Appendix F-21(1) Cost by operation year(Drainage and Infiltration Works,Damaged Forest)

| | Damaged Forest | | | | | |
|---|---|---|---|---|---|---|
| | Olt County | | Dolj County | | Total | |
| Operation year | Operation Area ha | Cost US$ | Operation Area ha | Cost US$ | Operation Area ha | Cost US$ |
| 3 | | | | | | |
| 4 | 448.10 | 2,948 | 383.13 | 2,521 | 831.23 | 5,469 |
| 5 | 1,500.00 | 9,870 | 1,500.00 | 9,870 | 3,000.00 | 19,740 |
| 6 | | | 1,500.00 | 9,870 | 1,500.00 | 9,870 |
| Total | 1,948.10 | 12,818 | 3,383.13 | 22,261 | 5,331.23 | 35,079 |

Appendix F-21(2) Cost by operation year(Drainage and Infiltration Works,Prevention Forest)

| | Prevention Forest | | | | | |
|---|---|---|---|---|---|---|
| | Olt County | | Dolj County | | Total | |
| Operation year | Operation Area ha | Cost US$ | Operation Area ha | Cost US$ | Operation Area ha | Cost US$ |
| 3 | | | | | | |
| 4 | 722.00 | 4,751 | 1,374.80 | 9,046 | 2,096.80 | 13,797 |
| 5 | 1,051.90 | 6,922 | 1,116.90 | 7,349 | 2,168.80 | 14,271 |
| 6 | | | | | | |
| Total | 1,773.90 | 11,672 | 2,491.70 | 16,395 | 4,265.60 | 28,068 |

Appendix F-22(1) Reforestation Cost per ha. Forest mantle replantation

*(Robinia pseudoacacia ,Gladi .,Elaeag .)*

| | | | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| Operations | Unit | Quantity | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Tilling by minibackhoe | ha | 0.50 | 6.7 | 63.80 | 31.9 | 320 | 0.39 | 124.8 | |
| Marking terrain planting | 1000Point | 10.000 | 10.0 | 4.21 | 42.1 | | | | |
| Seedling transport | km | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.04 | 0.8 | | | | |
| Temporary storage | 1000plant | 10.000 | 0.2 | 0.08 | 0.8 | | | | |
| Planting | 1000plant | 10.000 | 33.3 | 14.03 | 140.3 | | | | |
| *Robinia pseudoacacia* | 1000plant | | | | | 2.500 | 13.5 | 33.8 | |
| *Gladitschia triacanthos* | 1000plant | | | | | 5.000 | 17.0 | 85.0 | |
| *Elaeagunus angustifolia* | 1000plant | | | | | 2.500 | 17.8 | 44.5 | |
| Revising plantation | 1000plant | 0.200 | 4.1 | 86.5 | 17.3 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 7.1 | 30.50 | 30.5 | 37.5 | 0.51 | 19.1 | |
| Same (2') | times/Liter | 1 | 5.7 | 24.40 | 24.4 | 30.0 | 0.51 | 15.3 | |
| Blanking up (40%) | 1000plant | 4.000 | 38.4 | 40.4 | 161.6 | | | | |
| *Robinia pseudoacacia* | 1000plant | | | | | 1.000 | 13.5 | 13.5 | |
| *Gladitschia triacanthos* | 1000plant | | | | | 2.000 | 17.0 | 34.0 | |
| *Elaeagunus angustifolia* | 1000plant | | | | | 1.000 | 17.8 | 17.8 | |
| Hoeing next year(1') | times/Liter | 1 | 7.1 | 30.50 | 30.5 | 37.5 | 0.51 | 19.1 | |
| Hoeing next year(2') | times/Liter | 1 | 5.7 | 24.40 | 24.4 | 30.0 | 0.51 | 15.3 | |
| Salvage cutting, Clearing | times | 2 | 51.8 | 109.00 | 218.0 | | | | |
| (4th,8th) | | | | | | | | | |
| Stacking stems (4th,8th) | pils | 20 | 10.3 | 2.16 | 43.2 | | | | |
| | | | | | | | | | |
| Subtotal | | | 184.5 | | 810.8 | | | 430 | 0.0 |
| Insurances quota | | 1.40 | | | 1,135.1 | | | | |
| Total | | | | | 1,565.1 | | | | |

Appendix F-22(2)Silvicultural System for Forest Mantle Replantation

For Forest mantle replantation

Plantation of *Robinia, Gladi.,Elaeag.,Crataeg.*

| Operations | Ages | 0 | 1 | 1 | 2 | | 4 | | 8 | total |
|---|---|---|---|---|---|---|---|---|---|---|
| Preparation soil | | 1 | | | | | | | | |
| Plantation | | | 1 | | | | | | | |
| Revising plantation | | | | | 1 | | | | | |
| Hoeing | | | | 2 | 2 | | | | | |
| Blanking up | | | | | 1 | | | | | |
| Weed control | | | | | | | | | | |
| Salvage cutting | | | | | | | 1 | | (1) | |
| Clearing | | | | | | | (1) | | 1 | |
| | | | | | | | | | | |
| Costs | Labor | 31.9 | 229.0 | 54.9 | 233.8 | | 130.6 | | 130.6 | 778.9 |
| Insurances quota | 1.40 | 44.7 | 320.6 | 76.9 | 327.3 | | 182.8 | | 182.8 | 1,135.1 |
| | Materials | 124.8 | 171.1 | 34.4 | 99.7 | | | | | 305.2 |
| | Machinery | | | | | | | | | 0.0 |
| Total cost | US$ | 169.5 | 491.7 | 111.3 | 427.0 | | 182.8 | | 182.8 | 1,565.1 |

Appendix F-23 Improvement of Forest Roads

| Item | | Unit | | Remarks |
|---|---|---|---|---|
| Operation Volume (Bulldozer 11t) | Q=10E(11D+8) | $m^3/h$ | 53.08 | E=0.55, D=0.15 |
| Total length | | km | 77 | |
| Road width | | m | 2.75 | |
| Subbase thickness | | m | 0.15 | |
| Roadbed volume | | $m^3$ | 31762.5 | |
| Total productive machine hour | | h | 598.4 | |
| Productive machine hour by day | | h | 5.0 | |
| Productive machine day | | d | 119.7 | |
| Unit cost of roadbed | | $US$/m^3$ | 6.90 | Include transport fee |
| Rental charge for bulldozer | | US$/d/bull | 400 | Include labour fee |
| Sub Total(Roadbed) | | US$ | 219,052 | |
| Sub Total(Bulldozer) | | US$ | 47,871 | |
| Total | | US$ | 266,923 | |

Appendix F-24 Total Cost for General Arboretum

| Operations | | Unit | Quantity | Unit Cost | Cost | Note |
|---|---|---|---|---|---|---|
| Planting | Cutting | ha | 25.3 | 90 | 2,277 | |
| | Stumpage/Soil Preparation | ha | 25.3 | 845 | 21,379 | |
| | Planting | ha | 12 | 572 | 6,864 | |
| | Tending | ha | 12 | 1604 | 19,248 | |
| | Thinning | ha | 12 | 204 | 2,448 | |
| Sub Total | | | | | 52,216 | |
| Main paths | Tamping | $m^2$ | 2,300 | 1 | 2,300 | |
| | Roadbed | $m^3$ | 460 | 3.5 | 1,610 | |
| | Wood fence | Pieces | 2,300 | 1.5 | 3,450 | |
| Sub Total | | | | | 7,360 | |
| Branch paths | Tamping | $m^2$ | 4,900 | 1 | 4,900 | |
| | Wood fence | Pieces | 4,900 | 1.5 | 7,350 | |
| Sub Total | | | | | 12,250 | |
| Information board | Digging | Pieces | 180 | 1.5 | 270 | |
| | Board | Pieces | 90 | 50 | 4,500 | |
| Sub Total | | | | | 4,770 | |
| Small arbor | Plop | Pieces | 8 | 100 | 800 | |
| | Roof | Pieces | 8 | 450 | 3,600 | |
| Sub Total | | | | | 4,400 | |
| Car parks | Grading | $m^2$ | 8,000 | 2 | 16,000 | |
| | Tamping | $m^2$ | 8,000 | 1 | 8,000 | |
| | Roadbed | $m^3$ | 800 | 3 | 2,400 | |
| Sub Total | | | | | 26,400 | |
| Turfed gardens | Turfe | $m^2$ | 12,000 | 0.2 | 2,400 | |
| | Fertilizing | kg | 180 | 1 | 180 | 10years |
| | Brush cutting | year | 30 | 120 | 3,600 | 10years |
| | Lawn mower | | 2 | 300 | 600 | |
| Sub Total | | | | | 6,780 | |
| Repair cost | | | | | 1140 | |
| Total | | | | | 115,316 | |

## Appendix F-25(1) Total cost for Forestry Work Demonstration Forest

Ocol: Bals [142 B]

1.30 ha Damaged Grade: Moderate Artificial Forest Work

| | Unit | Quantity | Cost/Unit | Cost US$ | Note |
|---|---|---|---|---|---|
| Cruising | ha | 1.30 | 16.98 | 22 | 845×20.1$/1000=16.98$ |
| Cutting,Bucking,yarding | $m^3$ | 60.19 | 1.99 | 120 | 92.6$m^3$×1,3ha×50%=60.19$m^3$ |
| Silvicultural,Tending | ha | 1.30 | 2,005.40 | 2,607 | Detail : F-25(2) |
| Drainage and Infiltration Work | ha | 0.65 | 6.58 | 4 | |
| Information Board | pieces | 1 | 500.00 | 500 | |
| Total | | | | 3,253 | |

Ocol: Bals [157 E]

2.40 ha Damaged Grade: Moderate Natural forest Work

| | Unit | Quantity | Cost/Unit | Cost US$ | Note |
|---|---|---|---|---|---|
| Cruising | ha | 2.40 | 10.98 | 26 | 546×20.1$/1000=10.98$ |
| Cutting,Bucking,yarding | $m^3$ | 28.75 | 1.99 | 57 | 143.76$m^3$×20%=28.75$m^3$ |
| Drainage and Infiltration Work | ha | 2.40 | 26.32 | 63 | 6.58$×4=26.32$ |
| Information Board | pieces | 1 | 500.00 | 500 | |
| Total | | | | 647 | |

Ocol: Craiova [145 A-1]

5.10 ha Damaged Grade: Strong Natural forest Work

| | Unit | Quantity | Cost/Unit | Cost US$ | Note |
|---|---|---|---|---|---|
| Cruising | ha | 5.10 | 25.01 | 128 | 1244×20.1$/1000=25.01$ |
| Cutting(Cleaning) | ha | 5.10 | 7.53 | 38 | 136.4$m^3$×10%×0.522$=7.53$/ha |
| Drainage and Infiltration Work | ha | 5.10 | 26.32 | 134 | 6.58$×4 =26.32$ |
| Information Board | pieces | 1 | 500.00 | 500 | |
| Total | | | | 800 | |

Ocol: Craiova [145 A-2]

4.40 ha Damaged Grade: Strong Artificial Forest Work

| | Unit | Quantity | Cost/Unit | Cost US$ | Note |
|---|---|---|---|---|---|
| Cruising | ha | 2.20 | 25.01 | 55 | 1244×20.1$/1000=25.01$ |
| Cutting,Bucking,yarding | $m^3$ | 300.08 | 1.99 | 597 | 136.40$m^3$×4.40ha×50%=300.08$m^3$ |
| Silvicultural,Tending | ha | 4.40 | 1,885.00 | 8,294 | Reforestation Cost F5 moderate |
| Drainage and Infiltration Work | ha | 2.20 | 6.58 | 14 | |
| Information Board | pieces | 1 | 500.00 | 500 | |
| Total | | | | 9,461 | |

Ocol: Craiova [145 A-3]

9.70 ha Damaged Grade: Strong Artificial Forest Work

| | Unit | Quantity | Cost/Unit | Cost US$ | Note |
|---|---|---|---|---|---|
| Cruising | ha | 9.70 | 25.01 | 243 | 1244×20.1$/1000=25.01$ |
| Cutting,Bucking,yarding | $m^3$ | 1323.08 | 1.99 | 2,633 | 136.40$m^3$×9.70ha=1323.08$m^3$ |
| Silvicultural,Tending | ha | 2.50 | 1,885.00 | 4,713 | Reforestation cost F5 strong |
| Silvicultural,Tending | ha | 2.40 | 1,871.90 | 4,493 | Reforestation cost F6 strong |
| Silvicultural,Tending | ha | 2.40 | 1,894.00 | 4,546 | Reforestation cost F7 strong |
| Silvicultural,Tending | ha | 2.40 | 1,892.50 | 4,542 | Reforestation cost F8 strong |
| Information Board | pieces | 4 | 500.00 | 2,000 | |
| Total | | | | 21,168 | |

Total(OLT and DOLJ)

| Place | Working Method | Area ha | Direct Cost US$ | Include Indirect Cost US$ |
|---|---|---|---|---|
| Ocol: Bals [142 B] | Artificial Forest Work | 1.30 | 3,253 | 3,741 |
| Ocol: Bals [157 E] | Natural forest Work | 2.40 | 647 | 744 |
| Olt County Total | | 3.70 | 3900 | 4,485 |
| Ocol: Craiova [145 A-1] | Natural forest Work | 5.10 | 800 | 920 |
| Ocol: Craiova [145 A-2] | Artificial Forest Work | 4.40 | 9,461 | 10,880 |
| Ocol: Craiova [145 A-3] | Artificial Forest Work | 9.70 | 21,168 | 24,343 |
| Dolj County Total | | 19.20 | 31,429 | 36,143 |
| Total | | 22.90 | 35,329 | 40,628 |

Appendix F-25(2) Reforestation Cost per ha. For Forestry Work Demonstration Forest, Bals (F6)
*Quercus* spp. forest (*Q.frainetto*, *Q.cerris*, Others)

| | | | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| Operations | Unit | Quantity | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Tilling by minibackhoe | ha /Liter | 0.5 | 6.7 | 63.80 | 31.9 | 320 | 0.39 | 124.8 | |
| Marking terrain planting | 1000Point | 6.250 | 6.3 | 4.21 | 26.3 | | | | |
| Seedling transport | km/Liter | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.04 | 0.8 | | | | |
| Temporary storage | 1000plant | 6.250 | 0.1 | 0.08 | 0.5 | | | | |
| Planting | 1000plant | 6.250 | 86.4 | 58.20 | 363.8 | | | | |
| *Quercus frainetto* | 1000plant | | | | | 0.833 | 20.5 | 17.1 | |
| *Quercus cerris* | 1000plant | | | | | 2.917 | 15.3 | 44.6 | |
| *Pyrus pyraster* | 1000plant | | | | | 0.417 | 20.0 | 8.3 | |
| Others | 1000plant | | | | | 2.083 | 15.0 | 31.2 | |
| Mulching (plastic film) | 1000plant/km | 3.750 | 7.5 | 8.42 | 31.6 | 2.250 | 62.0 | 139.5 | |
| Revising plantation | 1000plant | 0.094 | 1.9 | 86.50 | 8.1 | | | | |
| Cutting seedling stems | 1000plant | 6.250 | 2.5 | 1.69 | 10.6 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 7.1 | 30.50 | 30.5 | 37.5 | 0.51 | 19.1 | |
| Same (2') | times/Liter | 1 | 5.7 | 24.40 | 24.4 | 30.0 | 0.51 | 15.3 | |
| Blanking up (5%) | 1000plant | 0.312 | 3.0 | 40.40 | 12.6 | | | | |
| *Q.frainetto* | 1000plant | | | | | 0.062 | 20.5 | 1.3 | |
| *Q.cerris* | 1000plant | | | | | 0.250 | 15.3 | 3.8 | |
| Hoeing next year(1') | times/Liter | 5 | 35.4 | 30.50 | 152.5 | 187.5 | 0.51 | 95.6 | |
| Hoeing next year(2') | times/Liter | 5 | 28.3 | 24.40 | 122.0 | 150.0 | 0.51 | 76.5 | |
| Weed control | times | 3 | 11.9 | 16.70 | 50.1 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 13.0 | 27.27 | 54.5 | | | | |
| Marking for clearing | times | 2 | 0.4 | 0.88 | 1.8 | | | | |
| Clearing (15th,20th) | times | 2 | 8.4 | 17.77 | 35.5 | | | | |
| Stacking stems | pils | 6 | 2.9 | 2.02 | 12.1 | | | | |
| Subtotal | | | | | 1014.6 | | | 585 | 0 |
| Insurances quota | | 1.40 | | | 1420.4 | | | | |
| Total | | | | | 2005.4 | | | | |

Appendix F-26(1) Silvicultural system For strong damaged stand of *Quercus frainetto* IV F5
Plantation of *Q.frainetto*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil Preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | | 295.8 | 51.6 | 96.2 | 51.6 | 40.6 | 40.6 | 40.6 | 36.5 | 36.5 | 19.8 | 19.8 | 729.6 |
| Insurances quota | 1.40 | | 414.1 | 72.2 | 134.7 | 72.2 | 56.8 | 56.8 | 56.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,021.4 |
| | Materials | | 82.5 | 35.0 | 51.3 | 35.0 | 35.0 | 35.0 | 35.0 | | | | | 308.8 |
| | Machinery | 554.8 | | | | | | | | | | | | 554.8 |
| Total cost | US$ | 554.8 | 496.6 | 107.2 | 186.0 | 107.2 | 91.8 | 91.8 | 91.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,885.0 |

Appendix F-26(2) Silvicultural system For moderate damaged stand of *Quercus frainetto* IV F5
Plantation of *Q.frainetto*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | 31.9 | 436.4 | 71.6 | 140.8 | 71.6 | 54.9 | 54.9 | 54.9 | 27.3 | 27.3 | 24.7 | 24.7 | 1,021.0 |
| Insurances quota | 1.40 | 44.7 | 611.0 | 100.2 | 197.1 | 100.2 | 76.9 | 76.9 | 76.9 | 38.2 | 38.2 | 34.6 | 34.6 | 1,429.4 |
| | Materials | 124.8 | 124.4 | 34.4 | 60.1 | 34.4 | 34.4 | 34.4 | 34.4 | | | | | 481.3 |
| | Machinery | 0 | | | | | | | | | | | | 0.0 |
| Total cost | US$ | 169.5 | 735.4 | 134.6 | 257.2 | 134.6 | 111.3 | 111.3 | 111.3 | 38.2 | 38.2 | 34.6 | 34.6 | 1,910.7 |

Appendix F-26(3) Silvicultural system For strong damaged stand of *Quercus frainetti, Q.cerris.* III F6
Plantation of *Q.frainetto, Q.cerris*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | | 295.8 | 51.6 | 96.2 | 51.6 | 40.6 | 40.6 | 40.6 | 36.5 | 36.5 | 19.8 | 19.8 | 729.6 |
| Insurances quota | 1.40 | | 414.1 | 72.2 | 134.7 | 72.2 | 56.8 | 56.8 | 56.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,021.4 |
| | Materials | | 72.6 | 35.0 | 48.1 | 35.0 | 35.0 | 35.0 | 35.0 | | | | | 295.7 |
| | Machinery | 554.8 | | | | | | | | | | | | 554.8 |
| Total cost | US$ | 554.8 | 486.7 | 107.2 | 182.8 | 107.2 | 91.8 | 91.8 | 91.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,871.9 |

Appendix F-26(4) Silvicultural system For moderate damaged stand of *Quercus frainetto,Q.cerris.* III F6
Plantation of *Q.frainetto, Q.cerris*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | 31.9 | 436.4 | 71.6 | 140.8 | 71.6 | 54.9 | 54.9 | 54.9 | 27.3 | 27.3 | 24.7 | 24.7 | 1,021.0 |
| Insurances quota | 1.40 | 44.7 | 611.0 | 100.2 | 197.1 | 100.2 | 76.9 | 76.9 | 76.9 | 38.2 | 38.2 | 34.6 | 34.6 | 1,429.4 |
| | Materials | 124.8 | 109.1 | 34.4 | 54.8 | 34.4 | 34.4 | 34.4 | 34.4 | | | | | 460.7 |
| | Machinery | 0 | | | | | | | | | | | | 0.0 |
| Total cost | US$ | 169.5 | 720.1 | 134.6 | 251.9 | 134.6 | 111.3 | 111.3 | 111.3 | 38.2 | 38.2 | 34.6 | 34.6 | 1,890.1 |

Appendix F-26(5) Silvicultural system For strong damaged stand of *Quercus* spp. II F7
Plantation of *Q.robur, Q.petraea, Q.cerris*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | | 295.8 | 51.6 | 96.2 | 51.6 | 40.6 | 40.6 | 40.6 | 36.5 | 36.5 | 19.8 | 19.8 | 729.6 |
| Insurances quota | 1.40 | | 414.1 | 72.2 | 134.7 | 72.2 | 56.8 | 56.8 | 56.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,021.4 |
| | Materials | | 94.3 | 35.0 | 48.5 | 35.0 | 35.0 | 35.0 | 35.0 | | | | | 317.8 |
| | Machinery | 554.8 | | | | | | | | | | | | 554.8 |
| Total cost | US$ | 554.8 | 508.4 | 107.2 | 183.2 | 107.2 | 91.8 | 91.8 | 91.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,894.0 |

Appendix F-26(6) Silvicultural system For moderate damaged stand of *Quercus* spp. II F7
Plantation of *Q.robur, Q.petraea, Q.cerris*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | 31.9 | 436.4 | 71.6 | 140.8 | 71.6 | 54.9 | 54.9 | 54.9 | 27.3 | 27.3 | 24.7 | 24.7 | 1,021.0 |
| Insurances quota | 1.40 | 44.7 | 611.0 | 100.2 | 197.1 | 100.2 | 76.9 | 76.9 | 76.9 | 38.2 | 38.2 | 34.6 | 34.6 | 1,429.4 |
| | Materials | 124.8 | 108.2 | 34.4 | 55.6 | 34.4 | 34.4 | 34.4 | 34.4 | | | | | 460.6 |
| | Machinery | 0 | | | | | | | | | | | | 0.0 |
| Total cost | US$ | 169.5 | 719.2 | 134.6 | 252.7 | 134.6 | 111.3 | 111.3 | 111.3 | 38.2 | 38.2 | 34.6 | 34.6 | 1,890.0 |

