipterocarpaceae** |


**1. Distribution:** -Found in a wide range of climate: Temperature range tolerance from 34-47 degree centigrade & rainfall range from 1000mm to1800 mm. As regarding topography, it is found stunted on the ridges, grows best on the lower slopes / valleys where the soil is deep, moist and fertile. The most favorable soil for this is well- drained, moist deep sandy loam with good sub-soil drainage. In Himachal Pradesh, Paonta Sal forests are restricted to Bhabar region of Nahan Forest Circle.

**2. Flowering**: - April-May

**3. Fruit ripening:** - June-July

**4. Seed collection & Storage:** -The fruits fall as soon as they are ripe. Sound fresh seeds have a high percentage of fertility, but the seeds rapidly lose vitality, thus no storage done. Trees of girth size around 120 cm and 12m. in height have been found to produce abundant seedlings. Coppice crop also is found to produce fertile seeds.

**5. Seed Biology** (*for a normal seed year of Sal)

| **Seed weight (No. of seeds per kg)** | **Germination percentage** | **Germination period** | **Plant percent** |
|---|---|---|---|
| 500-1000* per kg | 50-60% | 5 to 10 days | 40 |

**6. Seed pre-treatment:** -No pre-treatment required.

**7. Seed sowing:** - Due to very short viability, freshly collected seeds are dibbled in polythene bags during June-July. Soil from the seeding area is most ideal as required *Mycorrhiza* would be available. Regular watering isrequired. Root cutting, grading and re-setting of poly-bag seedlings are done in the nursery at regular interval of 30 days. Polythene sheet on nursery bed is used to prevent root penetration into soil. Shade is provided using agro-green shade net in warmer areas.

**8. Plant able seedling:** Seedlings are fit for planting in the following monsoon. However, owing to the dying-back phenomenon in Sal, survival will have to be monitored for a very long period of time.

### 33. Sandan

| Sandan (*Ougeinia oojeinensis)* | |
|---|---|
| **English Name: Sandan** | **Family: Leguminosae (Pipilionioideae)** |

**1. Distribution:** This tree grows in dry sub tropical areas and its native range is Western Himalaya to Western Nepal and India. It is recommended for plantation on land slips, river banks and other exposed places. It is a good coppice and produces abundant root suckers.

**2. Flowering:** Liliac or pink coloured flowers appear from Feburary-March to May.

**3. Fruit ripening:** Pods ripen in May to June.

**4. Seed Collection and Storage:** Fruits are collected off the trees in May to June, dried in the sun, broken into one-seededsegments and stored for use. Since the seeds do not store well,fresh seeds should be utilized. Seeds are stored at room temperature. Seed viability is less than one month.

**5. Seed Biology:**

| Seed weight (No of seeds per Kg) | Germination Percentage | Germination Period | Plant Percent |
|---|---|---|---|
| 28,200 to 33,200 | 40- 80 | 10-30 days | 25 |

**6. Seed Pre-treatment:** Theseeds are soaked for 24 hours in cold water.

**7. Seed sowing:** Seeds are sown in poly bags (because of very fast growth of root and seedlings are sensitive to root damage) in May to June with polythene sheets beneath to control rooting.

**8. Plantable seedlings:** Seedlings get ready for plantation after one year and are planted in the monsoon season.

**34. Shatavari**

| **Shatavari (*Asparagus racemosus)*** | |
|---|---|
| **English Name: Asparagus plant** | **Family: Asparagaceae** |

**1. Distribution:** Shatavari is found commonly throughout tropical and subtropical regions, particularly central India. It is also found up to an altitude of 1500m in sub-tropical Himalayas including Himachal Pradesh.

**2. Flowering: -**December- January

**3. Fruit ripening: -** March to May (when the color changes from red to black)

**4. Seed collection & Storage: -** Seeds may be collected between March to May and stored in earthen pots. Crown rhizomes can also be used for propagation.

**5. Seed Biology:**

| **Seed weight (No. of seeds per kg)** | **Germination percentage** | **Germination period** | **Plant percent** |
|---|---|---|---|
| 4000-5000 per Kg | 60-70% | 20-30 days | 70- 80 |

**6. Seed pre-treatment:** To protect crop from soil borne disease and pest, before sowing do seed treatment by soaking seeds in cow urine for 24 hours. After treatment seeds are sown in nursery beds**.**

**7. Seed sowing & transplanting:** Seeds are sown in the month of June in well-prepared and raised nursery beds containing good amount of vermicompost. After sowing, cover beds are covered with shade-nets to retain moisture. Seedling germination starts within 8-10 days.

8. **Transplanting:-**Transplanting of seedlings should be done in the month of June - July. Seedlings are ready for transplanting when they attain the height of 45cm.

**9. Plantable seedling: -** One year seedlings are planted during next year monsoon attaining a height of around 60 cm.

### 35. Shehtoot

| Shehtoot (*Morus alba*) | |
|---|---|
| **English Name: Mulberry** | **Family: Moraceae** |

**1. Distribution:** Found across lower Himachal from the plains upto a considerable elevation in the middle Himalayas

**2. Flowering:** December-February

**3. Fruit ripening:** March to May

**4. Seed collection & Storage:** Fruits should be collected when thoroughly ripe in May-June and kneaded in several successive washings of water to separate the seeds and the latter should then be spread out at once to dry in the shed.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 4,50,000 per kg | 10 to 20 % | 30-45 days | 7-10 |

**6. Seed pre-treatment:** Stratification of seeds in moist sand at about 50 degree centigrade for about 30 to 90 days.

**7. Transplanting:** The seedlings are transplanted in cold season or early in the following rainy season, before transplanting the lower branches should be pruned off and the upper branches stripped of all but one or two terminal leaves.Root-shoot cuttings are also preferable for raising in nurseries.