Appendix F-26(7) Silvicultural system For strong damaged stand of *Quercus* mixed 1 F8
Plantation of *Q.robur, Q.petraea, Fraxinus excelsior*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | | 295.8 | 51.6 | 96.2 | 51.6 | 40.6 | 40.6 | 40.6 | 36.5 | 36.5 | 19.8 | 19.8 | 729.6 |
| Insurances quota | 1.40 | | 414.1 | 72.2 | 134.7 | 72.2 | 56.8 | 56.8 | 56.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,021.4 |
| | Materials | | 93.2 | 35.0 | 48.1 | 35.0 | 35.0 | 35.0 | 35.0 | | | | | 316.3 |
| | Machinery | 554.8 | | | | | | | | | | | | 554.8 |
| Total cost | US$ | 554.8 | 507.3 | 107.2 | 182.8 | 107.2 | 91.8 | 91.8 | 91.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,892.5 |

Appendix F-26(8) Silvicultural system For moderate damaged stand of *Quercus* mixed 1 F8
Plantation of *Q.robur, Q.petraea, Fraxinus excelsior*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | 31.9 | 436.4 | 71.6 | 140.8 | 71.6 | 54.9 | 54.9 | 54.9 | 27.3 | 27.3 | 24.7 | 24.7 | 1,020.9 |
| Insurances quota | 1.40 | 44.7 | 611.0 | 100.2 | 197.1 | 100.2 | 76.9 | 76.9 | 76.9 | 38.2 | 38.2 | 34.6 | 34.6 | 1,429.3 |
| | Materials | 124.8 | 107.2 | 34.4 | 54.8 | 34.4 | 34.4 | 34.4 | 34.4 | | | | | 458.8 |
| | Machinery | 0 | | | | | | | | | | | | 0.0 |
| Total cost | US$ | 169.5 | 718.2 | 134.6 | 251.9 | 134.6 | 111.3 | 111.3 | 111.3 | 38.2 | 38.2 | 34.6 | 34.6 | 1,888.1 |

Appendix F-26(9) Silvicultural system For strong damaged stand of *Robinia pseudoacacia* F9 Str. F10 Str.
Plantation of *Robinia pseudoacacia, Gladitschia triacanthos,Elaeagnus angustifolia*

| Operations | Ages | 0 | 1 | 1 | 2 | | 4 | | 8 | total |
|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | |
| Plantation | | | 1 | | | | | | | |
| Revising plantation | | | | | 1 | | | | | |
| Hoeing | | | | 2 | 2 | | | | | |
| Blanking up | | | | | 1 | | | | | |
| Weed control | | | | | | | | | | |
| Salvage cutting | | | | | | | 1 | | (1) | |
| Clearing | | | | | | | (1) | | 1 | |
| | | | | | | | | | | |
| Costs | Labor | | 358.2 | 44.1 | 133.6 | | 65.3 | | 65.3 | 666.5 |
| Insurances quota | 1.40 | | 501.5 | 61.7 | 187.0 | | 91.4 | | 91.4 | 933.1 |
| | Materials | | 78.2 | 27.5 | 55.7 | | | | | 161.4 |
| | Machinery | 828.1 | | | | | | | | 828.1 |
| Total cost | US$ | 828.1 | 579.7 | 89.2 | 242.7 | | 91.4 | | 91.4 | 1,922.6 |

Appendix F-26(10) Silvicultural system For moderate damaged stand of *Robinia pseudoacacia*, Above 20 years F9
Plantation of *Robinia pseudoacacia*, 50%

| Operations | Ages | 0 | 1 | 1 | 2 | | 4 | | 8 | total |
|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | |
| Revising plantation | | | | | 1 | | | | | |
| Hoeing | | | | 2 | 2 | | | | | |
| Weed control | | | | 1 | | | | | | |
| Blanking up | | | | | 1 | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | |
| Salvage cutting | | | | | | | 1 | | (1) | |
| Clearing | | | | | | | (1) | | 1 | |
| | | | | | | | | | | |
| Costs | Labor | | 196.8 | 110.7 | 189.9 | | 65.3 | | 65.3 | 628.0 |
| Insurances quota | 1.40 | | 275.5 | 155.0 | 265.9 | | 91.4 | | 91.4 | 879.2 |
| | Materials | | 62.9 | | 13.5 | | | | | 76.4 |
| | Machinery | | | | | | | | | 0 |
| Total cost | US$ | | 338.4 | 155.0 | 279.4 | | 91.4 | | 91.4 | 955.6 |

Appendix F-26(11) Silvicultural system For moderate damaged stand of *Robinia pseudoacacia*, under 20 years F10
Plantation of *Robinia pseudoacacia*, 20%

| Operations | Ages | 0 | 1 | 1 | 2 | | 4 | | 8 | total |
|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | |
| Revising plantation | | | | | 1 | | | | | |
| Hoeing | | | | 2 | 2 | | | | | |
| Weed control | | | | 1 | | | | | | |
| Blanking up | | | | | 1 | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | |
| Salvage cutting | | | | | | | 1 | | (1) | |
| Clearing | | | | | | | (1) | | 1 | |
| | | | | | | | | | | |
| Costs | Labor | | 99.3 | 114.6 | 116.8 | | 65.3 | | 65.3 | 461.3 |
| Insurances quota | 1.40 | | 139.0 | 160.4 | 163.5 | | 91.4 | | 91.4 | 645.8 |
| | Materials | | 42.6 | | 5.4 | | | | | 48.0 |
| | Machinery | | | | | | | | | 0 |
| Total cost | US$ | | 181.6 | 160.4 | 168.9 | | 91.4 | | 91.4 | 693.8 |

Appendix F-26(12) Silvicultural system For strong damaged stand of *Robinia pseudoacacia* F11
Plantation of *Q.frainetto, Q.cerris*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | | 295.8 | 51.6 | 96.2 | 51.6 | 40.6 | 40.6 | 40.6 | 36.5 | 36.5 | 19.8 | 19.8 | 729.6 |
| Insurances quota | 1.40 | | 414.1 | 72.2 | 134.7 | 72.2 | 56.8 | 56.8 | 56.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,021.4 |
| | Materials | | 76.6 | 35.0 | 48.1 | 35.0 | 35.0 | 35.0 | 35.0 | | | | | 299.7 |
| | Machinery | 554.8 | | | | | | | | | | | | 554.8 |
| Total cost | US$ | 554.8 | 490.7 | 107.2 | 182.8 | 107.2 | 91.8 | 91.8 | 91.8 | 51.1 | 51.1 | 27.7 | 27.7 | 1,875.9 |

Appendix F-26(13) Silvicultural system For moderate damaged stand of *Robinia pseudoacacia* F11
Plantation of *Q.frainetto, Q.cerris*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | 15.9 | 218.2 | 35.8 | 70.5 | 35.8 | 27.5 | 27.5 | 27.5 | 13.6 | 13.6 | 12.3 | 12.3 | 510.4 |
| Insurances quota | 1.40 | 22.3 | 305.5 | 50.1 | 98.7 | 50.1 | 38.4 | 38.4 | 38.4 | 19.1 | 19.1 | 17.2 | 17.2 | 714.6 |
| | Materials | 62.4 | 58.8 | 17.2 | 27.6 | 17.2 | 17.2 | 17.2 | 17.2 | | | | | 234.8 |
| | Machinery | 0 | | | | | | | | | | | | 0 |
| Total cost | US$ | 84.7 | 364.3 | 67.3 | 126.3 | 67.3 | 55.6 | 55.6 | 55.6 | 19.1 | 19.1 | 17.2 | 17.2 | 949.4 |

Appendix F-26(14) Silvicultural system For strong damaged stand of *Populus* spp. F13
Plantation of *Q.robur, Fraxinus excelsior, Tilia platyphillos*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 15 | 20 | total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | | | | | |
| Plantation | | | 1 | | | | | | | | | | | |
| Revising plantation | | | | | 1 | | | | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | |
| Weed control | | | | 1 | 1 | 1 | | | | | | | | |
| Blanking up | | | | | 1 | | | | | | | | | |
| Cutting seedling stems | | | | | 1 | | | | | | | | | |
| Salvage cutting | | | | | | | | | | 1 | 1 | | | |
| Clearing | | | | | | | | | | | | 1 | 1 | |
| | | | | | | | | | | | | | | |
| Costs | Labor | | 462.4 | 92.2 | 166.1 | 92.2 | 58.7 | 58.7 | 58.7 | 54.6 | 54.6 | 30.7 | 30.7 | 1,159.6 |
| Insurances quota | 1.40 | | 647.4 | 129.1 | 232.5 | 129.1 | 82.2 | 82.2 | 82.2 | 76.4 | 76.4 | 43.0 | 43.0 | 1,623.4 |
| | Materials | | 114.9 | 36.7 | 58.8 | 36.7 | 36.7 | 36.7 | 36.7 | | | | | 357.2 |
| | Machinery | 828.1 | | | | | | | | | | | | 828.1 |
| Total cost | US$ | 828.1 | 762.3 | 165.8 | 291.3 | 165.8 | 118.9 | 118.9 | 118.9 | 76.4 | 76.4 | 43.0 | 43.0 | 2,808.7 |

Appendix F-26(15) Silvicultural system For moderate damaged stand of *Populus* spp. F13
Plantation of *Populus alba*

| Operations | Ages | 0 | 1 | 1 | 2 | 3 | 4 | | 7 | total |
|---|---|---|---|---|---|---|---|---|---|---|
| Soil preparation | | 1 | | | | | | | | |
| Plantation | | | 1 | | | | | | | |
| Revising plantation | | | | 1 | | | | | | |
| Hoeing | | | | 2 | 2 | 2 | | | | |
| Cutting buds | | | | 1 | 1 | | | | | |
| Blanking up | | | | | 1 | | | | | |
| Weed control | | | | | | | 1 | | | |
| Pruning | | | | | | | | | 1 | |
| | | | | | | | | | | |
| Costs | Labor | | 44.0 | 75.6 | 72.2 | 58.7 | 33.5 | | 41.1 | 325.1 |
| Insurances quota | 1.40 | | 61.6 | 105.8 | 101.1 | 82.2 | 46.9 | | 57.5 | 455.1 |
| | Materials | | 155.0 | 36.7 | 67.3 | 36.7 | | | | 295.7 |
| | Machinery | 828.1 | | | | | | | | 828.1 |
| Total cost | US$ | 828.1 | 216.6 | 142.5 | 168.4 | 118.9 | 46.9 | | 57.5 | 1,578.9 |

Appendix F-27(1) Reforestation Cost per ha.

For strong damaged stand Ⅳ F5
*Quercus* spp.forest (*Q.frainetto*)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Stumpage removal | ha | 0.67 | | 760.5 | | | | | 509.5 |
| Stumpage gathering | ha | 0.67 | | inc.a | | | | | |
| Soil preparation | ha | 0.67 | | inc.a | | | | | |
| Scarifying | ha | 0.67 | | inc.a | | | | | |
| Ploughing | ha | 0.67 | | 45.1 | | | | | 30.2 |
| Disk harrowing | ha | 0.67 | | 22.5 | | | | | 15.1 |
| Marking terrain planting | 1000Point | 4.002 | 4.0 | 4.21 | 16.8 | | | | |
| Seedling transport | km/Liter | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.039 | 0.8 | | | | |
| Temporary storage | 1000plant | 4.002 | 0.1 | 0.077 | 0.3 | | | | |
| Planting | 1000plant | 4.002 | 55.3 | 58.2 | 232.9 | | | | |
| *Quercus frainetto* | 1000plant | | | | | 2.668 | 20.5 | 54.7 | |
| Others | 1000plant | | | | | 1.334 | 15.0 | 20.0 | |
| Revising plantation | 1000plant | 0.060 | 1.2 | 86.5 | 5.2 | | | | |
| Cutting seedling stems | 1000plant | 4.002 | 1.6 | 1.69 | 6.8 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 5.3 | 22.56 | 22.6 | 38.1 | 0.51 | 19.4 | |
| Same (2') | times/Liter | 1 | 4.3 | 18.04 | 18.0 | 30.5 | 0.51 | 15.6 | |
| Blanking up (20%) | 1000plant | 0.800 | 7.7 | 40.4 | 32.3 | | | | |
| *Q.frainetto* | 1000plant | | | | | 0.800 | 20.5 | 16.4 | |
| Hoeing next year(1') | times/Liter | 5 | 26.6 | 22.56 | 112.8 | 190.5 | 0.51 | 97.2 | |
| Hoeing next year(2') | times/Liter | 5 | 21.3 | 18.04 | 90.2 | 152.5 | 0.51 | 77.8 | |
| Weed control | times | 3 | 7.9 | 11.05 | 33.2 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 17.4 | 36.53 | 73.1 | | | | |
| Marking for clearing | times | 2 | 0.3 | 0.63 | 1.3 | | | | |
| Clearing (15th,20th) | times | 2 | 6.0 | 12.7 | 25.4 | | | | |
| Stacking stems | pils | 6 | 3.1 | 2.16 | 13.0 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 729.6 | | | 308.8 | 554.8 |
| Insurances quota | | 1.40 | | | 1021.4 | | | | |
| Total | | | | | 1885.0 | | | | |

Appendix F-27(2) Reforestation Cost per ha.

For Moderate Damaged Stand Ⅳ F5
*Quercus* spp.forest (*Q.frainetto*)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Tilling by minibackhoe | ha /Liter | 0.5 | 6.7 | 63.8 | 31.9 | 320 | 0.39 | 124.8 | |
| Marking terrain planting | 1000Point | 6.250 | 6.3 | 4.21 | 26.3 | | | | |
| Seedling transport | km/Liter | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.039 | 0.8 | | | | |
| Temporary storage | 1000plant | 6.250 | 0.1 | 0.077 | 0.5 | | | | |
| Planting | 1000plant | 6.250 | 86.4 | 58.2 | 363.8 | | | | |
| *Quercus frainetto* | 1000plant | | | | | 4.167 | 20.5 | 85.4 | |
| Others | 1000plant | | | | | 2.083 | 15.0 | 31.2 | |
| Revising plantation | 1000plant | 0.093 | 1.9 | 86.5 | 8.1 | | | | |
| Cutting seedling stems | 1000plant | 6.250 | 2.5 | 1.69 | 10.6 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 7.1 | 30.5 | 30.5 | 37.5 | 0.51 | 19.1 | |
| Same (2') | times/Liter | 1 | 5.7 | 24.4 | 24.4 | 30 | 0.51 | 15.3 | |
| Blanking up (20%) | 1000plant | 1.250 | 12.0 | 40.4 | 50.5 | | | | |
| *Q.frainetto* | 1000plant | | | | | 1.250 | 20.5 | 25.6 | |
| Hoeing next year(1') | times/Liter | 5 | 35.4 | 30.5 | 152.5 | 187.5 | 0.51 | 95.6 | |
| Hoeing next year(2') | times/Liter | 5 | 28.3 | 24.4 | 122.0 | 150 | 0.51 | 76.5 | |
| Weed control | times | 3 | 11.9 | 16.7 | 50.1 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 13.0 | 27.27 | 54.5 | | | | |
| Marking for clearing | times | 2 | 0.4 | 0.88 | 1.8 | | | | |
| Clearing (15th,20th) | times | 2 | 8.4 | 17.77 | 35.5 | | | | |
| Stacking stems | pils | 6 | 2.9 | 2.02 | 12.1 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 1,020.9 | | | 481.4 | |
| Insurances quota | | 1.40 | | | 1,429.2 | | | | |
| Total | | | | | 1,910.7 | | | | |

Appendix F-27(3) Reforestation Cost per ha.

For strong damaged stand III F6
*Quercus* spp. forest (*Q.frainetto*,*Q.cerris*, Others)

| | | | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| Operations | Unit | Quantity | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Stumpage removal | ha | 0.67 | | 760.5 | | | | | 509.5 |
| Stumpage gathering | ha | 0.67 | | inc.a | | | | | |
| Soil preparation | ha | 0.67 | | inc.a | | | | | |
| Scarifying | ha | 0.67 | | inc.a | | | | | |
| Ploughing | ha | 0.67 | | 45.1 | | | | | 30.2 |
| Disk harrowing | ha | 0.67 | | 22.5 | | | | | 15.1 |
| Marking terrain planting | 1000Point | 4.002 | 4.0 | 4.21 | 16.8 | | | | |
| Seedling transport | km | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.039 | 0.8 | | | | |
| Temporary storage | 1000plant | 4.002 | 0.1 | 0.077 | 0.3 | | | | |
| Planting | 1000plant | 4.002 | 55.3 | 58.2 | 232.9 | | | | |
| *Quercus frainetto* | 1000plant | | | | | 0.534 | 20.5 | 10.9 | |
| *Quercus cerris* | 1000plant | | | | | 1.867 | 15.3 | 28.6 | |
| *Pyrus pyraster* | 1000plant | | | | | 0.267 | 20.0 | 5.3 | |
| Others | 1000plant | | | | | 1.334 | 15.0 | 20.0 | |
| Revising plantation | 1000plant | 0.060 | 1.2 | 86.5 | 5.2 | | | | |
| Cutting seedling stems | 1000plant | 4.002 | 1.6 | 1.69 | 6.8 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 5.3 | 22.56 | 22.6 | 38.1 | 0.51 | 19.4 | |
| Same (2') | times/Liter | 1 | 4.3 | 18.04 | 18.0 | 30.5 | 0.51 | 15.6 | |
| Blanking up (20%) | 1000plant | 0.800 | 7.7 | 40.4 | 32.3 | | | | |
| *Q.frainetto* | 1000plant | | | | | 0.160 | 20.5 | 3.3 | |
| *Q.cerris* | 1000plant | | | | | 0.640 | 15.3 | 9.8 | |
| Hoeing next year(1') | times/Liter | 5 | 26.6 | 22.56 | 112.8 | 190.5 | 0.51 | 97.2 | |
| Hoeing next year(2') | times/Liter | 5 | 21.3 | 18.04 | 90.2 | 152.5 | 0.51 | 77.8 | |
| Weed control | times | 3 | 7.9 | 11.05 | 33.2 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 17.4 | 36.53 | 73.1 | | | | |
| Marking for clearing | times | 2 | 0.3 | 0.63 | 1.3 | | | | |
| Clearing (15th,20th) | times | 2 | 6.0 | 12.7 | 25.4 | | | | |
| Stacking stems | pils | 6 | 3.1 | 2.16 | 13.0 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 729.6 | | | 295.7 | 554.8 |
| Insurances quota | | 1.40 | | | 1,021.4 | | | | |
| Total | | | | | 1,871.9 | | | | |

Appendix F-27(4) Reforestation Cost per ha.

For Moderate Damaged Stand III F6
*Quercus* spp.forest (*Q.frainetto, Q.cerris*, Others)

| | | | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| Operations | Unit | Quantity | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Filling by minibackhoe | ha /Liter | 0.5 | 6.7 | 63.80 | 31.9 | 320 | 0.39 | 124.8 | |
| Marking terrain planting | 1000Point | 6.250 | 6.3 | 4.21 | 26.3 | | | | |
| Seedling transport | km/Liter | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.04 | 0.8 | | | | |
| Temporary storage | 1000plant | 6.250 | 0.1 | 0.08 | 0.5 | | | | |
| Planting | 1000plant | 6.250 | 86.4 | 58.20 | 363.8 | | | | |
| *Quercus frainetto* | 1000plant | | | | | 0.833 | 20.5 | 17.1 | |
| *Quercus cerris* | 1000plant | | | | | 2.917 | 15.3 | 44.6 | |
| *Pyrus pyraster* | 1000plant | | | | | 0.417 | 20.0 | 8.3 | |
| Others | 1000plant | | | | | 2.083 | 15.0 | 31.2 | |
| Revising plantation | 1000plant | 0.091 | 1.9 | 86.50 | 8.1 | | | | |
| Cutting seedling stems | 1000plant | 6.250 | 2.5 | 1.69 | 10.6 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 7.1 | 30.50 | 30.5 | 37.5 | 0.51 | 19.1 | |
| Same (2') | times/Liter | 1 | 5.7 | 24.40 | 24.4 | 30.0 | 0.51 | 15.3 | |
| Blanking up (20%) | 1000plant | 1.250 | 12.0 | 40.40 | 50.5 | | | | |
| *Q.frainetto* | 1000plant | | | | | 0.250 | 20.5 | 5.1 | |
| *Q.cerris* | 1000plant | | | | | 1.000 | 15.3 | 15.3 | |
| Hoeing next year(1') | times/Liter | 5 | 35.4 | 30.50 | 152.5 | 187.5 | 0.51 | 95.6 | |
| Hoeing next year(2') | times/Liter | 5 | 28.3 | 24.40 | 122.0 | 150.0 | 0.51 | 76.5 | |
| Weed control | times | 3 | 11.9 | 16.70 | 50.1 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 13.0 | 27.27 | 54.5 | | | | |
| Marking for clearing | times | 2 | 0.4 | 0.88 | 1.8 | | | | |
| Clearing (15th,20th) | times | 2 | 8.4 | 17.77 | 35.5 | | | | |
| Stacking stems | pils | 6 | 2.9 | 2.02 | 12.1 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 1,020.9 | | | 460.9 | |
| Insurances quota | | 1.40 | | | 1,429.2 | | | | |
| Total | | | | | 1,890.1 | | | | |

Appendix F-27(5) Reforestation Cost per ha.

For strong damaged stand Ⅱ F7
*Quercus* spp. forest (*Q.robur* ,Others)

| | | | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| Operations | Unit | Quantity | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Stumpage removal | ha | 0.67 | | 760.5 | | | | | 509.5 |
| Stumpage gathering | ha | 0.67 | | inc.a | | | | | |
| Soil preparation | ha | 0.67 | | inc.a | | | | | |
| Scarifying | ha | 0.67 | | inc.a | | | | | |
| Ploughing | ha | 0.67 | | 45.1 | | | | | 30.2 |
| Disk harrowing | ha | 0.67 | | 22.5 | | | | | 15.1 |
| Marking terrain planting | 1000Point | 4.002 | 4.0 | 4.21 | 16.8 | | | | |
| Seedling transport | km | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.039 | 0.8 | | | | |
| Temporary storage | 1000plant | 4.002 | 0.1 | 0.077 | 0.3 | | | | |
| Planting | 1000plant | 4.002 | 55.3 | 58.2 | 232.9 | | | | |
| *Quercus robur* | 1000plant | | | | | 2.401 | 17.0 | 40.8 | |
| *Quercus petraea,* etc | 1000plant | | | | | 0.801 | 16.8 | 13.5 | |
| *Quercus cerris* | 1000plant | | | | | 0.800 | 15.3 | 12.2 | |
| Others | 1000plant | | | | | 1.334 | 15.0 | 20.0 | |
| Revising plantation | 1000plant | 0.060 | 1.2 | 86.5 | 5.2 | | | | |
| Cutting seedling stems | 1000plant | 4.002 | 1.6 | 1.69 | 6.8 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 5.3 | 22.56 | 22.6 | 38.1 | 0.51 | 19.4 | |
| Same (2) | times/Liter | 1 | 4.3 | 18.04 | 18.0 | 30.5 | 0.51 | 15.6 | |
| Blanking up (20%) | 1000plant | 0.800 | 7.7 | 40.4 | 32.3 | | | | |
| *Quercus robur* | 1000plant | | | | | 0.480 | 17.0 | 8.2 | |
| *Quercus petraea,* etc | 1000plant | | | | | 0.320 | 16.8 | 5.4 | |
| Hoeing next year(1') | times/Liter | 5 | 26.6 | 22.56 | 112.8 | 190.5 | 0.51 | 97.2 | |
| Hoeing next year(2') | times/Liter | 5 | 21.3 | 18.04 | 90.2 | 152.5 | 0.51 | 77.8 | |
| Weed control | times | 3 | 7.9 | 11.05 | 33.2 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 17.4 | 36.53 | 73.1 | | | | |
| Marking for clearing | times | 2 | 0.3 | 0.63 | 1.3 | | | | |
| Clearing (15th,20th) | times | 2 | 6.0 | 12.7 | 25.4 | | | | |
| Stacking stems | pils | 6 | 3.1 | 2.16 | 13.0 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 729.6 | | | 317.8 | 554.8 |
| Insurances quota | | 1.40 | | | 1,021.4 | | | | |
| Total | | | | | 1,894.0 | | | | |

Appendix F-27(6) Reforestation Cost per ha.

For Moderate Damaged Stand Ⅱ F7
*Quercus* spp. forest (*Q.robur* , Others)

| | | | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| Operations | Unit | Quantity | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Tilling by minibackhoe | ha /Liter | 0.5 | 6.7 | 63.80 | 31.9 | 320 | 0.39 | 124.8 | |
| Marking terrain planting | 1000Point | 6.250 | 6.3 | 4.21 | 26.3 | | | | |
| Seedling transport | km/Liter | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.04 | 0.8 | | | | |
| Temporary storage | 1000plant | 6.250 | 0.1 | 0.08 | 0.5 | | | | |
| Planting | 1000plant | 6.250 | 86.4 | 58.20 | 363.8 | | | | |
| *Quercus robur* | 1000plant | | | | | 2.500 | 17.0 | 42.5 | |
| *Quercus petraea,* etc | 1000plant | | | | | 0.834 | 16.8 | 14.0 | |
| *Quercus cerris* | 1000plant | | | | | 0.833 | 15.3 | 12.7 | |
| Others | 1000plant | | | | | 2.083 | 15.0 | 31.2 | |
| Revising plantation | 1000plant | 0.094 | 1.9 | 86.50 | 8.1 | | | | |
| Cutting seedling stems | 1000plant | 6.250 | 2.5 | 1.69 | 10.6 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 7.1 | 30.50 | 30.5 | 37.5 | 0.51 | 19.1 | |
| Same (2') | times/Liter | 1 | 5.7 | 24.40 | 24.4 | 30.0 | 0.51 | 15.3 | |
| Blanking up (20%) | 1000plant | 1.250 | 12.0 | 40.40 | 50.5 | | | | |
| *Quercus robur* | 1000plant | | | | | 0.750 | 17.0 | 12.8 | |
| *Quercus petraea,* etc | 1000plant | | | | | 0.500 | 16.8 | 8.4 | |
| Hoeing next year(1') | times/Liter | 5 | 35.4 | 30.50 | 152.5 | 187.5 | 0.51 | 95.6 | |
| Hoeing next year(2') | times/Liter | 5 | 28.3 | 24.40 | 122.0 | 150.0 | 0.51 | 76.5 | |
| Weed control | times | 3 | 11.9 | 16.70 | 50.1 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 13.0 | 27.27 | 54.5 | | | | |
| Marking for clearing | times | 2 | 0.4 | 0.88 | 1.8 | | | | |
| Clearing (15th,20th) | times | 2 | 8.4 | 17.77 | 35.5 | | | | |
| Stacking stems | pils | 6 | 2.9 | 2.02 | 12.1 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 1,020.9 | | | 460.8 | |
| Insurances quota | | 1.40 | | | 1,429.2 | | | | |
| Total | | | | | 1,890.0 | | | | |

For strong damaged stand I F8

Appendix F-27(7) Reforestation Cost per ha. *Quercus* spp. mixed forest (*Q.robur* ,*Fraxinus excelsior* ,Others)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Stumpage removal | ha | 0.67 | | 760.5 | | | | | 509.5 |
| Stumpage gathering | ha | 0.67 | | inc.a | | | | | |
| Soil preparation | ha | 0.67 | | inc.a | | | | | |
| Scarifying | ha | 0.67 | | inc.a | | | | | |
| Ploughing | ha | 0.67 | | 45.1 | | | | | 30.2 |
| Disk harrowing | ha | 0.67 | | 22.5 | | | | | 15.1 |
| Marking terrain planting | 1000Point | 4.002 | 4.0 | 4.21 | 16.8 | | | | |
| Seedling transport | km | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.039 | 0.8 | | | | |
| Temporary storage | 1000plant | 4.002 | 0.1 | 0.077 | 0.3 | | | | |
| Planting | 1000plant | 4.002 | 55.3 | 58.2 | 232.9 | | | | |
| *Quercus robur* | 1000plant | | | | | 2.001 | 17.0 | 34.0 | |
| *Q.petraea, Q.pedunculiflora* | 1000plant | | | | | 0.800 | 16.8 | 13.4 | |
| *Fraxinus excelsior* | 1000plant | | | | | 1.201 | 15.0 | 18.0 | |
| Others | 1000plant | | | | | 1.334 | 15.0 | 20.0 | |
| Revising plantation | 1000plant | 0.060 | 1.2 | 86.5 | 5.2 | | | | |
| Cutting seedling stems | 1000plant | 4.002 | 1.6 | 1.69 | 6.8 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 5.3 | 22.56 | 22.6 | 38.1 | 0.51 | 19.4 | |
| Same (2') | times/Liter | 1 | 4.3 | 18.04 | 18.0 | 30.5 | 0.51 | 15.6 | |
| Blanking up (20%) | 1000plant | 0.800 | 7.7 | 40.4 | 32.3 | | | | |
| *Quercus robur* | 1000plant | | | | | 0.400 | 17.0 | 6.8 | |
| *Q.petraea, Q.pedunculiflora* | 1000plant | | | | | 0.160 | 16.8 | 2.7 | |
| *Fraxinus excelsior* | 1000plant | | | | | 0.240 | 15.0 | 3.6 | |
| Hoeing next year(1') | times/Liter | 5 | 26.6 | 22.56 | 112.8 | 190.5 | 0.51 | 97.2 | |
| Hoeing next year(2') | times/Liter | 5 | 21.3 | 18.04 | 90.2 | 152.5 | 0.51 | 77.8 | |
| Weed control | times | 3 | 7.9 | 11.05 | 33.2 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 17.4 | 36.53 | 73.1 | | | | |
| Marking for clearing | times | 2 | 0.3 | 0.63 | 1.3 | | | | |
| Clearing (15th,20th) | times | 2 | 6.0 | 12.7 | 25.4 | | | | |
| Stacking stems | pils | 6 | 3.1 | 2.16 | 13.0 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 729.6 | | | 316.3 | 554.8 |
| Insurances quota | | 1.40 | | | 1,021.4 | | | | |
| Total | | | | | 1,892.5 | | | | |

For Moderate Damaged Stand I F8

Appendix F-27(8) Reforestation Cost per ha. *Quercus* spp. mixed forest (*Q.robur* ,*Fraxinus excelsior* ,Others)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Tilling by minibackhoe | ha /Liter | 0.5 | 6.7 | 63.80 | 31.9 | 320 | 0.39 | 124.8 | |
| Marking terrain planting | 1000Point | 6.250 | 6.3 | 4.21 | 26.3 | | | | |
| Seedling transport | km/Liter | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.04 | 0.8 | | | | |
| Temporary storage | 1000plant | 6.250 | 0.1 | 0.08 | 0.5 | | | | |
| Planting | 1000plant | 6.250 | 86.4 | 58.20 | 363.8 | | | | |
| *Quercus robur* | 1000plant | | | | | 2.083 | 17.0 | 35.4 | |
| *Q.petraea, Q.pedunculiflora* | 1000plant | | | | | 0.834 | 16.8 | 14.0 | |
| *Fraxinus excelsior* | 1000plant | | | | | 1.250 | 15.0 | 18.8 | |
| Others | 1000plant | | | | | 2.083 | 15.0 | 31.2 | |
| Revising plantation | 1000plant | 0.094 | 1.9 | 86.50 | 8.1 | | | | |
| Cutting seedling stems | 1000plant | 6.250 | 2.5 | 1.69 | 10.6 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 7.1 | 30.50 | 30.5 | 37.5 | 0.51 | 19.1 | |
| Same (2') | times/Liter | 1 | 5.7 | 24.40 | 24.4 | 30.0 | 0.51 | 15.3 | |
| Blanking up (20%) | 1000plant | 1.250 | 12.0 | 40.40 | 50.5 | | | | |
| *Quercus robur* | 1000plant | | | | | 0.625 | 17.0 | 10.6 | |
| *Q.petraea, Q.pedunculiflora* | 1000plant | | | | | 0.250 | 16.8 | 4.2 | |
| *Fraxinus excelsior* | | | | | | 0.375 | 15.0 | 5.6 | |
| Hoeing next year(1') | times/Liter | 5 | 35.4 | 30.50 | 152.5 | 187.5 | 0.51 | 95.6 | |
| Hoeing next year(2') | times/Liter | 5 | 28.3 | 24.40 | 122.0 | 150.0 | 0.51 | 76.5 | |
| Weed control | times | 3 | 11.9 | 16.70 | 50.1 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 13.0 | 27.27 | 54.5 | | | | |
| Marking for clearing | times | 2 | 0.4 | 0.88 | 1.8 | | | | |
| Clearing (15th,20th) | times | 2 | 8.4 | 17.77 | 35.5 | | | | |
| Stacking stems | pils | 6 | 2.9 | 2.02 | 12.1 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 1,020.9 | | | 459.0 | |
| Insurances quota | | 1.40 | | | 1,429.2 | | | | |
| Total | | | | | 1,888.2 | | | | |

For strong damaged stand of Robinia F9 Str. F10 Str.

## Appendix F-27(9) Reforestation Cost per ha.

*Robinia pseudoacacia* forest (*R.pseudoacacia,Gladitschia triacanthos ,Elaeagnus angustifolia*)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Stumpage removal | ha | 1.00 | | 436.3 | | | | | 436.3 |
| Stumpage gathering | ha | 1.00 | | 124.7 | | | | | 124.7 |
| Soil preparation | ha | 1.00 | | 74.8 | | | | | 74.8 |
| Scarifying | ha | 1.00 | | 124.7 | | | | | 124.7 |
| Ploughing | ha | 1.00 | | 45.1 | | | | | 45.1 |
| Disk harrowing | ha | 1.00 | | 22.5 | | | | | 22.5 |
| Marking terrain planting | 1000Point | 5.000 | 5.0 | 4.21 | 21.1 | | | | |
| Seedling transport | km | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 10 | 0.1 | 0.039 | 0.4 | | | | |
| Temporary storage | 1000plant | 5.000 | 0.1 | 0.077 | 0.4 | | | | |
| Planting | 1000plant | 5.000 | 69.2 | 58.25 | 291.3 | | | | |
| *Robinia pseudoacacia* | 1000plant | | | | | 4.250 | 13.5 | 57.4 | |
| *Gladitschia triacanthos* | 1000plant | | | | | 0.500 | 17.0 | 8.5 | |
| *Elaeagunus angustifolia* | 1000plant | | | | | 0.250 | 17.8 | 4.5 | |
| Revising plantation | 1000plant | 0.100 | 2.1 | 86.5 | 8.7 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 5.7 | 24.46 | 24.5 | 30.0 | 0.51 | 15.3 | |
| Same (2') | times/Liter | 1 | 4.5 | 19.57 | 19.6 | 24.0 | 0.51 | 12.2 | |
| Blanking up (40%) | 1000plant | 2.000 | 19.2 | 40.4 | 80.8 | | | | |
| *Robinia pseudoacacia* | 1000plant | | | | | 1.700 | 13.5 | 23.0 | |
| *Gladitschia triacanthos* | 1000plant | | | | | 0.200 | 17.0 | 3.4 | |
| *Elaeagunus angustifolia* | 1000plant | | | | | 0.100 | 17.8 | 1.8 | |
| Hoeing next year(1') | times/Liter | 1 | 5.7 | 24.46 | 24.5 | 30.0 | 0.51 | 15.3 | |
| Hoeing next year(2') | times/Liter | 1 | 4.5 | 19.57 | 19.6 | 24.0 | 0.51 | 12.2 | |
| Salvage cutting, Clearing (4th,8th) | times | 2 | 25.9 | 54.50 | 109.0 | | | | |
| Stacking stems (4th,8th) | pils | 10 | 5.1 | 2.16 | 21.6 | | | | |
| | | | | | | | | | |
| Subtotal | | | 157.7 | | 666.2 | | | 161.3 | 828.1 |
| Insurances quota | | 1.40 | | | 932.7 | | | | |
| Total | | | | | 1,922.1 | | | | |

For moderate damaged stand of Robinia F9

## Appendix F-27(10) Reforestation Cost per ha.

*Robinia pseudoacacia* forest (*R.pseudoacacia* planting 50%)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Marking terrain planting | 1000Point | 2.500 | 2.5 | 4.21 | 10.5 | | | | |
| Seedling transport | km | 100 | 8.1 | 0.34 | 34.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 5 | 0.1 | 0.052 | 0.3 | | | | |
| Temporary storage | 1000plant | 2.500 | 0.1 | 0.103 | 0.3 | | | | |
| Planting | 1000plant | 2.500 | 36.0 | 60.69 | 151.7 | 41.7 | 0.51 | 21.3 | |
| *Robinia pseudoacacia* | 1000plant | | | | | 2.500 | 13.5 | 33.8 | |
| Revising plantation | 1000plant | 0.050 | 1.0 | 86.5 | 4.3 | | | | |
| Hoeing first year (1') | times | 1 | 10.0 | 42.00 | 42.0 | | | | |
| Same (2') | times | 1 | 8.4 | 35.20 | 35.2 | | | | |
| Weed control | times | 1 | 8.0 | 33.47 | 33.5 | | | | |
| Blanking up (40%) | 1000plant | 1.000 | 9.6 | 40.4 | 40.4 | | | | |
| *Robinia pseudoacacia* | 1000plant | | | | | 1.000 | 13.5 | 13.5 | |
| Cutting seedling stems | times | 1 | 16.2 | 68.03 | 68.0 | | | | |
| Hoeing first year (1') | times | 1 | 10.0 | 42.00 | 42.0 | | | | |
| Same (2') | times | 1 | 8.4 | 35.20 | 35.2 | | | | |
| Salvage cutting, Clearing (4th,8th) | times | 2 | 25.9 | 54.50 | 109.0 | | | | |
| Stacking stems (4th,8th) | pils | 10 | 5.1 | 2.16 | 21.6 | | | | |
| | | | | | | | | | |
| Subtotal | | | 149.2 | | 628.0 | | | 76.3 | |
| Insurances quota | | 1.40 | | | 879.2 | | | | |
| Total | | | | | 955.5 | | | | |

Appendix F-27(11) Reforestation Cost per ha.

For moderate damaged stand of Robinia F10
*Robinia pseudoacacia* forest (*R.pseudoacacia* planting 20%)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Marking terrain planting | 1000Point | 1.000 | 1.0 | 4.21 | 4.2 | | | | |
| Seedling transport | km | 100 | 8.1 | 0.34 | 34.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 5 | 0.1 | 0.052 | 0.3 | | | | |
| Temporary storage | 1000plant | 1.000 | 0.0 | 0.103 | 0.1 | | | | |
| Planting | 1000plant | 1.000 | 14.4 | 60.69 | 60.7 | 41.7 | 0.51 | 21.3 | |
| *Robinia pseudoacacia* | 1000plant | | | | | 1.000 | 13.5 | 13.5 | |
| Revising plantation | 1000plant | 0.020 | 0.4 | 86.5 | 1.7 | | | | |
| Hoeing first year (1') | times | 1 | 4.0 | 16.80 | 16.8 | | | | |
| Same (2') | times | 1 | 3.3 | 14.08 | 14.1 | | | | |
| Weed control | times | 1 | 19.9 | 83.68 | 83.7 | | | | |
| Blanking up (40%) | 1000plant | 0.400 | 3.8 | 40.4 | 16.2 | | | | |
| *Robinia pseudoacacia* | 1000plant | | | | | 0.400 | 13.5 | 5.4 | |
| Cutting seedling stems | times | 1 | 16.2 | 68.03 | 68.0 | | | | |
| Hoeing first year (1') | times | 1 | 4.0 | 16.80 | 16.8 | | | | |
| Same (2') | times | 1 | 3.3 | 14.08 | 14.1 | | | | |
| Salvage cutting, Clearing (4th,8th) | times | 2 | 25.9 | 54.50 | 109.0 | | | | |
| Stacking stems (4th,8th) | pils | 10 | 5.1 | 2.16 | 21.6 | | | | |
| | | | | | | | | | |
| Subtotal | | | 109.6 | | 461.2 | | | 48.0 | |
| Insurances quota | | 1.40 | | | 645.7 | | | | |
| Total | | | | | 693.7 | | | | |

Appendix F-27(12) Reforestation Cost per ha.

For strong damaged stand of *Robinia F11*
*Robinia pseudoacacia* forest (*Q.frainetto*,*Q.cerris*)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Stumpage removal | ha | 0.67 | | 760.5 | | | | | 509.5 |
| Stumpage gathering | ha | 0.67 | | inc.a | | | | | |
| Soil preparation | ha | 0.67 | | inc.a | | | | | |
| Scarifying | ha | 0.67 | | inc.a | | | | | |
| Ploughing | ha | 0.67 | | 45.1 | | | | | 30.2 |
| Disk harrowing | ha | 0.67 | | 22.5 | | | | | 15.1 |
| Marking terrain planting | 1000Point | 4.002 | 4.0 | 4.21 | 16.8 | | | | |
| Seedling transport | km | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.039 | 0.8 | | | | |
| Temporary storage | 1000plant | 4.002 | 0.1 | 0.077 | 0.3 | | | | |
| Planting | 1000plant | 4.002 | 55.3 | 58.2 | 232.9 | | | | |
| *Quercus frainetto* | 1000plant | | | | | 0.534 | 20.5 | 10.9 | |
| *Quercus cerris* | 1000plant | | | | | 2.134 | 15.3 | 32.7 | |
| *Pyrus pyraster* | 1000plant | | | | | 0.267 | 20.0 | 5.3 | |
| Others | 1000plant | | | | | 1.334 | 15.0 | 20.0 | |
| Revising plantation | 1000plant | 0.060 | 1.2 | 86.5 | 5.2 | | | | |
| Cutting seedling stems | 1000plant | 4.002 | 1.6 | 1.69 | 6.8 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 5.3 | 22.56 | 22.6 | 38.1 | 0.51 | 19.4 | |
| Same (2') | times/Liter | 1 | 4.3 | 18.04 | 18.0 | 30.5 | 0.51 | 15.6 | |
| Blanking up (20%) | 1000plant | 0.800 | 7.7 | 40.4 | 32.3 | | | | |
| *Q.frainetto* | 1000plant | | | | | 0.160 | 20.5 | 3.3 | |
| *Q.cerris* | 1000plant | | | | | 0.640 | 15.3 | 9.8 | |
| Hoeing next year(1') | times/Liter | 5 | 26.6 | 22.56 | 112.8 | 190.5 | 0.51 | 97.2 | |
| Hoeing next year(2') | times/Liter | 5 | 21.3 | 18.04 | 90.2 | 152.5 | 0.51 | 77.8 | |
| Weed control | times | 3 | 7.9 | 11.05 | 33.2 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 17.4 | 36.53 | 73.1 | | | | |
| Marking for clearing | times | 2 | 0.3 | 0.63 | 1.3 | | | | |
| Clearing (15th,20th) | times | 2 | 6.0 | 12.7 | 25.4 | | | | |
| Stacking stems | pils | 6 | 3.1 | 2.16 | 13.0 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 729.6 | | | 299.7 | 554.8 |
| Insurances quota | | 1.40 | | | 1,021.4 | | | | |
| Total | | | | | 1,875.9 | | | | |

For Moderate Damaged Stand of *Robinia F11*

Appendix F-27(13) Reforestation Cost per ha. *Robinia pseudoacacia* forest (*Q.frainetto*, *Q.cerris*, Others)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Tilling by minibackhoe | ha /Liter | 0.25 | 3.3 | 63.80 | 15.95 | 160 | 0.39 | 62.4 | |
| Marking terrain planting | 1000Point | 3.125 | 3.1 | 4.21 | 13.2 | | | | |
| Seedling transport | km/Liter | 100 | 5.3 | 0.23 | 22.5 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 10 | 0.1 | 0.04 | 0.4 | | | | |
| Temporary storage | 1000plant | 3.125 | 0.1 | 0.08 | 0.2 | | | | |
| Planting | 1000plant | 3.125 | 43.2 | 58.20 | 181.9 | | | | |
| *Quercus frainetto* | 1000plant | | | | | 0.694 | 20.5 | 14.2 | |
| *Quercus cerris* | 1000plant | | | | | 1.389 | 15.3 | 21.3 | |
| Others | 1000plant | | | | | 1.042 | 15.0 | 15.6 | |
| Revising plantation | 1000plant | 0.047 | 1.0 | 86.50 | 4.1 | | | | |
| Cutting seedling stems | 1000plant | 3.125 | 1.3 | 1.69 | 5.3 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 7.1 | 15.25 | 15.3 | 18.8 | 0.51 | 9.6 | |
| Same (2') | times/Liter | 1 | 5.7 | 12.20 | 12.2 | 15.0 | 0.51 | 7.7 | |
| Blanking up (20%) | 1000plant | 0.625 | 6.0 | 40.40 | 25.3 | | | | |
| *Q.frainetto* | 1000plant | | | | | 0.125 | 20.5 | 2.6 | |
| *Q.cerris* | 1000plant | | | | | 0.500 | 15.3 | 7.7 | |
| Hoeing next year(1') | times/Liter | 5 | 35.4 | 15.25 | 76.3 | 93.75 | 0.51 | 47.8 | |
| Hoeing next year(2') | times/Liter | 5 | 28.3 | 12.20 | 61.0 | 75.0 | 0.51 | 38.3 | |
| Weed control | times | 3 | 6.0 | 8.35 | 25.1 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 6.5 | 13.64 | 27.3 | | | | |
| Marking for clearing | times | 2 | 0.2 | 0.44 | 0.9 | | | | |
| Clearing (15th,20th) | times | 2 | 4.2 | 8.89 | 17.8 | | | | |
| Stacking stems | pils | 6 | 1.4 | 1.01 | 6.1 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 510.4 | | | 234.8 | |
| Insurances quota | | 1.40 | | | 714.6 | | | | |
| Total | | | | | 949.4 | | | | |