**8. Plantable seedling:** Seedlings are fit for planting during the following year in the monsoon season with approximately 60 cm height.

### 36. Tat Patanga

| Tat Patanga/Shyonak (*Oroxylum indicum*) | |
|---|---|
| **English Name:Indian Trumpet Flower** | **Family:Bignoniaceae** |


**1. Distribution:** It is a broadleaf, deciduous,medium size tree. Found in Lower Siwalik Hills, grows well along river banks. The leaves fall in January – February and new leaves appear in June. The beautiful flower-like seeds of Tat-patanga adorn the traditional Kinnauri caps as an accessory (*Arlu).* The tradition of graziers coming from Kinnaur belt in summers towards the Lower Shivalik regions led to this cultural exchange between the two geographically divergent landscapes.

**2. Flowering:** June- August.

**3. Fruit ripening: -** November- February

**4. Seed collection & Storage:** Seeds are collected in January to March. The seeds are contained in large sword-shaped pods. The beans are to be plucked from the tree and dried. After drying the beans, seed extraction is easy. The seed is also very light.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 6000-7000 per kg | 70-80% | 10 to 20 days | 70 |

**6. Seed pre-treatment:** No specific treatment is required.

**7. Seed sowing: -** Seed storage is done in earthen pot or plastic bottles. Seed sowing can be directly done from there in poly-bags under sufficient sunlight.

**8. Transplanting:** Seedlings needs to be shifted every three months in order to avoid excessive rooting**.**

**9. Plant able seedling**: - One-year seedlings are planted during following year monsoon after attaining a height of around 60 cm.

**37. Timru**

| **Timru (*Zanthoxylum armatum)*** | |
|---|---|
| **English Name: Winged Prickly Ash** | **Family: Rutaceae** |

**1. Distribution:** The species is found in warmer valleys of subtropical Himalayas, from trans-Indus areas to Bhutan, up to an altitude of 2400 m.

**2. Flowering: -**March-May

**3. Fruit ripening: -** July-August

**4. Seed collection & Storage: -**August seed collection. Seed viability period is low so direct sowing is done at the earliest.

**5. Seed Biology:**

| **Seed weight (No. of seeds per kg)** | **Germination percentage** | **Germination period** | **Plant percent** |
|---|---|---|---|
| /kg | 60-70 % | 20-30 days | 60 |

**6. Seed pre-treatment:** Seeds are washed in lukewarm water for 2 hours.

**7. Seed sowing:** The seeds are sown in August– September in polybags. Stem cuttings may also be planted in the nursery during monsoon in July–August.The seeds germinate in 20–30 days after sowing.

**8. Plantable seedling: -** The seedlings attain a height of 20–30 cm by June–July of following year, when they can be planted out.

**38. Toon**

| Toon (*Toona ciliata*) | |
|---|---|
| **English Name:Indian Mahogany** | **Family:Meliaceae** |


**1. Distribution: -** Toon originates from tropical Asia. In India, it is found throughout the Sub-Himalayan tract and valleys of outer Himalayas from J&K, Himachal Pradesh eastwards to Khasi hills, West Bengal and valleys of Eastern Ghats.

**2. Flowering:** March-May

**3. Fruit ripening:** June-July

**4. Seed collection & Storage:** Seeds are collected from trees during June-August. Fruits are dried in sun for 3-4 days, rubbed and beaten to separate seeds. Seeds must be stored in air tight containers.

**5. Seed Biology**

| Seed weight (No. of seeds per kg) | Germination percentage | Germination period | Plant percent |
|---|---|---|---|
| 30000-380000 /kg | 70-80% | 7 to 14 days | 70 |

**6. Seed pre-treatment: -** No treatmentrequired.

**7. Seed sowing:** June-July. Root-shoot cuttings are also preferable for raising in nurseries.

**8. Transplanting:** Done inJuly-August. Root cutting, grading, re-setting of poly-bag seedlings are done at regular intervals of about 60-75 days.

**9. Plantable seedling:** 1 year old seedling is ready for normal planting out in next monsoon season.

## Appendix-XIV

**The ex-gratia rates as notified by HP Forest Department under Human & Wild Life conflicts.**

| Sr. No. | Particular | Enhanced Rate (in Rs.) |
|---|---|---|
| 1 | In case of death of human being | 4,00,000/- |
| 2 | In case of permanent disability to human being | 2,00,000/- |
| 3 | In Case of grievous injuries/ Partial disability to human being | 75,000/- |
| 4 | In case of simple injury to human being as per actual cost of medical treatment | 15,000/- |
| 5 | In case of loss of Horse, Mule, Buffalo, Ox, Yak and Camel. | 30,000/- |
| 6 | In case of loss of Cow Jersey and cross breed. | 15,000/- |
| 7 | In case of loss of Cow (local breed), Donkey, Churu, Churi & Pashmina Goat. | 6,000/- |
| 8 | In case of Loss of Sheep, Goat and pig | 3,000/- |
| 9 | In case of loss of young ones of Buffalo, Cow Jersey and all other breeds , Mule, Yak, Horse, Camel, Churu, Churi, Donkey, Pashmina Goat, Sheep and Goat | 1,500/- |