For strong damaged stand of Populus F13

Appendix F-27(14) Reforestation Cost per ha. *Populus* spp. forest (*Q.robur*, *Fraxinus excelsior*, Others)

| Operations | Unit | Quantity | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| | | | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Stumpage removal | ha | 1.00 | | 760.5 | | | | | 760.5 |
| Stumpage gathering | ha | 1.00 | | inc.a | | | | | |
| Soil preparation | ha | 1.00 | | inc.a | | | | | |
| Scarifying | ha | 1.00 | | inc.a | | | | | |
| Ploughing | ha | 1.00 | | 45.1 | | | | | 45.1 |
| Disk harrowing | ha | 1.00 | | 22.5 | | | | | 22.5 |
| Marking terrain planting | 1000Point | 6.667 | 6.7 | 4.21 | 28.1 | | | | |
| Seedling transport | km | 100 | 10.7 | 0.45 | 45.0 | 20 | 0.39 | 7.8 | |
| Preparate seedling store | m | 20 | 0.2 | 0.039 | 0.8 | | | | |
| Temporary storage | 1000plant | 6.667 | 0.1 | 0.077 | 0.5 | | | | |
| Planting | 1000plant | 6.667 | 92.2 | 58.2 | 388.0 | | | | |
| *Quercus robur* | 1000plant | | | | | 3.556 | 17.0 | 60.5 | |
| *Fraxinus excelsior* | 1000plant | | | | | 0.889 | 15.0 | 13.3 | |
| Others | 1000plant | | | | | 2.222 | 15.0 | 33.3 | |
| Revising plantation | 1000plant | 0.100 | 2.1 | 86.5 | 8.7 | | | | |
| Cutting seedling stems | 1000plant | 6.667 | 2.7 | 1.69 | 11.3 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 7.6 | 32.60 | 32.6 | 40.0 | 0.51 | 20.4 | |
| Same (2') | times/Liter | 1 | 6.1 | 26.08 | 26.1 | 32.0 | 0.51 | 16.3 | |
| Blanking up (20%) | 1000plant | 1.333 | 12.8 | 40.4 | 53.9 | | | | |
| *Quercus robur* | 1000plant | | | | | 1.066 | 17.0 | 18.1 | |
| *Fraxinus excelsior* | 1000plant | | | | | 0.267 | 15.0 | 4.0 | |
| Hoeing next year(1') | times/Liter | 5 | 37.8 | 32.60 | 163.0 | 200.0 | 0.51 | 102.0 | |
| Hoeing next year(2') | times/Liter | 5 | 30.3 | 26.08 | 130.4 | 160.0 | 0.51 | 81.6 | |
| Weed control | times | 3 | 23.8 | 33.47 | 100.4 | | | | |
| Salvage cutting (7th,10th) | times | 2 | 25.9 | 54.55 | 109.1 | | | | |
| Marking for clearing | times | 2 | 0.5 | 0.95 | 1.9 | | | | |
| Clearing (15th,20th) | times | 2 | 9.0 | 18.95 | 37.9 | | | | |
| Stacking stems | pils | 10 | 5.1 | 2.16 | 21.6 | | | | |
| | | | | | | | | | |
| Subtotal | | | | | 1,159.1 | | | 357.4 | 828.1 |
| Insurances quota | | 1.40 | | | 1,622.8 | | | | |
| Total | | | | | 2,808.2 | | | | |

For moderate damaged stand of Populus F13

Appendix F-27(15) Reforestation Cost per ha. *Populus* spp. forest (*Populus alba*)

| | | | Labor | | | Materials | | | Machinery |
|---|---|---|---|---|---|---|---|---|---|
| Operations | Unit | Quantity | Productivity | Cost/unit | Cost | Quantity | Price | Cost | Contract |
| | | | Man/ha | US$ | US$ | | US$ | US$ | US$ |
| Stumpage removal | ha | 1.00 | | 436.3 | | | | | 436.3 |
| Stumpage gathering | ha | 1.00 | | 124.7 | | | | | 124.7 |
| Soil preparation | ha | 1.00 | | 74.8 | | | | | 74.8 |
| Scarifying | ha | 1.00 | | 124.7 | | | | | 124.7 |
| Ploughing | ha | 1.00 | | 45.1 | | | | | 45.1 |
| Disk harrowing | ha | 1.00 | | 22.5 | | | | | 22.5 |
| Marking terrain planting | 1000Point | 0.625 | 0.6 | 4.21 | 2.6 | | | | |
| Seedling transport | km | 100 | 1.2 | 0.05 | 5.0 | 20 | 0.39 | 7.8 | |
| Planting | 1000plant | 0.625 | 8.6 | 58.2 | 36.4 | | | | |
| *Populus alba* | 1000plant | | | | | 0.625 | 235.5 | 147.2 | |
| Revising plantation | 1000plant | 0.100 | 2.1 | 86.5 | 8.7 | | | | |
| Hoeing first year (1') | times/Liter | 1 | 7.6 | 32.60 | 32.6 | 40.0 | 0.51 | 20.4 | |
| Same (2') | times/Liter | 1 | 6.1 | 26.08 | 26.1 | 32.0 | 0.51 | 16.3 | |
| Blanking up (21%) | 1000plant | 0.130 | 1.2 | 40.4 | 5.3 | | | | |
| *Populus alba* | 1000plant | | | | | 0.130 | 235.5 | 30.6 | |
| Hoeing next year(1') | times/Liter | 2 | 15.1 | 32.60 | 65.2 | 80.0 | 0.51 | 40.8 | |
| Hoeing next year(2') | times/Liter | 2 | 12.1 | 26.08 | 52.2 | 64.0 | 0.51 | 32.6 | |
| Weed control (4th) | times | 1 | 8.0 | 33.47 | 33.5 | | | | |
| Cutting buds (1t,2d) | times | 2 | 3.9 | 8.22 | 16.4 | | | | |
| Pruning (7th) | times | 1 | 9.8 | 41.11 | 41.1 | | | | |
| | | | | | | | | | |
| Subtotal | | | 76.2 | | 325.0 | | | 295.8 | 828.1 |
| Insurances quota | | 1.40 | | | 455.0 | | | | |
| Total | | | | | 1,578.8 | | | | |

## Appendix F-28(1) Labor Volume by Operation Year

| Total (Dolj and Olt) | | | | | | | | Total Man-Day |
|---|---|---|---|---|---|---|---|---|
| Operation Year | Cursing | Log production | Ground clearance | Planting | Tending | D.I.W | Forest mantle replantation | |
| 2 | 1,469 | | | | | | | 1,469 |
| 3 | 1,803 | 7,834 | 228 | | | | | 9,865 |
| 4 | 2,461 | 9,629 | 284 | 10,531 | 1,849 | 221 | 80 | 25,055 |
| 5 | 2,913 | 13,158 | 578 | 16,373 | 6,900 | 798 | 1,050 | 41,770 |
| 6 | 4,117 | 15,947 | 425 | 29,236 | 13,038 | 399 | 1,937 | 65,099 |
| 7 | 4,737 | 21,978 | 2,826 | 36,951 | 22,056 | | 1,481 | 90,029 |
| 8 | 3,962 | 25,199 | 3,592 | 57,972 | 25,906 | | 856 | 117,487 |
| 9 | | 21,077 | 2,935 | 74,221 | 41,415 | | 416 | 140,064 |
| 10 | | | | 61,115 | 54,316 | | 220 | 115,651 |
| 11 | | | | | 45,519 | | | 45,519 |
| 12 | | | | | 32,147 | | 372 | 32,519 |
| 13 | 270 | | | | 29,865 | | 416 | 30,551 |
| 14 | 540 | | | | 26,870 | | 220 | 27,630 |
| 15 | 1,102 | | | | 15,054 | | | 16,156 |
| 16 | 1,614 | | | | 6,680 | | | 8,294 |
| 17 | | | | | 4,490 | | | 4,490 |
| 18 | 100 | | | | 6,248 | | | 6,348 |
| 19 | 202 | | | | 5,417 | | | 5,619 |
| 20 | 405 | | | | 1,014 | | | 1,419 |
| 21 | 602 | | | | 1,175 | | | 1,777 |
| 22 | | | | | 3,412 | | | 3,412 |
| 23 | 63 | | | | 4,839 | | | 4,902 |
| 24 | 127 | | | | 4,241 | | | 4,368 |
| 25 | 254 | | | | 1,019 | | | 1,273 |
| 26 | 378 | | | | 1,175 | | | 1,553 |
| 27 | | | | | 3,412 | | | 3,412 |
| 28 | | | | | 4,382 | | | 4,382 |
| 29 | | | | | 3,611 | | | 3,611 |
| S-total | 27,119 | 114,822 | 10,868 | 286,399 | 366,050 | 1,418 | 7,048 | 813,724 |
| 33 | 387 | | | | | | | 387 |
| 34 | 775 | | | | | | | 775 |
| 35 | 1,559 | | | | | | | 1,559 |
| 36 | 2,319 | | | | | | | 2,319 |
| 37 | 14 | | | | | | | 14 |
| 38 | 602 | | | | | | | 602 |
| 39 | 835 | | | | | | | 835 |
| 40 | 1,331 | | | | | | | 1,331 |
| 41 | 1,522 | | | | | | | 1,522 |
| 42 | 4,213 | | | | | | | 4,213 |
| 43 | 5,419 | | | | | | | 5,419 |
| 44 | 4,472 | | | | | | | 4,472 |
| 48 | 253 | | | | | | | 253 |
| 49 | 350 | | | | | | | 350 |
| 50 | 557 | | | | | | | 557 |
| 51 | 638 | | | | | | | 638 |
| 52 | 1,766 | | | | | | | 1,766 |
| 53 | 2,271 | | | | | | | 2,271 |
| 54 | 1,874 | | | | | | | 1,874 |
| 58 | 121 | | | | | | | 84 |
| 59 | 168 | | | | | | | 168 |
| 60 | 267 | | | | | | | 267 |
| 61 | 306 | | | | | | | 306 |
| 62 | 847 | | | | | | | 847 |
| 63 | 1,089 | | | | | | | 1,089 |
| 64 | 899 | | | | | | | 899 |
| 68 | 75 | | | | | | | 75 |
| 69 | 104 | | | | | | | 104 |
| 70 | 166 | | | | | | | 166 |
| 71 | 191 | | | | | | | 191 |
| 72 | 527 | | | | | | | 527 |
| 73 | 678 | | | | | | | 678 |
| 74 | 559 | | | | | | | 559 |

| Total (Dolj and Olt) | | | | | | | | Total Man-Day |
|---|---|---|---|---|---|---|---|---|
| Operation Year | Cursing | Log production | Ground clearance | Planting | Tending | D.I.W | Forest mantle replantation | |
| 78 | 69 | | | | | | | 69 |
| 79 | 96 | | | | | | | 96 |
| 80 | 152 | | | | | | | 152 |
| 81 | 175 | | | | | | | 175 |
| 82 | 482 | | | | | | | 482 |
| 83 | 620 | | | | | | | 620 |
| 84 | 512 | | | | | | | 512 |
| 123 | 433 | | | | | | | 433 |
| 124 | 604 | | | | | | | 604 |
| 125 | 963 | | | | | | | 963 |
| 126 | 1,103 | | | | | | | 1,103 |
| 127 | 3,025 | | | | | | | 3,025 |
| 128 | 3,893 | | | | | | | 3,893 |
| 129 | 3,210 | | | | | | | 3,210 |
| 143 | 459 | | | | | | | 459 |
| 144 | 640 | | | | | | | 640 |
| 145 | 1,020 | | | | | | | 1,020 |
| 146 | 1,168 | | | | | | | 1,168 |
| 147 | 3,206 | | | | | | | 3,206 |
| 148 | 4,125 | | | | | | | 4,125 |
| 149 | 3,402 | | | | | | | 3,402 |
| 163 | 487 | | | | | | | 487 |
| 164 | 678 | | | | | | | 678 |
| 165 | 1,081 | | | | | | | 1,081 |
| 166 | 1,237 | | | | | | | 1,237 |
| 167 | 3,396 | | | | | | | 3,396 |
| 168 | 4,370 | | | | | | | 4,370 |
| 169 | 3,604 | | | | | | | 3,604 |
| **S-total** | **81,364** | | | | | | | **81,327** |
| **Total** | **108,483** | **114,822** | **10,868** | **286,399** | **366,050** | **1,418** | **7,048** | **895,051** |

*Remark D.I.W : Drainage and Infiltration Works

## Appendix F-28(2) Labor Volume by Operation Year

| Oli County | | | | | | | | | Dolj County | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Operation Year | Cruising | Log production | Soil preparation | Planting | Tending | D.I.W | Forest mantle replantation | Total Man-Day | Cruising | Log production | Soil preparation | Planting | Tending | D.I.W | Forest mantle replantation | Total Man-Day |
| 2 | 481 | | | | | | | 481 | 988 | | | | | | | 988 |
| 3 | 606 | 2,558 | 60 | | | | | 3,224 | 1,197 | 5,276 | 168 | | | | | 6,641 |
| 4 | 715 | 3,228 | 80 | 2,222 | 378 | 119 | 40 | 6,782 | 1,746 | 6,401 | 204 | 8,309 | 1,471 | 102 | 40 | 18,273 |
| 5 | 785 | 3,805 | 174 | 3,743 | 1,383 | 399 | 530 | 10,819 | 2,128 | 9,353 | 404 | 12,630 | 5,517 | 399 | 520 | 30,951 |
| 6 | 1,212 | 4,180 | 125 | 6,246 | 2,715 | | 1,001 | 15,479 | 2,905 | 11,767 | 300 | 22,990 | 10,323 | 399 | 936 | 49,620 |
| 7 | 1,449 | 6,460 | 744 | 7,180 | 4,233 | | 504 | 20,570 | 3,288 | 15,518 | 2,082 | 29,771 | 17,823 | | 977 | 69,459 |
| 8 | 1,190 | 7,707 | 985 | 15,354 | 6,807 | | 186 | 32,229 | 2,772 | 17,492 | 2,607 | 42,618 | 19,099 | | 670 | 85,258 |
| 9 | | 6,330 | 763 | 20,165 | 10,986 | | 230 | 38,474 | | 14,747 | 2,172 | 54,056 | 30,429 | | 186 | 101,590 |
| 10 | | | | 15,938 | 14,105 | | | 30,043 | | | | 45,177 | 40,211 | | 220 | 85,608 |
| 11 | | | | | 12,409 | | | 12,409 | | | | | 33,110 | | | 33,110 |
| 12 | | | | | 8,620 | | 186 | 8,806 | | | | | 23,527 | | 186 | 23,713 |
| 13 | 6 | | | | 7,496 | | 230 | 7,732 | 264 | | | | 22,369 | | 186 | 22,819 |
| 14 | 24 | | | | 6,287 | | | 6,311 | 516 | | | | 20,583 | | 220 | 21,319 |
| 15 | 39 | | | | 4,159 | | | 4,198 | 1,063 | | | | 10,895 | | | 11,958 |
| 16 | 62 | | | | 1,936 | | | 1,998 | 1,552 | | | | 4,744 | | | 6,296 |
| 17 | | | | | 1,195 | | | 1,195 | | | | | 3,295 | | | 3,295 |
| 18 | 2 | | | | 1,702 | | | 1,704 | 98 | | | | 4,546 | | | 4,644 |
| 19 | 9 | | | | 1,476 | | | 1,485 | 193 | | | | 3,941 | | | 4,134 |
| 20 | 13 | | | | 370 | | | 383 | 392 | | | | 644 | | | 1,036 |
| 21 | 23 | | | | 413 | | | 436 | 579 | | | | 762 | | | 1,341 |
| 22 | | | | | 905 | | | 905 | | | | | 2,507 | | | 2,507 |
| 23 | 1 | | | | 1,326 | | | 1,327 | 62 | | | | 3,513 | | | 3,575 |
| 24 | 6 | | | | 1,168 | | | 1,174 | 121 | | | | 3,073 | | | 3,194 |
| 25 | 8 | | | | 370 | | | 378 | 246 | | | | 649 | | | 895 |
| 26 | 14 | | | | 413 | | | 427 | 364 | | | | 762 | | | 1,126 |
| 27 | | | | | 905 | | | 905 | | | | | 2,507 | | | 2,507 |
| 28 | | | | | 1,189 | | | 1,189 | | | | | 3,193 | | | 3,193 |
| 29 | | | | | 942 | | | 942 | | | | | 2,669 | | | 2,669 |
| S-total | 6,645 | 34,268 | 2,931 | 70,848 | 93,888 | 518 | 2,907 | 212,005 | 20,474 | 80,554 | 7,937 | 215,551 | 272,162 | 900 | 4,141 | 601,719 |
| 33 | 9 | | | | | | | 9 | 378 | | | | | | | 378 |
| 34 | 36 | | | | | | | 36 | 739 | | | | | | | 739 |
| 35 | 55 | | | | | | | 55 | 1,504 | | | | | | | 1,504 |
| 36 | 94 | | | | | | | 94 | 2,225 | | | | | | | 2,225 |
| 37 | 3 | | | | | | | 3 | 11 | | | | | | | 11 |
| 38 | 183 | | | | | | | 183 | 419 | | | | | | | 419 |
| 39 | 304 | | | | | | | 304 | 531 | | | | | | | 531 |
| 40 | 490 | | | | | | | 490 | 841 | | | | | | | 841 |
| 41 | 564 | | | | | | | 564 | 958 | | | | | | | 958 |
| 42 | 1,119 | | | | | | | 1,119 | 3,094 | | | | | | | 3,094 |
| 43 | 1,468 | | | | | | | 1,468 | 3,951 | | | | | | | 3,951 |
| 44 | 1,167 | | | | | | | 1,167 | 3,305 | | | | | | | 3,305 |
| 48 | 77 | | | | | | | 77 | 176 | | | | | | | 176 |
| 49 | 128 | | | | | | | 128 | 222 | | | | | | | 222 |
| 50 | 205 | | | | | | | 205 | 352 | | | | | | | 352 |
| 51 | 236 | | | | | | | 236 | 402 | | | | | | | 402 |
| 52 | 469 | | | | | | | 469 | 1,297 | | | | | | | 1,297 |
| 53 | 615 | | | | | | | 615 | 1,656 | | | | | | | 1,656 |
| 54 | 489 | | | | | | | 489 | 1,385 | | | | | | | 1,385 |
| 58 | 37 | | | | | | | | 84 | | | | | | | 84 |
| 59 | 61 | | | | | | | 61 | 107 | | | | | | | 107 |
| 60 | 98 | | | | | | | 98 | 169 | | | | | | | 169 |
| 61 | 113 | | | | | | | 113 | 193 | | | | | | | 193 |
| 62 | 225 | | | | | | | 225 | 622 | | | | | | | 622 |
| 63 | 295 | | | | | | | 295 | 794 | | | | | | | 794 |
| 64 | 235 | | | | | | | 235 | 664 | | | | | | | 664 |
| 68 | 23 | | | | | | | 23 | 52 | | | | | | | 52 |
| 69 | 38 | | | | | | | 38 | 66 | | | | | | | 66 |
| 70 | 61 | | | | | | | 61 | 105 | | | | | | | 105 |
| 71 | 71 | | | | | | | 71 | 120 | | | | | | | 120 |
| 72 | 140 | | | | | | | 140 | 387 | | | | | | | 387 |
| 73 | 184 | | | | | | | 184 | 494 | | | | | | | 494 |
| 74 | 146 | | | | | | | 146 | 413 | | | | | | | 413 |
| 78 | 21 | | | | | | | 21 | 48 | | | | | | | 48 |
| 79 | 35 | | | | | | | 35 | 61 | | | | | | | 61 |
| 80 | 56 | | | | | | | 56 | 96 | | | | | | | 96 |
| 81 | 65 | | | | | | | 65 | 110 | | | | | | | 110 |
| 82 | 128 | | | | | | | 128 | 354 | | | | | | | 354 |
| 83 | 168 | | | | | | | 168 | 452 | | | | | | | 452 |
| 84 | 134 | | | | | | | 134 | 378 | | | | | | | 378 |
| 123 | 139 | | | | | | | 139 | 294 | | | | | | | 294 |
| 124 | 232 | | | | | | | 232 | 372 | | | | | | | 372 |
| 125 | 373 | | | | | | | 373 | 590 | | | | | | | 590 |
| 126 | 430 | | | | | | | 430 | 673 | | | | | | | 673 |
| 127 | 853 | | | | | | | 853 | 2,172 | | | | | | | 2,172 |

| Olt County | | | | | | | | Total | Dolj County | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Operation Year | Cruising | Log production | Soil preparation | Planting | Tending | D.I.W | Forest mantle reclantation | Man-Day | Cruising | Log production | Soil preparation | Planting | Tending | D.I.W | Forest mantle reclantatio | Man-Day |
| 128 | 1,119 | | | | | | | 1,119 | 2,774 | | | | | | | 2,774 |
| 129 | 890 | | | | | | | 890 | 2,320 | | | | | | | 2,320 |
| 143 | 147 | | | | | | | 147 | 312 | | | | | | | 312 |
| 144 | 245 | | | | | | | 245 | 395 | | | | | | | 395 |
| 145 | 391 | | | | | | | 391 | 626 | | | | | | | 626 |
| 146 | 454 | | | | | | | 454 | 714 | | | | | | | 714 |
| 147 | 901 | | | | | | | 901 | 2,305 | | | | | | | 2,305 |
| 148 | 1,182 | | | | | | | 1,182 | 2,943 | | | | | | | 2,943 |
| 149 | 940 | | | | | | | 940 | 2,462 | | | | | | | 2,462 |
| 163 | 156 | | | | | | | 156 | 331 | | | | | | | 331 |
| 164 | 259 | | | | | | | 259 | 419 | | | | | | | 419 |
| 165 | 417 | | | | | | | 417 | 664 | | | | | | | 664 |
| 166 | 480 | | | | | | | 480 | 757 | | | | | | | 757 |
| 167 | 953 | | | | | | | 953 | 2,443 | | | | | | | 2,443 |
| 168 | 1,250 | | | | | | | 1,250 | 3,120 | | | | | | | 3,120 |
| 169 | 994 | | | | | | | 994 | 2,610 | | | | | | | 2,610 |
| S-total | 22,853 | | | | | | | 22,816 | 58,511 | | | | | | | 58,511 |
| Total | 29,498 | 34,268 | 2,931 | 70,848 | 93,888 | 518 | 2,907 | 234,821 | 78,985 | 80,554 | 7,937 | 215,551 | 272,162 | 900 | 4,141 | 660,230 |

*Remark D.I.W : Drainage and Infiltration Works

Appendix F-29(1) Operation Volume by Operation Year (Tending)

| | Olt and Dolj Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Operation Year | Supplementary planting | Correction of planting | Scarifying | Weeding | Improvement cutting of brush | Intraspecific improvement cutting | Removal of lateral buds | Pruning |
| 3 | | | | | | | | |
| 4 | | | 268.00 | 99.00 | | | | |
| 5 | 35.80 | 134.00 | 694.88 | 235.44 | | | | |
| 6 | 60.69 | 213.44 | 1,360.28 | 461.14 | | | | |
| 7 | 111.74 | 377.70 | 2,168.72 | 613.81 | 45.00 | | | |
| 8 | 152.67 | 495.82 | 3,071.92 | 1,055.42 | 90.00 | | 9.80 | |
| 9 | 126.61 | 631.00 | 4,135.78 | 1,654.95 | 181.00 | | 9.80 | |
| 10 | 160.22 | 801.08 | 5,280.18 | 2,095.38 | 358.15 | | | |
| 11 | 132.24 | 661.20 | 5,013.70 | 1,472.08 | 123.44 | 45.00 | | |
| 12 | | | 4,620.30 | 661.20 | 196.70 | 90.00 | | |
| 13 | | | 4,170.16 | | 314.07 | 181.00 | | |
| 14 | | | 2,924.56 | | 746.24 | 269.15 | | 9.80 |
| 15 | | | 1,322.40 | | 997.78 | | | |
| 16 | | | | | 886.27 | | | |
| 17 | | | | | 622.80 | | | |
| 18 | | | | | 801.08 | 89.00 | | |
| 19 | | | | | 661.20 | 123.44 | | |
| 20 | | | | | | 196.70 | | |
| 21 | | | | | | 225.07 | | |
| 22 | | | | | | 622.80 | | |
| 23 | | | | | | 890.08 | | |
| 24 | | | | | | 784.64 | | |
| 25 | | | | | | 196.70 | | |
| 26 | | | | | | 225.07 | | |
| 27 | | | | | | 622.80 | | |
| 28 | | | | | | 801.08 | | |
| 29 | | | | | | 661.20 | | |
| Total | 779.97 | 3,314.24 | 35,030.88 | 8,348.42 | 6,023.73 | 6,023.73 | 19.60 | 9.80 |

## Appendix F-29(2) Operation Volume by Operation Year (Tending)

| | Olt County | | | | | | | | Dolj County | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Operation Year | Supplementary planting | Planting revision | 地掘り weeding | Weeding | Shrub cleaning | cleaning | Lateral bud remove | Pruning | Supplementary planting | Planting revision | 地掘り weeding | Weeding | Shrub cleaning | cleaning | Lateral bud remove | Pruning |
| 3 | | | | | | | | | | | | | | | | |
| 4 | | | 56.00 | 27.00 | | | | | | | 212.00 | 72.00 | | | | |
| 5 | 5.80 | 28.00 | 154.00 | 72.00 | | | | | 30.00 | 106.00 | 540.88 | 163.44 | | | | |
| 6 | 10.60 | 49.00 | 308.80 | 144.40 | | | | | 50.09 | 164.44 | 1,051.48 | 316.74 | | | | |
| 7 | 16.88 | 78.40 | 488.20 | 201.80 | 1.00 | | | | 94.86 | 299.30 | 1,680.52 | 412.01 | 44.00 | | | |
| 8 | 20.80 | 95.30 | 810.28 | 325.24 | 4.00 | | 1.60 | | 131.87 | 400.52 | 2,261.64 | 730.18 | 86.00 | | 8.20 | |
| 9 | 33.42 | 165.44 | 1,223.68 | 471.84 | 6.00 | | 1.60 | | 93.19 | 465.56 | 2,912.10 | 1,183.11 | 175.00 | | 8.20 | |
| 10 | 43.40 | 217.00 | 1,514.88 | 565.34 | 37.30 | | | | 116.82 | 584.08 | 3,765.30 | 1,530.04 | 320.85 | | | |
| 11 | 34.52 | 172.60 | 1,421.68 | 391.20 | 45.00 | 1.00 | | | 97.72 | 488.60 | 3,592.02 | 1,080.88 | 78.44 | 44.00 | | |
| 12 | | | 1,276.88 | 172.60 | 72.40 | 4.00 | | | | | 3,343.42 | 488.60 | 124.30 | 86.00 | | |
| 13 | | | 1,110.08 | | 110.40 | 6.00 | | | | | 3,060.08 | | 203.67 | 175.00 | | |
| 14 | | | 779.20 | | 210.44 | 10.30 | | 1.60 | | | 2,145.36 | | 535.80 | 258.85 | | 8.20 |
| 15 | | | 345.20 | | 289.40 | | | | | | 977.20 | | 708.38 | | | |
| 16 | | | | | 256.00 | | | | | | | | 630.27 | | | |
| 17 | | | | | 165.44 | | | | | | | | 457.36 | | | |
| 18 | | | | | 217.00 | 27.00 | | | | | | | 584.08 | 62.00 | | |
| 19 | | | | | 172.60 | 45.00 | | | | | | | 488.60 | 78.44 | | |
| 20 | | | | | | 72.40 | | | | | | | | 124.30 | | |
| 21 | | | | | | 83.40 | | | | | | | | 141.67 | | |
| 22 | | | | | | 165.44 | | | | | | | | 457.36 | | |
| 23 | | | | | | 244.00 | | | | | | | | 646.08 | | |
| 24 | | | | | | 217.60 | | | | | | | | 567.04 | | |
| 25 | | | | | | 72.40 | | | | | | | | 124.30 | | |
| 26 | | | | | | 83.40 | | | | | | | | 141.67 | | |
| 27 | | | | | | 165.44 | | | | | | | | 457.36 | | |
| 28 | | | | | | 217.00 | | | | | | | | 584.08 | | |
| 29 | | | | | | 172.60 | | | | | | | | 488.60 | | |
| Total | 165.42 | 805.74 | 9,488.88 | 2,371.42 | 1,586.98 | 1,586.98 | 3.20 | 1.60 | 614.55 | 2,508.50 | 25,542.00 | 5,977.00 | 4,436.75 | 4,436.75 | 16.40 | 8.20 |

## Appendix F-30 Restoration Targets for Damaged Forest by Site Index,Damage Grade

<Olt County>

| Present Stand | Site Index | Damage Grade | Stand Area | Plantation Method/Rate | Actual Regeneration Area ha | Regeneration Method / Target Period | Target Unit Stock $m^3$/ha | Target Stock $m^3$ |
|---|---|---|---|---|---|---|---|---|
| *Q.frainetto* F5 | 2 | Strong | 1.3 | Plantation 80% | 1.0 | *Q.frainetto* | 451 | 469 |
| | | Moderate | 5.4 | Plantation 50% | 2.7 | 120ys | 451 | 1,218 |
| | 3 | Strong | 59.8 | Plantation 80% | 47.8 | | 374 | 17,892 |
| | | Moderate | 218.6 | Plantation 50% | 109.3 | | 374 | 40,878 |
| | 4 | Strong | 80.9 | Plantation 80% | 64.7 | | 303 | 19,610 |
| | | Moderate | 151.7 | Plantation 50% | 75.9 | | 303 | 22,983 |
| | 5 | Strong | 36.4 | Plantation 80% | 29.1 | | 221 | 6,436 |
| | | Moderate | 46.0 | Plantation 50% | 23.0 | | 221 | 5,083 |
| | total | | 600.1 | | 353.6 | | | 114,568 |
| *Q.frainetto* & *Q.cerris* F6 | 2 | Strong | 0.0 | Plantation 80% | 0.0 | *Q.frainetto* | | |
| | | Moderate | 8.4 | Plantation 50% | 4.2 | *Q.cerris* | 441 | 1,852 |
| | 3 | Strong | 30.7 | Plantation 80% | 24.6 | 120ys | 355 | 8,719 |
| | | Moderate | 141.6 | Plantation 50% | 70.8 | | 355 | 25,134 |
| | 4 | Strong | 55.1 | Plantation 80% | 44.1 | | 285 | 12,563 |
| | | Moderate | 130.7 | Plantation 50% | 65.4 | | 285 | 18,625 |
| | 5 | Strong | 14.8 | Plantation 80% | 11.8 | | 210 | 2,486 |
| | | Moderate | 76.4 | Plantation 50% | 38.2 | | 210 | 8,022 |
| | total | | 457.7 | | 259.0 | | | 77,401 |
| *Quercus* spp. F7 | 1 | Strong | 0.0 | Plantation 80% | 0.0 | *Q.robur ,Q.petraea ,* | | |
| | | Moderate | 0.2 | Plantation 50% | 0.1 | *Q.pedun .,Q.cerris* | 817 | 82 |
| | 2 | Strong | 1.5 | Plantation 80% | 1.2 | 120ys | 687 | 824 |
| | | Moderate | 2.0 | Plantation 50% | 1.0 | | 687 | 687 |
| | 3 | Strong | 1.4 | Plantation 80% | 1.1 | | 557 | 624 |
| | | Moderate | 15.5 | Plantation 50% | 7.8 | | 557 | 4,317 |
| | 4 | Strong | 20.7 | Plantation 80% | 16.6 | | 441 | 7,353 |
| | | Moderate | 21.9 | Plantation 50% | 11.0 | | 441 | 4,862 |
| | 5 | Strong | 2.4 | Plantation 80% | 1.9 | | 341 | 655 |
| | | Moderate | 5.3 | Plantation 50% | 2.7 | | 341 | 904 |
| | total | | 70.9 | | 43.3 | | | 20,307 |
| *Quercus* & Others F8 | 1 | Strong | 0.0 | Plantation 80% | 0.0 | *Q.robur ,Q.petraea ,* | | |
| | | Moderate | 0.6 | Plantation 50% | 0.3 | *Q.pedun .,Fraxinus* | 888 | 266 |
| | 2 | Strong | 17.6 | Plantation 80% | 14.1 | 120ys | 749 | 10,546 |
| | | Moderate | 0.8 | Plantation 50% | 0.4 | | 749 | 300 |
| | 3 | Strong | 27.5 | Plantation 80% | 22.0 | | 609 | 13,398 |
| | | Moderate | 25.4 | Plantation 50% | 12.7 | | 609 | 7,734 |
| | 4 | Strong | 41.0 | Plantation 80% | 32.8 | | 485 | 15,908 |
| | | Moderate | 19.5 | Plantation 50% | 9.8 | | 485 | 4,729 |
| | 5 | Strong | 38.2 | Plantation 80% | 30.6 | | 374 | 11,429 |
| | | Moderate | 5.0 | Plantation 50% | 2.5 | | 374 | 935 |
| | total | | 175.6 | | 125.1 | | | 65,245 |
| *Robinia* above20ys F9 | 3 | Strong | 0.0 | Plantation 100% | 0.0 | *Robinia*, Others 30ys | | |
| | | Moderate | 1.0 | Coppice | 1.0 | Species for planting:*Robinia* 30ys | 213 | 213 |
| | 4 | Strong | 3.8 | Plantation 100% | 3.8 | *Robinia*, Others 30ys | 181 | 688 |
| | | Moderate | 2.5 | Coppice | 2.5 | Species for planting:*Robinia* 30ys | 153 | 383 |
| | total | | 7.3 | | 7.3 | | | 1,283 |
| *Robinia* under20ys F10 | 3 | Strong | 4.6 | Plantation 100% | 4.6 | *Robinia*, Others 30ys | 239 | 1,099 |
| | | Moderate | 12.0 | Coppice | 6.0 | Species for planting:*Robinia* 30ys | 197 | 1,182 |
| | 4 | Strong | 1.4 | Plantation 100% | 1.4 | *Robinia*, Others 30ys | 181 | 253 |
| | | Moderate | 4.0 | Coppice | 2.0 | Species for planting:*Robinia* 30ys | 136 | 272 |
| | total | | 22.0 | | 14.0 | | | 2,807 |
| *Robinia* above20ys F11 | 5 | Strong | 1.9 | Plantation 100% | 1.9 | *Q.cerris frai.* 120ys | 210 | 399 |
| | | Moderate | 0.0 | Coppice | 0.0 | Species for planting:*Q.ce .fr* .120ys | | |
| | total | | 1.9 | | 1.9 | | | 399 |
| *Populus* spp. F13 | 3 | Strong | 0.0 | Plantation 100% | 0.0 | *Q.robur* ,others 120ys | | |
| | | Moderate | 1.6 | Plantation 100% | 1.6 | *Populus alba* 30ys | 289 | 462 |
| | total | | 1.6 | | 1.6 | | | 462 |
| | | Total | 1,337.1 | | 805.7 | | | 282,473 |

<Dolj County>

| Present Stand | Site Index | Damage Grade | Stand Area | Plantation Method/Rate | Actual Regeneration Area ha | Regeneration Method / Target Period | Target Unit Stock $m^3$/ha | Target Stock $m^3$ |
|---|---|---|---|---|---|---|---|---|
| Seed Stand | | | | | | | | |
| *Q.frainetto* F1 | 3 | Strong | 32.8 | Plantation 60% | 19.7 | *Q.frainetto* 120ys | 374 | 7,360 |
| *Q.frai.,cer.* F2 | 3 | Strong | 45.2 | Plantation 60% | 27.1 | *Q.frai.,cer* 120ys | 355 | 9,628 |
| | | Moderate | 15.2 | Plantation 40% | 6.1 | *Q.frai.,cer* 120ys | 355 | 2,158 |
| | total | | 60.4 | | 33.2 | | | 11,786 |
| *Q.*spp. F3 | 1 | Moderate | 3.6 | Plantation 40% | 1.4 | *Q.ped.,pet.,cer.*120ys | 817 | 1,176 |
| | | Total | 96.8 | | 54.3 | | | 20,323 |

| Present Stand | Site Index | Damage Grade | Stand Area | Plantation Method/Rate | Actual Regeneration Area ha | Regeneration Method / Target Period | Target Unit Stock $m^3$/ha | Target Stock $m^3$ |
|---|---|---|---|---|---|---|---|---|
| *Q.frainetto* F5 | 2 | Strong | 0.0 | Plantation 80% | 0.0 | *Q.frainetto* | | |
| | | Moderate | 6.4 | Plantation 50% | 3.2 | 120ys | 451 | 1,443 |
| | 3 | Strong | 152.3 | Plantation 80% | 121.8 | | 374 | 45,568 |
| | | Moderate | 195.3 | Plantation 50% | 97.7 | | 374 | 36,521 |
| | 4 | Strong | 149.7 | Plantation 80% | 119.8 | | 303 | 36,287 |
| | | Moderate | 189.2 | Plantation 50% | 94.6 | | 303 | 28,664 |
| | 5 | Strong | 70.9 | Plantation 80% | 56.7 | | 221 | 12,535 |
| | | Moderate | 134.9 | Plantation 50% | 67.5 | | 221 | 14,906 |
| | total | | 898.7 | | 561.2 | | | 175,925 |
| *Q.frainetto & cerris* F6 | 2 | Strong | 3.8 | Plantation 80% | 3.0 | *Q.frainetto* | 441 | 1,341 |
| | | Moderate | 28.3 | Plantation 50% | 14.2 | *cerris* | 441 | 6,240 |
| | 3 | Strong | 101.1 | Plantation 80% | 80.9 | 120ys | 355 | 28,712 |
| | | Moderate | 566.7 | Plantation 50% | 283.4 | | 355 | 100,589 |
| | 4 | Strong | 202.8 | Plantation 80% | 162.2 | | 285 | 46,238 |
| | | Moderate | 656.5 | Plantation 50% | 328.3 | | 285 | 93,551 |
| | 5 | Strong | 114.9 | Plantation 80% | 91.9 | | 210 | 19,303 |
| | | Moderate | 264.1 | Plantation 50% | 132.1 | | 210 | 27,731 |
| | total | | 1938.2 | | 1095.9 | | | 323,706 |
| Quercus spp. F7 | 1 | Strong | 1.7 | Plantation 80% | 1.4 | *Q.robur ,petraea ,* | 817 | 1,111 |
| | | Moderate | 6.2 | Plantation 50% | 3.1 | *pedun .,cerris* | 817 | 2,533 |
| | 2 | Strong | 2.6 | Plantation 80% | 2.1 | 120ys | 687 | 1,429 |
| | | Moderate | 6.4 | Plantation 50% | 3.2 | | 687 | 2,198 |
| | 3 | Strong | 27.0 | Plantation 80% | 21.6 | | 557 | 12,031 |
| | | Moderate | 60.8 | Plantation 50% | 30.4 | | 557 | 16,933 |
| | 4 | Strong | 28.5 | Plantation 80% | 22.8 | | 444 | 10,123 |
| | | Moderate | 46.3 | Plantation 50% | 23.2 | | 444 | 10,279 |
| | 5 | Strong | 1.1 | Plantation 80% | 0.9 | | 341 | 300 |
| | | Moderate | 14.7 | Plantation 50% | 7.4 | | 341 | 2,506 |
| | total | | 195.3 | | 115.9 | | | 59,443 |
| *Quercus* & Others F8 | 2 | Strong | 0.0 | Plantation 80% | 0.0 | *Q.robur ,petraea ,* | | |
| | | Moderate | 3.6 | Plantation 50% | 1.8 | *pedun .,Fraxinus* | 749 | 1,348 |
| | 3 | Strong | 21.5 | Plantation 80% | 17.2 | 120ys | 609 | 10,475 |
| | | Moderate | 25.5 | Plantation 50% | 12.8 | | 609 | 7,765 |
| | 4 | Strong | 18.4 | Plantation 80% | 14.7 | | 485 | 7,139 |
| | | Moderate | 9.5 | Plantation 50% | 4.8 | | 485 | 2,304 |
| | 5 | Strong | 18.3 | Plantation 80% | 14.6 | | 374 | 5,475 |
| | | Moderate | 43.7 | Plantation 50% | 21.9 | | 374 | 8,172 |
| | total | | 140.5 | | 87.7 | | | 42,678 |
| *Robinia* above20ys F9 | 2 | Strong | 3.2 | Plantation 100% | 3.2 | *Robinia* ,Others 30ys | 333 | 1,066 |
| | | Moderate | 12.1 | Coppice | 12.1 | Species for planting:*Robinia* 30ys | 302 | 3,654 |
| | 3 | Strong | 108.3 | Plantation 100% | 108.3 | *Robinia* ,Others 30ys | 239 | 25,884 |
| | | Moderate | 53.5 | Coppice | 53.5 | Species for planting:*Robinia* 30ys | 213 | 11,396 |
| | 4 | Strong | 70.8 | Plantation 100% | 70.8 | *Robinia* ,Others 30ys | 181 | 12,815 |
| | | Moderate | 47.5 | Coppice | 47.5 | Species for planting:*Robinia* 30ys | 153 | 7,268 |
| | 5 | Strong | 47.8 | Plantation 100% | 47.8 | *Robinia* ,Others 30ys | 105 | 5,019 |
| | | Moderate | 14.5 | Coppice | 14.5 | Species for planting:*Robinia* 30ys | 89 | 1,291 |
| | total | | 357.7 | | 357.7 | | | 68,391 |

| Present Stand | Site Index | Damage Grade | Stand Area | Plantation Method/Rate | Actual Regeneration Area ha | Regeneration Method Target Period | Target Unit Stock $m^3$/ha | Target Stock $m^3$ |
|---|---|---|---|---|---|---|---|---|
| *Robinia* under20ys F10 | 2 | Strong | 4.2 | Plantation 100% | 4.2 | *Robinia* ,Others 30ys | 333 | 1,399 |
| | | Moderate | 0.9 | Coppice | 0.5 | Species for planting:*Robinia* 30ys | 283 | 127 |
| | 3 | Strong | 48.5 | Plantation 100% | 48.5 | *Robinia* ,Others 30ys | 239 | 11,592 |
| | | Moderate | 19.0 | Coppice | 9.5 | Species for planting:*Robinia* 30ys | 197 | 1,872 |
| | 4 | Strong | 46.6 | Plantation 100% | 46.6 | *Robinia* ,Others 30ys | 181 | 8,435 |
| | | Moderate | 29.7 | Coppice | 14.9 | Species for planting:*Robinia* 30ys | 136 | 2,020 |
| | 5 | Strong | 75.0 | Plantation 100% | 75.0 | *Robinia* ,Others 30ys | 105 | 7,875 |
| | | Moderate | 14.1 | Coppice | 7.1 | Species for planting:*Robinia* 30ys | 79 | 557 |
| | total | | 238.0 | | 206.2 | | | 33,875 |
| *Robinia* above20ys F11 | 4 | Strong | 0.0 | Plantation 100% | 0.0 | *Q.cerris fraі* . 120ys | | |
| | | Moderate | 1.8 | Coppice | 1.8 | Species for planting:*Q.ce* .,fr.120ys | 143 | 257 |
| | total | | 1.8 | | 1.8 | | | 257 |
| *Robinia* under20ys F12 | 5 | Strong | 2.5 | Plantation 100% | 2.5 | *Q.cerris fraі* . 120ys | 210 | 525 |
| | | Moderate | 0.0 | Coppice | 0.0 | Species for planting:*Q.ce* .,*fr* .120ys | | |
| | total | | 2.5 | | 2.5 | | | 525 |
| *Populus* spp. F13 | 1 | Strong | 1.1 | Plantation 100% | 1.1 | *Q.robur* ,others 120ys | 888 | 977 |
| | | Moderate | 0.0 | Plantation 100% | 0.0 | *Populus alba* 30ys | | |
| | 2 | Strong | 4.1 | Plantation 100% | 4.1 | *Q.robur* ,others 120ys | 749 | 3,071 |
| | | Moderate | 0.7 | Plantation 100% | 0.7 | *Populus alba* 30ys | 400 | 280 |
| | 3 | Strong | 4.9 | Plantation 100% | 4.9 | *Q.robur* ,others 120ys | 609 | 2,984 |
| | | Moderate | 2.1 | Plantation 100% | 2.1 | *Populus alba* 30ys | 289 | 607 |
| | 4 | Strong | 7.0 | Plantation 100% | 7.0 | *Q.robur* ,others 120ys | 485 | 3,395 |
| | | Moderate | 0.5 | Plantation 100% | 0.5 | *Populus alba* 30ys | 185 | 93 |
| | 5 | Strong | 0.0 | Plantation 100% | 0.0 | *Q.robur* ,others 120ys | | |
| | | Moderate | 4.9 | Plantation 100% | 4.9 | *Populus alba* 30ys | 107 | 524 |
| | total | | 25.3 | | 25.3 | | | 11,931 |
| | | Total | 3,798.0 | | 2,454.2 | | | 716,731 |
| | | Sum Total | 5,231.9 | | 3,314.2 | | | 1,019,527 |

## Appendix F-31 Appraised Wood Value for Damaged Forest by Site Index

<Olt County>

| | | | | | | | | | US$ | 1000US$ | US$ | 1000US$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Present Stand | Site Index | Damage Grade | Actual Regeneration Area ha | Regeneration Method / Target Period | Target Unit Stock $m^3$/ha | For Wood Industry % | For Wood Industry Volume $m^3$ | Another Use Volume $m^3$ | For Wood Industry Unit Cost | For Wood Industry Appraised value | Another Use Unit Cost | Another Use Appraised value |
| *Q.frainetto* | 2 | Strong | 1.0 | *Q.frainetto* | 469 | 55 | 258 | 211 | 200 | 52 | 13.9 | 3 |
| F5 | | Moderate | 2.7 | 120ys | 1,218 | 55 | 670 | 548 | 200 | 134 | 13.9 | 8 |
| | 3 | Strong | 47.8 | | 17,892 | 42 | 7,515 | 10,377 | 200 | 1,503 | 13.9 | 144 |
| | | Moderate | 109.3 | | 40,878 | 42 | 17,169 | 23,709 | 200 | 3,434 | 13.9 | 330 |
| | 4 | Strong | 64.7 | | 19,610 | 31 | 6,079 | 13,531 | 200 | 1,216 | 13.9 | 188 |
| | | Moderate | 75.9 | | 22,983 | 31 | 7,125 | 15,858 | 200 | 1,425 | 13.9 | 220 |
| | 5 | Strong | 29.1 | | 6,436 | 20 | 1,287 | 5,148 | 200 | 257 | 13.9 | 72 |
| | | Moderate | 23.0 | | 5,083 | 20 | 1,017 | 4,066 | 200 | 203 | 13.9 | 57 |
| | total | | 353.6 | | 114,568 | | 41,119 | 73,450 | | 8,224 | | 1,021 |
| *Q.frainetto* | 2 | Strong | | *Q.frainetto* | | | | | | | | |
| *& cerris* F6 | | Moderate | 4.2 | *cerris* | 1,852 | 55 | 1,019 | 833 | 200 | 204 | 13.9 | 12 |
| | 3 | Strong | 24.6 | 120ys | 8,719 | 42 | 3,662 | 5,057 | 200 | 732 | 13.9 | 70 |
| | | Moderate | 70.8 | | 25,134 | 42 | 10,556 | 14,578 | 200 | 2,111 | 13.9 | 203 |
| | 4 | Strong | 44.1 | | 12,563 | 31 | 3,894 | 8,668 | 200 | 779 | 13.9 | 120 |
| | | Moderate | 65.4 | | 18,625 | 31 | 5,774 | 12,851 | 200 | 1,155 | 13.9 | 179 |
| | 5 | Strong | 11.8 | | 2,486 | 20 | 497 | 1,989 | 200 | 99 | 13.9 | 28 |
| | | Moderate | 38.2 | | 8,022 | 20 | 1,604 | 6,418 | 200 | 321 | 13.9 | 89 |
| | total | | 259.0 | | 77,401 | | 27,007 | 50,394 | | 5,401 | | 700 |
| *Quercus* spp. | 1 | Strong | | *Q.robur petraea*, | | | | | | | | |
| F7 | | Moderate | 0.1 | *pedun.,cerris* | 82 | 61 | 50 | 32 | 200 | 10 | 13.9 | 0 |
| | 2 | Strong | 1.2 | 120ys | 824 | 58 | 478 | 346 | 200 | 96 | 13.9 | 5 |
| | | Moderate | 1.0 | | 687 | 58 | 398 | 289 | 200 | 80 | 13.9 | 4 |
| | 3 | Strong | 1.1 | | 624 | 53 | 331 | 293 | 200 | 66 | 13.9 | 4 |
| | | Moderate | 7.8 | | 4,317 | 53 | 2,288 | 2,029 | 200 | 458 | 13.9 | 28 |
| | 4 | Strong | 16.6 | | 7,353 | 47 | 3,456 | 3,897 | 200 | 691 | 13.9 | 54 |
| | | Moderate | 11.0 | | 4,862 | 47 | 2,285 | 2,577 | 200 | 457 | 13.9 | 36 |
| | 5 | Strong | 1.9 | | 655 | 40 | 262 | 393 | 200 | 52 | 13.9 | 5 |
| | | Moderate | 2.7 | | 904 | 40 | 361 | 542 | 200 | 72 | 13.9 | 8 |
| | total | | 43.3 | | 20,307 | | 9,909 | 10,397 | | 1,982 | | 145 |
| *Quercus* & | 1 | Strong | | *Q.robur petraea*, | | | | | | | | |
| Others F8 | | Moderate | 0.3 | *pedun.,Fraxinus* | 266 | 61 | 163 | 104 | 200 | 33 | 13.9 | 1 |
| | 2 | Strong | 14.1 | 120ys | 10,546 | 59 | 6,222 | 4,324 | 200 | 1,244 | 13.9 | 60 |
| | | Moderate | 0.4 | | 300 | 59 | 177 | 123 | 200 | 35 | 13.9 | 2 |
| | 3 | Strong | 22.0 | | 13,398 | 56 | 7,503 | 5,895 | 200 | 1,501 | 13.9 | 82 |
| | | Moderate | 12.7 | | 7,734 | 56 | 4,331 | 3,403 | 200 | 866 | 13.9 | 47 |
| | 4 | Strong | 32.8 | | 15,908 | 51 | 8,113 | 7,795 | 200 | 1,623 | 13.9 | 108 |
| | | Moderate | 9.8 | | 4,729 | 51 | 2,412 | 2,317 | 200 | 482 | 13.9 | 32 |
| | 5 | Strong | 30.6 | | 11,429 | 45 | 5,143 | 6,286 | 200 | 1,029 | 13.9 | 87 |
| | | Moderate | 2.5 | | 935 | 45 | 421 | 514 | 200 | 84 | 13.9 | 7 |
| | total | | 125.1 | | 65,245 | | 34,484 | 30,761 | | 6,897 | | 428 |
| *Robinia* | 3 | Strong | | *Robinia*,Others 30ys | | | | | | | | |
| above20ys F9 | | Moderate | 1.0 | Species for planting:*Robinia* 30ys | 213 | 14 | 30 | 183 | 16.5 | 0 | 12.4 | 2 |
| | 4 | Strong | 3.8 | *Robinia*,Others 30ys | 688 | 2 | 14 | 674 | 16.5 | 0 | 12.4 | 8 |
| | | Moderate | 2.5 | Species for planting:*Robinia* 30ys | 383 | 2 | 8 | 375 | 16.5 | 0 | 12.4 | 5 |
| | total | | 7.3 | | 1,283 | | 51 | 1,232 | | 1 | | 15 |
| *Robinia* | 3 | Strong | 4.6 | *Robinia*,Others 30ys | 1,099 | 18 | 198 | 902 | 16.5 | 3 | 12.4 | 11 |
| under20ys F10 | | Moderate | 6.0 | Species for planting:*Robinia* 30ys | 1,182 | 14 | 165 | 1,017 | 16.5 | 3 | 12.4 | 13 |
| | 4 | Strong | 1.4 | *Robinia*,Others 30ys | 253 | 2 | 5 | 248 | 16.5 | 0 | 12.4 | 3 |
| | | Moderate | 2.0 | Species for planting:*Robinia* 30ys | 272 | 2 | 5 | 267 | 16.5 | 0 | 12.4 | 3 |
| | total | | 14.0 | | 2,807 | | 374 | 2,433 | | 6 | | 30 |
| *Robinia* | 5 | Strong | 1.9 | *Q.cerris frai*. 120ys | 399 | 20 | 80 | 319 | 200 | 16 | 13.9 | 4 |
| above20ys F11 | | Moderate | | Species for planting:*Q.ce.fr*.120ys | | | | | | | | |
| | total | | 1.9 | | 399 | | 80 | 319 | | 16 | | 4 |
| *Populus* spp. | 3 | Strong | | *Q.robur*,others 120ys | | | | | | | | |
| F13 | | Moderate | 1.6 | *Populus alba* 30ys | 462 | 20 | 92 | 370 | 16.0 | 1 | 10.6 | 4 |
| | total | | 1.6 | | 462 | | 92 | 370 | | 1 | | 4 |
| | | Total | 805.7 | | 282,473 | | 113,116 | 169,357 | | 22,528 | | 2,347 |

By Planting Species

<Olt County>

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 782.8 | *Quercus* | 277,920 | | 112,598 | 165,322 | | 22,520 | | 2,298 |
| 21.3 | *Robinia* | 4,090 | | 425 | 3,665 | | 7 | | 45 |
| 1.6 | *Populus* | 462 | | 92 | 370 | | 1 | | 4 |
| 805.7 | Total | 282,473 | | 113,116 | 169,357 | | 22,528 | | 2,347 |

<Dolj County>

| Present Stand | Site Index | Damage Grade | Actual Regeneration Area ha | Regeneration Method / Target Period | Target Unit Stock $m^3$/ha | For Wood Industry % | For Wood Industry Volume $m^3$ | Another Use Volume $m^3$ | US$ For Wood Industry Unit Cost | 1000US$ For Wood Industry Appraised value | US$ Another Use Unit Cost | 1000US$ Another Use Appraised value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Seed Stands | | | | | | | | | | | | |
| *Q.frainetto* F1 | 3 | Strong | 19.7 | *Q.frainetto* 120ys | 7,360 | 42 | 3,091 | 4,269 | 200 | 618 | 13.9 | 59 |
| *Q.frai.,cer.* F2 | 3 | Strong | 27.1 | *Q.frai.,cer* 120ys | 9,628 | 42 | 4,044 | 5,584 | 200 | 809 | 13.9 | 78 |
| | | Moderate | 6.1 | *Q.frai.,cer* 120ys | 2,158 | 42 | 907 | 1,252 | 200 | 181 | 13.9 | 17 |
| | total | | 33.2 | | 11,786 | | 4,950 | 6,836 | | 1,608 | | 154 |
| Q. spp. F3 | 1 | Moderate | 1.4 | *Q.ped.,pet.,cer.*120ys | 1,176 | 61 | 718 | 459 | 200 | 144 | 13.9 | 6 |
| | | Total | 54.3 | | 20,323 | | 8,759 | 11,564 | | 2,370 | | 220 |
| *Q.frainetto* F5 | 2 | Strong | | *Q.frainetto* | | | | | | | | |
| | | Moderate | 3.2 | 120ys | 1,443 | 55 | 794 | 649 | 200 | 159 | 13.9 | 9 |
| | 3 | Strong | 121.8 | | 45,568 | 42 | 19,139 | 26,430 | 200 | 3,828 | 13.9 | 367 |
| | | Moderate | 97.7 | | 36,521 | 42 | 15,339 | 21,182 | 200 | 3,068 | 13.9 | 294 |
| | 4 | Strong | 119.8 | | 36,287 | 31 | 11,249 | 25,038 | 200 | 2,250 | 13.9 | 348 |
| | | Moderate | 94.6 | | 28,664 | 31 | 8,886 | 19,778 | 200 | 1,777 | 13.9 | 275 |
| | 5 | Strong | 56.7 | | 12,535 | 20 | 2,507 | 10,028 | 200 | 501 | 13.9 | 139 |
| | | Moderate | 67.5 | | 14,906 | 20 | 2,981 | 11,925 | 200 | 596 | 13.9 | 166 |
| | total | | 561.2 | | 175,925 | | 60,894 | 115,031 | | 12,179 | | 1,599 |
| *Q.frainetto & cerris* F6 | 2 | Strong | 3.0 | *Q.frainetto cerris* | 1,341 | 55 | 737 | 603 | 200 | 147 | 13.9 | 8 |
| | | Moderate | 14.2 | | 6,240 | 55 | 3,432 | 2,808 | 200 | 686 | 13.9 | 39 |
| | 3 | Strong | 80.9 | 120ys | 28,712 | 42 | 12,059 | 16,653 | 200 | 2,412 | 13.9 | 231 |
| | | Moderate | 283.4 | | 100,589 | 42 | 42,247 | 58,342 | 200 | 8,449 | 13.9 | 811 |
| | 4 | Strong | 162.2 | | 46,238 | 31 | 14,334 | 31,904 | 200 | 2,867 | 13.9 | 443 |
| | | Moderate | 328.3 | | 93,551 | 31 | 29,001 | 64,550 | 200 | 5,800 | 13.9 | 897 |
| | 5 | Strong | 91.9 | | 19,303 | 20 | 3,861 | 15,443 | 200 | 772 | 13.9 | 215 |
| | | Moderate | 132.1 | | 27,731 | 20 | 5,546 | 22,184 | 200 | 1,109 | 13.9 | 308 |
| | total | | 1095.9 | | 323,706 | | 111,218 | 212,488 | | 22,244 | | 2,954 |
| *Quercus* spp. F7 | 1 | Strong | 1.4 | *Q.robur ,petraea , pedun .,cerris* | 1,111 | 61 | 678 | 433 | 200 | 136 | 13.9 | 6 |
| | | Moderate | 3.1 | | 2,533 | 61 | 1,545 | 988 | 200 | 309 | 13.9 | 14 |
| | 2 | Strong | 2.1 | 120ys | 1,429 | 58 | 829 | 600 | 200 | 166 | 13.9 | 8 |
| | | Moderate | 3.2 | | 2,198 | 58 | 1,275 | 923 | 200 | 255 | 13.9 | 13 |
| | 3 | Strong | 21.6 | | 12,031 | 53 | 6,377 | 5,655 | 200 | 1,275 | 13.9 | 79 |
| | | Moderate | 30.4 | | 16,933 | 53 | 8,974 | 7,958 | 200 | 1,795 | 13.9 | 111 |
| | 4 | Strong | 22.8 | | 10,123 | 47 | 4,758 | 5,365 | 200 | 952 | 13.9 | 75 |
| | | Moderate | 23.2 | | 10,279 | 47 | 4,831 | 5,448 | 200 | 966 | 13.9 | 76 |
| | 5 | Strong | 0.9 | | 300 | 40 | 120 | 180 | 200 | 24 | 13.9 | 3 |
| | | Moderate | 7.4 | | 2,506 | 40 | 1,003 | 1,504 | 200 | 201 | 13.9 | 21 |
| | total | | 115.9 | | 59,443 | | 30,389 | 29,054 | | 6,078 | | 404 |
| *Quercus* & Others F8 | 2 | Strong | | *Q.robur ,petraea , pedun .,Fraxinus* | | | | | | | | |
| | | Moderate | 1.8 | | 1,348 | 59 | 795 | 553 | 200 | 159 | 13.9 | 8 |
| | 3 | Strong | 17.2 | 120ys | 10,475 | 56 | 5,866 | 4,609 | 200 | 1,173 | 13.9 | 61 |
| | | Moderate | 12.8 | | 7,765 | 56 | 4,348 | 3,416 | 200 | 870 | 13.9 | 47 |
| | 4 | Strong | 14.7 | | 7,139 | 51 | 3,641 | 3,498 | 200 | 728 | 13.9 | 49 |
| | | Moderate | 4.8 | | 2,304 | 51 | 1,175 | 1,129 | 200 | 235 | 13.9 | 16 |
| | 5 | Strong | 14.6 | | 5,475 | 45 | 2,464 | 3,011 | 200 | 493 | 13.9 | 42 |
| | | Moderate | 21.9 | | 8,172 | 45 | 3,677 | 4,495 | 200 | 735 | 13.9 | 62 |
| | total | | 87.7 | | 42,678 | | 21,967 | 20,711 | | 4,393 | | 288 |
| *Robinia* above20ys F9 | 2 | Strong | 3.2 | *Robinia* ,Others 30ys | 1,066 | 30 | 320 | 746 | 16.5 | 5 | 12.4 | 9 |
| | | Moderate | 12.1 | Species for planting:*Robinia* 30ys | 3,654 | 28 | 1,023 | 2,631 | 16.5 | 17 | 12.4 | 33 |
| | 3 | Strong | 108.3 | *Robinia* ,Others 30ys | 25,884 | 18 | 4,659 | 21,225 | 16.5 | 77 | 12.4 | 263 |
| | | Moderate | 53.5 | Species for planting:*Robinia* 30ys | 11,396 | 14 | 1,595 | 9,800 | 16.5 | 26 | 12.4 | 122 |
| | 4 | Strong | 70.8 | *Robinia* ,Others 30ys | 12,815 | 2 | 256 | 12,559 | 16.5 | 4 | 12.4 | 156 |
| | | Moderate | 47.5 | Species for planting:*Robinia* 30ys | 7,268 | 2 | 145 | 7,122 | 16.5 | 2 | 12.4 | 88 |
| | 5 | Strong | 47.8 | *Robinia* ,Others 30ys | 5,019 | | | 5,019 | 16.5 | | 12.4 | 62 |
| | | Moderate | 14.5 | Species for planting:*Robinia* 30ys | 1,291 | | | 1,291 | 16.5 | | 12.4 | 16 |
| | total | | 357.7 | | 68,391 | | 7,999 | 60,392 | | 132 | | 749 |
| *Robinia* under20ys F10 | 2 | Strong | 4.2 | *Robinia* ,Others 30ys | 1,399 | 30 | 420 | 979 | 16.5 | 7 | 12.4 | 12 |
| | | Moderate | 0.5 | Species for planting:*Robinia* 30ys | 127 | 27 | 34 | 93 | 16.5 | 1 | 12.4 | 1 |
| | 3 | Strong | 48.5 | *Robinia* ,Others 30ys | 11,592 | 18 | 2,086 | 9,505 | 16.5 | 34 | 12.4 | 118 |
| | | Moderate | 9.5 | Species for planting:*Robinia* 30ys | 1,872 | 14 | 262 | 1,609 | 16.5 | 4 | 12.4 | 20 |
| | 4 | Strong | 46.6 | *Robinia* ,Others 30ys | 8,435 | 2 | 169 | 8,266 | 16.5 | 3 | 12.4 | 103 |
| | | Moderate | 14.9 | Species for planting:*Robinia* 30ys | 2,020 | 2 | 40 | 1,979 | 16.5 | 1 | 12.4 | 25 |
| | 5 | Strong | 75.0 | *Robinia* ,Others 30ys | 7,875 | | | 7,875 | 16.5 | | 12.4 | 98 |
| | | Moderate | 7.1 | Species for planting:*Robinia* 30ys | 557 | | | 557 | 16.5 | | 12.4 | 7 |
| | total | | 206.2 | | 33,875 | | 3,012 | 30,864 | | 50 | | 383 |

<Dolj County>

| Present Stand | Site Index | Damage Grade | Actual Regeneration Area ha | Regeneration Method / Target Period | Target Unit Stock m³/ha | For Wood Industry % | For Wood Industry Volume m³ | Another Use Volume m³ | US$ For Wood Industry Unit Cost | 1000US$ For Wood Industry Appraised value | US$ Another Use Unit Cost | 1000US$ Another Use Appraised value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Robinia* above20ys F11 | 4 | Strong | | *Q.cerris frai*. 120ys | | | | | | | | |
| | | Moderate | 1.8 | Species for planting *Q.ce.,fr*.120ys | 257 | 31 | 80 | 178 | 200 | 16 | 13.9 | 2 |
| | total | | 1.8 | | 257 | | 80 | 178 | | 16 | | 2 |
| *Robinia* under20ys F12 | 5 | Strong | 2.5 | *Q.cerris frai*. 120ys | 525 | 20 | 105 | 420 | 200 | 21 | 13.9 | 6 |
| | | Moderate | | Species for planting *Q.ce.,fr*.120ys | | | | | | | | |
| | total | | 2.5 | | 525 | | 105 | 420 | | 21 | | 6 |
| *Populus* spp. F13 | 1 | Strong | 1.1 | *Q.robur*,others 120ys | 977 | 61 | 596 | 381 | 200 | 119 | 13.9 | 5 |
| | | Moderate | | *Populus alba* 30ys | | | | | | | | |
| | 2 | Strong | 4.1 | *Q.robur*,others 120ys | 3,071 | 59 | 1,812 | 1,259 | 200 | 362 | 13.9 | 18 |
| | | Moderate | 0.7 | *Populus alba* 30ys | 280 | 23 | 64 | 216 | 16.0 | 1 | 10.6 | 2 |
| | 3 | Strong | 4.9 | *Q.robur*,others 120ys | 2,984 | 56 | 1,671 | 1,313 | 200 | 334 | 13.9 | 18 |
| | | Moderate | 2.1 | *Populus alba* 30ys | 607 | 20 | 121 | 486 | 16.0 | 2 | 10.6 | 5 |
| | 4 | Strong | 7.0 | *Q.robur*,others 120ys | 3,395 | 51 | 1,731 | 1,664 | 200 | 346 | 13.9 | 23 |
| | | Moderate | 0.5 | *Populus alba* 30ys | 93 | 17 | 16 | 77 | 16.0 | 0 | 10.6 | 1 |
| | 5 | Strong | | *Q.robur*,others 120ys | | | | | | | | |
| | | Moderate | 4.9 | *Populus alba* 30ys | 524 | | | 524 | 16.0 | | 10.6 | 6 |
| | total | | 25.3 | | 11,931 | | 6,012 | 5,919 | | 1,165 | | 78 |
| | | Total | 2454.2 | | 716,731 | | 241,675 | 475,056 | | 46,277 | | 6,462 |
| | | Sum Total | 3314.2 | | 1,019,527 | | 363,550 | 655,977 | | 71,176 | | 9,030 |

<Dolj County>

By Planting Species

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1936.5 | *Quercus* | 633,284 | | 239,222 | 394,062 | | 48,463 | | 5,537 |
| 563.9 | *Robinia* | 102,266 | | 11,010 | 91,255 | | 182 | | 1,132 |
| 8.2 | *Populus* | 1,504 | | 202 | 1,302 | | 3 | | 14 |
| 2508.5 | Total | 737,054 | | 250,434 | 486,620 | | 48,648 | | 6,682 |

<Total>

By Planting Species

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2719.3 | *Quercus* | 911,204 | | 351,820 | 559,384 | | 70,982 | | 7,835 |
| 585.2 | *Robinia* | 106,356 | | 11,436 | 94,920 | | 189 | | 1,177 |
| 9.8 | *Populus* | 1,966 | | 294 | 1,672 | | 5 | | 18 |
| 3314.2 | Total | 1,019,527 | | 363,550 | 655,977 | | 71,176 | | 9,030 |

Appendix F-32(1) Calculation of wood volume on each destination(Olt County)

| | | | | | | US$ | 1000US$ | US$ | 1000US$ |
|---|---|---|---|---|---|---|---|---|---|
| Reforestation | Species | Target | For Wood Industry | | Another use | For Wood Industry | | Another use | |
| area (ha) | Target ages | Volume $m^3$ | % | Volume $m^3$ | Volume $m^3$ | Unit price | Amount | Unit price | Amount |
| 1.60 | *Populus* spp. | 462 | | 92 | 370 | | 1.5 | | 3.9 |
| 1.00 | 30 years | 288.750 | 20.000 | 57.500 | 231.250 | 16.0 | | 10.6 | |
| | | | | | | | | | |
| 21.30 | *Robinia pseudoacacia* | 4,090 | | 426 | 3,664 | | 7.0 | | 45.4 |
| 1.00 | 30 years | 192.019 | 10.416 | 20.000 | 172.019 | 16.5 | | 12.4 | |
| | | | | | | | | | |
| 782.84 | *Quercus* spp. | 277,920 | | 112,598 | 165,322 | | 22,520.0 | | 2,298.0 |
| 1.00 | 120 years | 355.015 | 40.515 | 143.833 | 211.182 | 200.0 | | 13.9 | |
| | 355m3+20m3 | | | | | | | | |
| 1.00 | 140 years | 375.015 | 43.515 | 163.186 | 211.829 | 200.0 | | 13.9 | |
| | 377m3+10m3 | | | | | | | | |
| 1.00 | 160 years | 385.015 | 45.015 | 173.313 | 211.702 | 200.0 | | 13.9 | |

Appendix F-32(2) Calculation of wood volume on each destination(Dolj County)

| | | | | | | US$ | 1000US$ | US$ | 1000US$ |
|---|---|---|---|---|---|---|---|---|---|
| Reforestation | Species | Target | For Wood Industry | | Another use | For Wood Industry | | Another use | |
| area (ha) | Target ages | Volume $m^3$ | % | Volume $m^3$ | Volume $m^3$ | Unit price | Amount | Unit price | Amount |
| 8.20 | *Populus* spp. | 1,504 | | 202 | 1,302 | | 3.2 | | 13.8 |
| 1.00 | 30 years | 183.415 | 13.431 | 24.634 | 158.780 | 16.0 | | 10.6 | |
| | | | | | | | | | |
| 563.85 | *Robinia pseudoacacia* | 102,266 | | 11,010 | 91,256 | | 181.7 | | 1,131.6 |
| 1.00 | 30 years | 181.371 | 10.766 | 19.526 | 161.844 | 16.5 | | 12.4 | |
| | | | | | | | | | |
| 1,936.45 | *Quercus* spp. | 633,284 | | 239,222 | 394,062 | | 47,844.0 | | 5,477.0 |
| 1.00 | 120 years | 327.033 | 37.775 | 123.536 | 203.497 | 200.0 | | 13.9 | |
| | $327m^3+20m^3$ | | | | | | | | |
| 1.00 | 140 years | 347.033 | 40.775 | 141.502 | 205.531 | 200.0 | | 13.9 | |
| | $347m^3+10m^3$ | | | | | | | | |
| 1.00 | 160 years | 357.033 | 42.275 | 150.935 | 206.098 | 200.0 | | 13.9 | |

Appendix F-33 Final desired growing stock

($m^3$/ha)

| Species | *Quercus frainetto* planted | *Quercus cerris* planted | *Quercus robur* planted | *Quercus robur* coppices | *Robinia pseudoacacia* planted | *Robinia pseudoacacia* coppices | *Populus alba* planted |
|---|---|---|---|---|---|---|---|
| Final cutting age | 120 years | 120 years | 120 years | 100 years | 30 years | 30 years | 30 years |
| Site quality | | | | | | | |
| I | 530 | 533 | 888 | 531 | 428 | 351 | 527 |
| II | 451 | 439 | 749 | 444 | 333 | 270 | 400 |
| III | 374 | 350 | 609 | 354 | 239 | 186 | 289 |
| IV | 303 | 281 | 485 | 277 | 181 | 125 | 185 |
| V | 221 | 207 | 374 | 214 | 105 | 73 | 107 |

*Reference: Tabele de productie pentru speciile*

Appendix F-34 Portion of saw log for industry

(%)

| Species | *Quercus frainetto* planted | *Quercus cerris* planted | *Quercus robur* planted | *Quercus robur* coppices | *Robinia pseudoacacia* planted | *Robinia pseudoacacia* coppices | *Populus alba* planted |
|---|---|---|---|---|---|---|---|
| Final cutting age | 120 years | 120 years | 120 years | 100 years | 30 years | 30 years | 30 years |
| Site quality | | | | | | | |
| I | 63 | 63 | 61 | 56 | 45 | 39 | 36 |
| II | 55 | 55 | 59 | 44 | 30 | 26 | 23 |
| III | 42 | 42 | 56 | 44 | 18 | 10 | 20 |
| IV | 31 | 31 | 51 | 28 | 2 | 2 | 17 |
| V | 20 | 20 | 45 | 22 | | | |

*Reference: Tabele de sortare pentru arborete echine, pe clase de productie, pentru speciile*

Appendix F-35 Estimated price of stumpage in future

(US$/m$^3$)

| Species/ Destination | Saw log for industry | Fire wood, pulp wood |
|---|---|---|
| *Quercus spp.* | 200.0 | 13.9 |
| *Robinia pseudoacacia* | 16.5 | 12.4 |
| *Populus alba* | 16.0 | 10.6 |

(US$/m$^3$)

| | | International level log price (Germany, France) | | Production cost and exporting cost | | Stumpage price |
|---|---|---|---|---|---|---|
| *Quercus* spp. | Saw log | 300 | – | 100 | = | 200 US$ |
| | | Domestic log price | | Production cost | | Stumpage price |
| | Fire wood, pulp wood | 16.1 | – | 2.2 | = | 13.9 US$ |

| | | Domestic log price | | Production cost | | Stumpage price |
|---|---|---|---|---|---|---|
| *Robinia pseudoacacia* | Saw log | 19.0 | – | 2.5 | = | 16.5 US$ |
| | | Domestic log price | | Production cost | | Stumpage price |
| | Fire wood, pulp wood | 14.9 | – | 2.5 | = | 12.4 US$ |

| | | Domestic log price | | Production cost | | Stumpage price |
|---|---|---|---|---|---|---|
| *Populus alba* | Saw log | 18.0 | – | 2.0 | = | 16.0 US$ |
| | | Domestic log price | | Production cost | | Stumpage price |
| | Fire wood, pulp wood | 12.6 | – | 2.0 | = | 10.6 US$ |

Note: Production cost in the stand was calculated; all of production cost divided by all of production volume on the summary table of the activities costs

Reference: Present price of stumpage in 1998

| | (US$/m$^3$) | observation |
|---|---|---|
| *Quercus* spp. | 18 | Stumpage mixed all kind of use |
| *Robinia pseudoacacia* | 16 | Same to above |
| *Populus alba* | 14 | Same to above |

Appendix F-36 Calculation of Quantity of Machinery

## 1. Agricultural Tractor, 4WD type(For Wood production work)

Productivity of operation:

*Quercus* stand, $57m^3$/2 tractors

$57m^3$/2 tractors×200 days= $11,400m^3$/year·2 tractors

*Robinia* stand, $66m^3$/2 tractors

$66m^3$/2 tractors× 200 days= $13,200m^3$/year·2 tractors

*Populus* stand, $96m^3$/2 tractors

$96m^3$/2 tractors×200 days= $19,200m^3$/year·2 tractors

DOLJ County; Volume of Wood production:

*Quercus* stand, $285,251m^3$÷ 7years=$40,750m^3$/year

$40,750m^3$/year ÷ $11,400m^3$/year·2 tractors = 7.15 tractors

*Robinia* stand, $47,844m^3$÷ 7years=$6,841m^3$/year

$6,841m^3$/year÷ $13,200m^3$/year·2 tractors = 1.04 tractors

*Populus* stand, $2,499m^3$÷ 7years=$357m^3$/year

$357m^3$/year÷ $19,200m^3$/year·2 tractors = 0.04 tractors

Total: 8.23 tractors ≒ 8 tractors

OLT County; Volume of Wood production:

*Quercus* stand, $145,096m^3$÷ 7years=$20,728m^3$/year

$20,728m^3$/year÷ $11,400m^3$/year·2 tractors =3.64 tractors

*Robinia* stand, $1,413m^3$÷ 7years=$202m^3$/year

$202m^3$/year÷ $13,200m^3$/year·2 tractors = 0.03 tractors

*Populus* stand, $80m^3$÷ 7years=$11m^3$/year

$11m^3$/year÷ $19,200m^3$/year·2 tractors = 0.001 tractors

Total: 3.67 tractors ≒ 4 tractors

Total: 12 tractors, 52,000 US$/tractor (Inclusive attachment)

Attachment: Skidder, Grab for yarding

Maximum productivity by year:

$57m^3$/2 tractors×260 days= $14,820m^3$/year·2 tractors

$14,820m^3$/year·2 tractors×6 sets = 88,920/year

## 2. Chain saw (For Wood production work)

Productivity of operation:

*Quercus* stand, $57m^3$/ 9 saws

$6.33m^3$/saw×200days= $1,266m^3$/year

*Robinia* stand, $66m^3$/12 saws

5.50m³/saw×200days= 1,100m³/year

*Populus* stand, 96m³/11saws

8.73m³/saw×200days= 1,746m³/year

DOLJ County; Volume of Wood production:

*Quercus* stand, 285,251m³÷ 7years= 40,750m³/year

40,750m³/year÷ 1,266m³/year= 32.19 saws

*Robinia* stand, 47,844m³÷ 7years= 6,841m³/year

6,841m³/year÷ 1,100m³/year= 6.22 saws

*Populus* stand, 2,499m³÷ 7years=357m³/year

357m³/year÷ 1,746m³/year= 0.20 saws

Total: 38.61 saws ≒ 39saws

OLT County; Volume of Wood production:

*Quercus* stand, 145,096m³÷ 7years= 20,728m³/year

20,728m³/year÷ 1,266m³/year= 16.37 saws

*Robinia* stand, 1,413m³÷ 7years = 202m³/year

202m³/year÷ 1,100m³/year= 0.18 saws

*Populus* stand, 80m³÷ 7years = 11m³/year

11m³/year÷ 1,746m³/year= 0.006 saws

Total: 16.56 saws ≒ 17 saws

Total: 56 saws× 2 times of procurement (depreciation 4 years) = 112 saws

608 US$/saw

Maximum productivity by year: 6.33m³/saw×260days= 1,646m³/year

1,646m³/year× 56 saws = 92,165m³/year

3. Mini Bach-hoe (For reforestation work)

Soil preparation at cut-over area of group-cutting,

Productivity of operation: 6.67 days/Hoe/ha

(Operation area : 50% of the actual regeneration area)

DOLJ County: Actual regeneration area 1,136.57 ha

1136.57 ha÷7years=162.37 ha/year

162.37 ha/year×6.67days/ha=1,082.99 days

1,082.99 days÷ 160days/year= 6.77 Hoes ≒ 7 Hoes

OLT County: Actual regeneration area 437.50 ha

437.50 ha÷ 7years=62.50 ha/year

62.50 ha/year×6.67days/ha=416.88 days

416.88 days÷ 160days/year= 2.61 Hoes ≒ 3 Hoes

Total: 10 Mini Backhoes 47,500 US$/Hoe

Maximum productivity by year: 260days/year ÷ 6.67days/ha = 38.98ha

38.98ha × 10 hoes = 389.8ha

4. Cultivator (For reforestation work)

Weeding by scarifying between planted line

Productivity of operation:

At the Clear cut-over area: 2.11days/ha/cultivator, Using 60 cm wide type.

At the Group cut-over area: 2.08days/ha/cultivator, Using 30 cm wide type.

DOLJ County; Actual regeneration area:

(1) At the Clear cut-over area: Using 60 cm wide type.

*Quercus* stand 795.58 ha÷ 7years=113.65 ha/year

113.65 ha/year×2.11days/ha=239.81days

239.81days÷40days/year=6.00Culti.s

6.00Culti.s×6years (Repeating) =35.97Culti.s ≒ 36 Cultivators

*Robinia* stand 406.90 ha÷ 7years= 58.10 ha/year

58.10 ha/year×2.11days/ha=122.65days

122.65days÷40days/year= 3.07Culti.s

3.07Culti.s×2years (Repeating) =6.13Culti.s ≒ 6 Cultivators

*Populus* stand 8.20 ha÷ 1year = 8.20 ha/year

8.20 ha/year×2.11days/ha=17.30days

17.30days÷40days/year= 0.43Culti.s

0.43Culti.s×3years (Repeating) =1.30Culti.s ≒ 1 Cultivator

Total: 43 Cultivators 737 US$/Cultivator

(2) At the Group cut-over area: Using 30 cm wide type.

*Quercus* stand 1,136.57 ha÷ 7years=162.37 ha/year

162.37 ha/year×2.08days/ha=337.73days

337.73days÷40days/year= 8.44Culti.s

8.44Culti.s×6years (Repeating) =50.66Culti.s≒ 51 Cultivators

567 US$/Cultivator

Total for DOLJ 94 Cultivators

OLT County; Actual regeneration area:

(1) At the Clear cut-over area: Using 60 cm wide type.

*Quercus* stand 343.44 ha÷ 7years=49.06 ha/year

49.06 ha/year×2.11days/ha=103.52days

103.52days÷40days/year= 2.59Culti.s

2.59Culti.s×6years(Repeating)＝15.53Culti.s≒ 16 Cultivators

*Robinia* stand 11.70 ha÷ 7years＝1.67 ha/year

1.67 ha/year×2.11days/ha＝3.53days

3.53days÷40days/year＝ 0.09Culti.s

0.09Culti.s×2years(Repeating)＝0.18Culti.s≒ 0 Cultivator

*Populus* stand 1.60 ha÷ 1years＝1.60 ha/year

1.60 ha/year×2.11days/ha＝3.38days

3.38days÷40days/year＝ 0.08Culti.s

0.08Culti.s×3years(Repeating)＝0.25Culti.s≒ 1 Cultivator

Total: 17 Cultivators 737 US$/Cultivator

(2) At the Group cut-over area: Using 30 cm wide type.

*Quercus* stand 437.50 ha÷ 7years＝62.50 ha/year

62.50 ha/year×2.08days/ha＝130.00days

130.00days÷40days/year＝ 3.25Culti.s

3.25Culti.s×6years(Repeating)＝19.50Culti.s≒ 20 Cultivators

567 US$/Cultivators

Total for OLT 37 Cultivators

Total for 2 counties 131 Cultivators

5. Agricultural tractor, 4WD type (For drainage & infiltration work)

Establish lineal canal by 12.5 m of distance. 800 m/ha.

Tractor of 4WD type with Disc plough or Carried plough.

Velocity of operation: 2,000 m/hour, 1,000 m/hour on both ways

Productivity of operation:

7.5 ha/day. (1,000 m/hour×6hours/day÷800 m/ha)

DOLJ County; Remaining area of damaged forest 3,383.10 ha

Prevention forest 2,491.70 ha

Total 5,874.80 ha÷ 4years＝1,468.70 ha/year

1,468.70 ha/year÷7.5 ha/day＝195.83days

195.83days÷ 200days/year＝ 0.98 tractors ≒ 1 tractor

OLT County; Remaining area of damaged forest 1.948,10 ha

Prevention forest 1.773,90 ha

Total 3,722.00 ha÷ 4years＝930.50 ha/year

930.50 ha/year÷7.5 ha/day＝124.07days

124.07days÷ 200days/year＝ 0.62 tractors ≒ 1

Total for 2 counties; 2 tractors, 53,000 US$/tractor (Inclusive attachments)

Appendix F-37 Benefits of forest functions other than wood production

All of forest area (US$ 1000)

| Sector | Forest By-products | | | Hunting | | | Apiculture | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | OLT | DOLJ | Total | OLT | DOLJ | Total | OLT | DOLJ | Total | |
| RNP | 251.6 | 68.2 | 319.8 | 169.5 | 181.8 | 351.3 | 31.2 | 4.5 | 35.7 | 706.8 |
| Private | 0 | 0 | 0 | 12.3 | 16.7 | 29 | 27.4 | 228.0 | 255.4 | 284.4 |
| Total | 251.6 | 68.2 | 319.8 | 181.8 | 198.5 | 380.3 | 58.6 | 232.5 | 291.1 | 991.2 |

Target forest area (Damaged forest & prevention forest) (US$ 1000)

| Sector | Forest By-products | | | Hunting | | | Apiculture | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | OLT | DOLJ | Total | OLT | DOLJ | Total | OLT | DOLJ | Total | |
| RNP | 24.1 | 8.7 | 32.8 | 16.2 | 23.1 | 39.4 | 3.0 | 0.6 | 3.6 | 75.7 |
| Private | 0.0 | 0.0 | 0.0 | 1.2 | 2.1 | 3.3 | 2.6 | 29.0 | 31.6 | 34.9 |
| Total | 24.1 | 8.7 | 32.8 | 17.4 | 25.2 | 42.7 | 5.6 | 29.6 | 35.2 | 110.6 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Portion | 9.585% | 12.714% | 11.425% | 9.585% | 12.714% | | 9.585% | 12.714% | | |

| | | | | OLT | DOLJ | Total |
|---|---|---|---|---|---|---|
| All forest area | | ha | | 48,400.0 | 69,100.0 | 117,500.0 |
| Target forest area | | | | | | |
| Damaged forest | | ha | | 2,865.4 | 6,293.7 | 9,159.1 |
| Prevention forest | | ha | | 1,773.9 | 2,491.7 | 4,265.6 |
| Total | | ha | | 4,639.3 | 8,785.4 | 13,424.7 |
| Portion | | | | 0.09585 | 0.12714 | 0.11425 |

Appendix F-38 Calculation of Soil Conservation Effect

1. Volume of sediment in discharge

Target forest stand area = 201.4 ha
Volume of sediment in discharge per ha/year = 87.1 ton
All of sediment volume = 201.4 ha × 87.1 ton = 17,541.94 ton
17,541.94 ton / 1.8 = 9,745.5 $m^3$
Specific gravity of soil : 1.8 ton/$m^3$

2. Establishment of the condition

The area of target forest stand shall be formed a rectangle of 1,000m wide by 2,000m length.
The inclination angle of stand shall be 12°.
The sediment shall be stop at the edge of low side, 1,000m wide.
The sediment shall be stable by the grade of 6°(1/2 of the initial angle)

3. Efficient height of sediment retaining wall

| Retaining height | Retaining length | Volume of retaining sediment |
|---|---|---|
| 1.0 m | 9.31 m | 1.0× 9.31×1/2×1,000 = 4,655 $m^3$ |
| 1.5 m | 13.96 m | 1.5×13.96×1/2×1,000 = 10,470 $m^3$ |
| 2.0 m | 18.61 m | 2.0×18.61×1/2×1,000 = 18,610 $m^3$ |

It shall be decided the height of retaining wall by enough coefficient of safety
The coefficient of safety = 18,610$m^3$/9,745.5$m^3$ = 1.91
Therefore 2.0 m of height is decided for the efficient height

4. The structure of the sediment retaining wall

| | |
|---|---|
| Height of wall | 3.0 m (upper ground: 2.0 m, under ground 1.0 m) |
| Thickness of top of wall | 0.3 m |
| Gradient of down stream side | 0.3 |
| Gradient of up stream side | 0.05 |

5. Volume of the concrete for the wall construction

| | |
|---|---|
| Basal area | (0.3m+1.35m)/2×3.0m = 2.47 $m^2$ |
| Volume | 2.47 $m^2$×1,000m = 2,470 $m^3$ |

6. Cost of work per 1$m^3$ of the wall

2,470m3×50,000JP YEN/$m^3$ = 123,500,000JP YEN
Cost of materials = 44,000JP YEN 44,000JP YEN×0.596= 26,222JP YEN
Cost of lobar = 6,000JP YEN 6,000×0.0289= 173JP YEN
Total = 26,395JP YEN 26,395JP YEN / 120= 219.96 US$/$m^3$
2,470m3×219.96US$/$m^3$ = 543,312US$

7. Cost of work per 1$m^3$ of sediment

543,312 US$/9,745.5$m^3$ = 55.75 US$/$m^3$

Note: Comparison of work cost (US$)

| | | Japan | Romania | Ratio | Japan(A) | Romania(B | B/A |
|---|---|---|---|---|---|---|---|
| Cement | US$/kg | 0.14 | 0.16 | 235 kg | | | |
| Gravel | US$/m3 | 32.99 | 6.90 | 1.41 $m^3$ | | | |
| Total materials | | | | | 79.411 | 47.329 | 59.60% |
| Wages | US$/day | 145.83 | 4.21 | | | | 2.89% |

Appendix F-39 Plantation Area by Operation Year, Forest Management Type, Damage Grade

<Olt County> (ha)

| Forest Management Type | Damage Grade | Operation Year | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| F1 | Strong | | | | | | | | |
| F2 | Strong | | | | | | | | |
| | Moderate | | | | | | | | |
| F3 | Moderate | | | | | | | | |
| F5 | Strong | 6.00 | 7.00 | 6.50 | 10.00 | 26.00 | 47.00 | 40.22 | 142.72 |
| | Moderate | 2.00 | 2.00 | 2.00 | 4.50 | 67.00 | 80.00 | 53.35 | 210.85 |
| F6 | Strong | 4.00 | 4.00 | 4.00 | 6.00 | 21.00 | 23.00 | 18.48 | 80.48 |
| | Moderate | 3.00 | 3.00 | 3.00 | 4.00 | 38.00 | 67.00 | 60.55 | 178.55 |
| F7 | Strong | 1.00 | 5.00 | 7.00 | 7.80 | | | | 20.80 |
| | Moderate | 1.00 | 3.00 | 9.00 | 3.45 | 6.00 | | | 22.45 |
| F8 | Strong | 7.00 | 17.00 | 27.00 | 41.00 | 7.44 | | | 99.44 |
| | Moderate | 3.00 | 4.00 | 12.00 | 6.65 | | | | 25.65 |
| F9 | Strong | | | | 3.80 | | | | 3.80 |
| | Moderate | | 1.00 | 1.00 | 1.50 | | | | 3.50 |
| F10 | Strong | | 1.00 | 2.00 | 3.00 | | | | 6.00 |
| | Moderate | 1.00 | 2.00 | 3.00 | 2.00 | | | | 8.00 |
| F11 | Strong | | | 1.90 | | | | | 1.90 |
| | Moderate | | | | | | | | |
| F12 | Strong | | | | | | | | |
| F13 | Strong | | | | | | | | |
| | Moderate | | | | | 1.60 | | | 1.60 |
| Total | Strong | 18.00 | 34.00 | 48.40 | 71.60 | 54.44 | 70.00 | 58.70 | 355.14 |
| | Moderate | 10.00 | 15.00 | 30.00 | 22.10 | 112.60 | 147.00 | 113.90 | 450.60 |
| | Total | 28.00 | 49.00 | 78.40 | 93.70 | 167.04 | 217.00 | 172.60 | 805.74 |

<Dolj County> (ha)

| Forest Management Type | Damage Grade | Operation Year | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| F1 | Strong | | | | | 19.68 | | | 19.68 |
| F2 | Strong | | | | | 27.12 | | | 27.12 |
| | Moderate | | | | | | 6.08 | | 6.08 |
| F3 | Moderate | | 1.44 | | | | | | 1.44 |
| F5 | Strong | 14.00 | 14.00 | 14.00 | 20.00 | 54.00 | 98.00 | 84.32 | 298.32 |
| | Moderate | 3.00 | 3.00 | 3.00 | 5.50 | 83.00 | 100.00 | 65.40 | 262.90 |
| F6 | Strong | 16.00 | 16.00 | 16.00 | 24.00 | 89.00 | 97.00 | 80.08 | 338.08 |
| | Moderate | 13.00 | 13.00 | 12.00 | 16.00 | 162.00 | 283.00 | 258.80 | 757.80 |
| F7 | Strong | 4.00 | 10.00 | 18.00 | 16.72 | | | | 48.72 |
| | Moderate | 4.00 | 7.00 | 26.00 | 11.20 | 19.00 | | | 67.20 |
| F8 | Strong | 3.00 | 8.00 | 13.00 | 19.00 | 3.56 | | | 46.56 |
| | Moderate | 5.00 | 6.00 | 18.00 | 12.15 | | | | 41.15 |
| F9 | Strong | 20.00 | 35.00 | 60.00 | 115.10 | | | | 230.10 |
| | Moderate | 10.00 | 19.00 | 44.00 | 54.60 | | | | 127.60 |
| F10 | Strong | 10.00 | 24.00 | 58.00 | 82.30 | | | | 174.30 |
| | Moderate | 4.00 | 8.00 | 13.00 | 6.85 | | | | 31.85 |
| F11 | Strong | | | | | | | | |
| | Moderate | | | 1.80 | | | | | 1.80 |
| F12 | Strong | | | 2.50 | | | | | 2.50 |
| F13 | Strong | | | | 17.10 | | | | 17.10 |
| | Moderate | | | | | 8.20 | | | 8.20 |
| Total | Strong | 67.00 | 107.00 | 181.50 | 294.22 | 193.36 | 195.00 | 164.40 | 1,202.48 |
| | Moderate | 39.00 | 57.44 | 117.80 | 106.30 | 272.20 | 389.08 | 324.20 | 1,306.02 |
| | Total | 106.00 | 164.44 | 299.30 | 400.52 | 465.56 | 584.08 | 488.60 | 2,508.50 |

<Total>

(Planting Stock Number)

| Tree Species | Operation Year | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| *Q. frainetto* | 98,177 | 120,480 | 121,943 | 174,705 | 1,199,242 | 1,731,215 | 1,445,206 | 229,140 | 5,120,107 |
| *Q.cerris* | 90,842 | 119,712 | 156,292 | 166,830 | 916,607 | 1,440,414 | 1,368,049 | 223,103 | 4,481,849 |
| *Q.robur* | 50,505 | 113,279 | 263,993 | 304,524 | 128,344 | 15,435 | | | 876,078 |
| *Q.petraea* | 9,418 | 22,686 | 48,581 | 45,364 | 20,647 | 2,670 | | | 149,366 |
| *Q.pedunculiflora* | 7,709 | 19,460 | 37,379 | 36,917 | 14,174 | 1,628 | | | 117,268 |
| *Quercus spp.* | 256,652 | 395,616 | 628,187 | 728,340 | 2,279,015 | 3,191,362 | 2,813,255 | 452,242 | 10,744,668 |
| *Fraxinus excelsior* | 12,001 | 21,669 | 46,338 | 59,073 | 5,867 | | | | 144,949 |
| *Tilia platyphyllos* | 7,709 | 14,919 | 33,795 | 33,959 | 8,142 | | | | 98,524 |
| *Pyrus pyraster* | 12,001 | 12,001 | 11,585 | 16,335 | 123,978 | 180,383 | 159,359 | | 515,641 |
| *Robinia pseudoacacia* | 157,500 | 378,000 | 764,500 | 1,272,350 | 406,780 | | | | 2,979,130 |
| *Gladitschia triacanthos* | 15,000 | 30,000 | 60,000 | 102,100 | | | | | 207,100 |
| *Elaeagnus angustifolia* | 7,500 | 15,000 | 30,000 | 51,050 | | | | | 103,550 |
| *Populus* spp. | | | | | 6,125 | 1,225 | | | 7,350 |
| Assistant Trees | 144,137 | 196,376 | 325,427 | 362,808 | 1,146,542 | 1,469,900 | 1,209,955 | | 4,855,144 |
| Total | 612,500 | 1,063,581 | 1,899,332 | 2,626,014 | 3,976,450 | 4,842,869 | 4,182,569 | 452,242 | 19,656,057 |

Note: Assistant trees: *Acer tataricum* , *Acer campestre* , *Prunus cerasifera* , *Fraxinus ornus* , *Crataegus monogyna* , *Cornus sanguinea* , *Ligustrum vulgare* , *Rosa canina* , etc.

Remark :The Above table does not include data of Forest Mantle Replantation.

Remark : Inclusive for replantation



## <Nursery Stock for Forest Mantle of Damaged Forest>

(Planting Stock Number)

| Species | Operation Year | | | | Total |
|---|---|---|---|---|---|
| | 5 | 6 | 7 | 8 | |
| *Robinia pseudoacacia* | 30,000 | 45,500 | 31,150 | 7,100 | 113,750 |
| *Gladitschia triacanthos* | 30,000 | 45,500 | 31,150 | 7,100 | 113,750 |
| *Elaeagnus angustifolia* | 30,000 | 45,500 | 31,150 | 7,100 | 113,750 |
| *Crataegus monogyna* | 30,000 | 45,500 | 31,150 | 7100 | 113,750 |

Remark : Inclusive for replantation

## <Nursery Stock for Forest Mantle of Prevention Forest>

(Planting Stock Number)

| Species | Operation Year | | Total |
|---|---|---|---|
| | 5 | 6 | |
| *Robinia pseudoacacia* | 23,000 | 9,200 | 32,200 |
| *Gladitschia triacanthos* | 23,000 | 9,200 | 32,200 |
| *Elaeagnus angustifolia* | 23,000 | 9,200 | 32,200 |
| *Crataegus monogyna* | 23,000 | 9,200 | 32,200 |

Remark : Inclusive for replantation

## Appendix F-40(1) Required Number of Nursery Stock by Species and Operation Year

### <Olt County for Damaged Forest>

(Planting Stock Number)

| Tree Species | Operation Year | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| *Q. frainetto* | 28,970 | 37,431 | 37,644 | 58,219 | 401,793 | 605,095 | 495,259 | 77,979 | 1,742,390 |
| *Q.cerris* | 17,585 | 24,903 | 35,784 | 36,206 | 161,028 | 269,381 | 258,793 | 42,224 | 845,903 |
| *Q.robur* | 19,685 | 50,442 | 104,011 | 108,578 | 42,850 | 4,984 | | | 330,550 |
| *Q.petraea* | 3,800 | 9,544 | 19,575 | 20,787 | 7,929 | 897 | | | 62,534 |
| *Q.pedunculiflora* | 3,459 | 8,184 | 16,508 | 18,467 | 6,327 | 647 | | | 53,592 |
| *Fraxinus excelsior* | 6,234 | 12,401 | 24,403 | 27,412 | 3,968 | | | | 74,418 |
| *Tilia platyphyllos* | 3,459 | 7,493 | 15,010 | 15,465 | 3,234 | | | | 44,660 |
| *Pyrus pyraster* | 2,317 | 2,317 | 2,317 | 3,267 | 21,435 | 34,053 | 30,160 | | 95,866 |
| *Robinia pseudoacacia* | 1,000 | 9,150 | 17,500 | 40,250 | 13,860 | | | | 81,760 |
| *Gleditschia triacanthos* | | 500 | 1,000 | 3,400 | | | | | 4,900 |
| *Elaeagnus angustifolia* | | 250 | 500 | 1,700 | | | | | 2,450 |
| *Populus* spp. | | | | | 1,000 | 200 | | | 1,200 |
| Assistant Trees | 42,741 | 68,985 | 116,009 | 125,122 | 303,782 | 399,511 | 315,501 | | 1,371,651 |
| Total | 129,250 | 231,600 | 390,261 | 458,872 | 967,207 | 1,314,768 | 1,099,712 | 120,203 | 4,711,873 |

Remark : The Above table does not include data of Forest Mantle Replantation.

Remark : Inclusive for replantation

### <Dolj County for Damaged Forest>

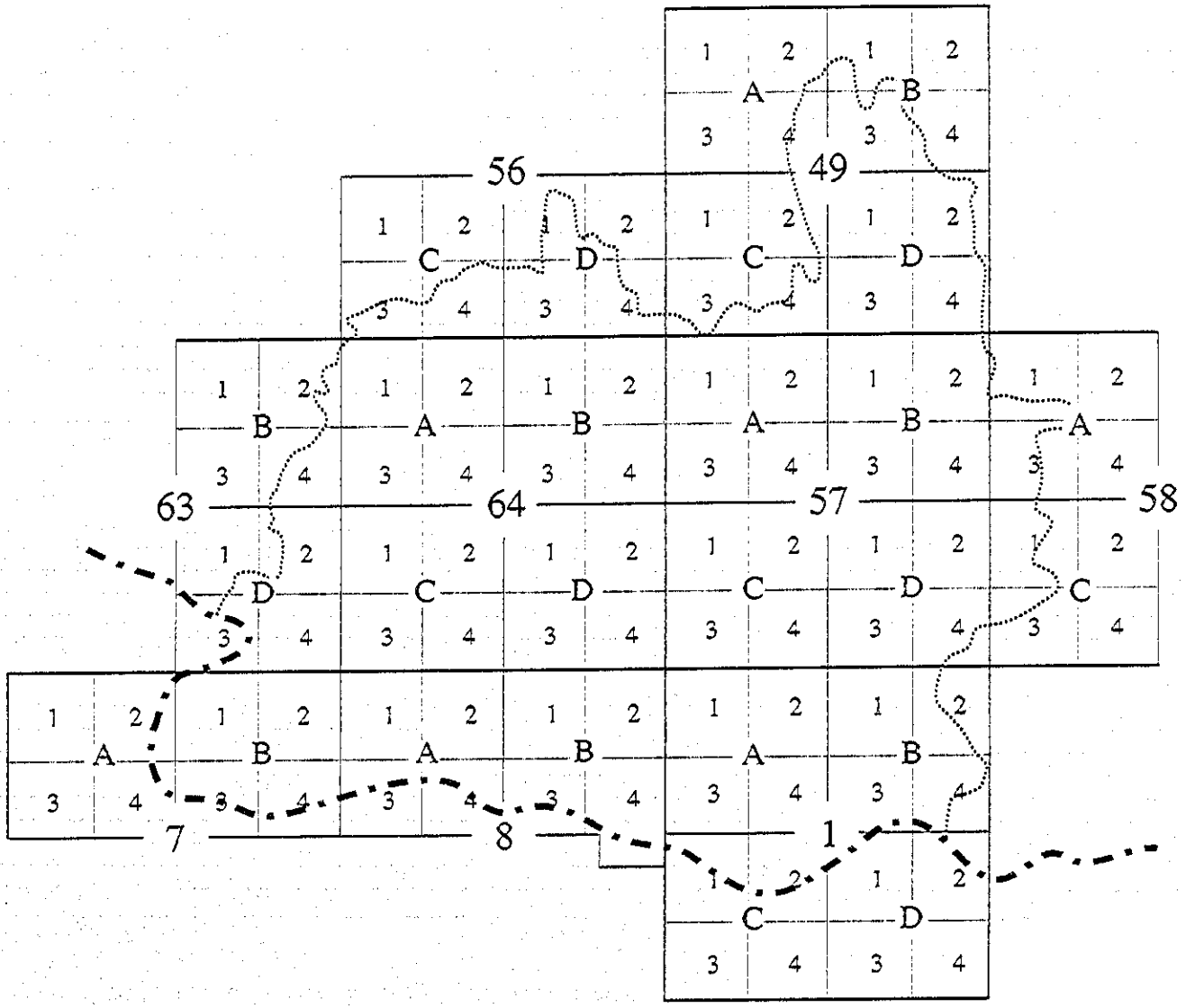
(Planting Stock Number)

| Tree Species | Operation Year | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| *Q. frainetto* | 69,208 | 83,049 | 84,299 | 116,486 | 797,450 | 1,126,119 | 949,947 | 151,160 | 3,377,718 |
| *Q.cerris* | 73,257 | 94,809 | 120,508 | 130,624 | 755,579 | 1,171,033 | 1,109,256 | 180,879 | 3,635,946 |
| *Q.robur* | 30,820 | 62,836 | 159,982 | 195,946 | 85,494 | 10,450 | | | 545,528 |
| *Q.petraea* | 5,617 | 13,141 | 29,006 | 24,577 | 12,718 | 1,773 | | | 86,833 |
| *Q.pedunculiflora* | 4,250 | 11,276 | 20,870 | 18,450 | 7,847 | 982 | | | 63,676 |
| *Fraxinus excelsior* | 5,767 | 9,268 | 21,935 | 31,662 | 1,899 | | | | 70,531 |
| *Tilia platyphyllos* | 4,250 | 7,426 | 18,785 | 18,494 | 4,908 | | | | 53,863 |
| *Pyrus pyraster* | 9,684 | 9,684 | 9,268 | 13,068 | 102,543 | 146,330 | 129,199 | | 419,776 |
| *Robinia pseudoacacia* | 156,500 | 368,850 | 747,000 | 1,232,100 | 392,920 | | | | 2,897,370 |
| *Gleditschia triacanthos* | 15,000 | 29,500 | 59,000 | 98,700 | | | | | 202,200 |
| *Elaeagnus angustifolia* | 7,500 | 14,750 | 29,500 | 49,350 | | | | | 101,100 |
| *Populus* spp. | | | | | 5,125 | 1,025 | | | 6,150 |
| Assistant Trees | 101,396 | 127,391 | 209,418 | 237,686 | 842,761 | 1,070,389 | 894,454 | | 3,483,493 |
| Total | 483,250 | 831,981 | 1,509,571 | 2,167,142 | 3,009,243 | 3,528,101 | 3,082,856 | 332,039 | 14,944,184 |

Remark :The Above table does not include data of Forest Mantle Replantation.

Remark : Inclusive for replantation

Appendix.F-41 Index Sheet for Thematic Map



# 調査実施体制

調査実施体制

(1) 調査団の派遣

1) 第1次現地調査 (IC/R 説明・協議、資料収集、概況調査)

| 担当 | 氏名 | 調査期間 | |
|---|---|---|---|
| 総括/森林保全 | 竹下 敬司 | 平成9年9月20日 ～ 平成9年10月 4日 | 15日間 |
| 財務経済分析 | 小宮 忠義 | 平成9年9月21日 ～ 平成9年10月10日 | 20日間 |
| 社会経済 | 阿部 由美子 | 平成9年9月27日 ～ 平成9年10月16日 | 20日間 |
| 森林生態/環境 | 伊藤 重右衛門 | 平成9年9月21日 ～ 平成9年10月10日 | 20日間 |
| 森林造成/育苗 | 山垣 興三 | 平成9年9月21日 ～ 平成9年10月10日 | 20日間 |
| 森林病虫害 | 遠田 暢男 | 平成9年9月21日 ～ 平成9年10月10日 | 20日間 |
| 土壌 | 高遠 宏 | 平成9年9月27日 ～ 平成9年10月10日 | 14日間 |
| 気象/森林水文 | 福田 寿 | 平成9年9月27日 ～ 平成9年10月16日 | 20日間 |
| 森林調査 | 鎌滝 晋 | 平成9年9月27日 ～ 平成9年10月10日 | 14日間 |
| 森林経営 | 櫻井 彰人 | 平成9年9月20日 ～ 平成9年10月 9日 | 20日間 |
| 衛星データ解析/空中写真撮影監督 | 細田 秀人 | 平成9年9月21日 ～ 平成9年10月10日 | 20日間 |
| 業務調整 | 山崎 岳 | 平成9年9月20日 ～ 平成9年10月16日 | 27日間 |

2) 第2次現地調査 (PR/R 説明・協議)

| 担当 | 氏名 | 調査期間 | |
|---|---|---|---|
| 財務経済分析 | 小宮 忠義 | 平成10年3月1日 ～ 平成10年3月10日 | 10日間 |
| 森林生態/環境 | 伊藤 重右衛門 | 平成10年3月1日 ～ 平成10年3月10日 | 10日間 |
| 土壌 | 高遠 宏 | 平成10年3月1日 ～ 平成10年3月10日 | 10日間 |

3) 第3次現地調査 (現地調査)

| 担当 | 氏名 | 調査期間 | |
|---|---|---|---|
| 総括/森林保全 | 竹下 敬司 | 平成10年6月 6日 ～ 平成10年7月10日 | 35日間 |
| 財務経済分析 | 小宮 忠義 | 平成10年6月29日 ～ 平成10年8月12日 | 45日間 |
| 社会経済 | 阿部 由美子 | 平成10年6月29日 ～ 平成10年8月12日 | 45日間 |
| 森林生態/環境 | 伊藤 重右衛門 | 平成10年6月14日 ～ 平成10年8月12日 | 60日間 |
| 森林造成/育苗 | 山垣 興三 | 平成10年5月24日 ～ 平成10年6月22日<br>平成10年9月29日 ～ 平成10年10月18日 | 30日間<br>20日間 |
| 森林病虫害 | 遠田 暢男 | 平成10年5月24日 ～ 平成10年7月12日 | 50日間 |
| 土壌 | 高遠 宏 | 平成10年6月14日 ～ 平成10年8月23日 | 71日間 |
| 気象/森林水文 | 福田 寿 | 平成10年5月24日 ～ 平成10年7月22日 | 60日間 |
| 森林調査 | 鎌滝 晋 | 平成10年6月28日 ～ 平成10年9月 6日 | 71日間 |
| 森林経営 | 櫻井 彰人 | 平成10年6月 6日 ～ 平成10年8月 9日 | 65日間 |
| 衛星データ解析/空中写真撮影監督 | 細田 秀人 | 平成10年5月30日 ～ 平成10年7月18日<br>平成10年9月16日 ～ 平成10年10月14日 | 50日間<br>19日間 |
| 業務調整 | 早川 清人 | 平成10年5月 9日 ～ 平成10年6月 7日 | 30日間 |

4) 第4次現地調査 (IT/R 説明・協議)

| 担当 | 氏名 | 調査期間 | | | |
|---|---|---|---|---|---|
| 総括/森林保全 | 竹下 敬司 | 平成11年2月21日 | ～ | 平成11年2月28日 | 8日間 |
| 財務経済分析 | 小宮 忠義 | 平成11年2月21日 | ～ | 平成11年2月28日 | 8日間 |
| 森林生態/環境 | 伊藤 重右衛門 | 平成11年2月21日 | ～ | 平成11年2月28日 | 8日間 |

5) 第5次現地調査 (現地調査)

| 担当 | 氏名 | 調査期間 | | | |
|---|---|---|---|---|---|
| 総括/森林保全 | 竹下 敬司 | 平成11年6月 3日 | ～ | 平成11年6月27日 | 25日間 |
| 財務経済分析 | 小宮 忠義 | 平成11年5月31日 | ～ | 平成11年6月27日 | 28日間 |
| 森林生態/環境 | 伊藤 重右衛門 | 平成11年5月31日 | ～ | 平成11年6月27日 | 28日間 |
| 森林造成/育苗 | 山垣 與三 | 平成11年5月31日 | ～ | 平成11年6月27日 | 28日間 |
| 気象/森林水文 | 福田 寿 | 平成11年5月27日 | ～ | 平成11年6月27日 | 32日間 |
| 森林調査 | 鎌滝 晋 | 平成11年5月18日 | ～ | 平成11年6月27日 | 41日間 |
| 森林経営 | 櫻井 彰人 | 平成11年5月31日 | ～ | 平成11年6月27日 | 28日間 |

6) 第6次現地調査 (DF/R 説明・協議)

| 担当 | 氏名 | 調査期間 | | | |
|---|---|---|---|---|---|
| 総括/森林保全 | 竹下 敬司 | 平成11年10月31日 | ～ | 平成11年11月7日 | 8日間 |
| 財務経済分析 | 小宮 忠義 | 平成11年10月31日 | ～ | 平成11年11月7日 | 8日間 |
| 森林経営 | 櫻井 彰人 | 平成11年10月31日 | ～ | 平成11年11月7日 | 8日間 |

(2) 作業監理委員会

1) 第1次現地調査 (IC/R 説明・協議)

| 担当 | 氏名 | 調査期間 | | | |
|---|---|---|---|---|---|
| 造林 | 溝口 岳男 | 平成9年9月21日 | ～ | 平成9年10月3日 | 13日間 |
| 業務調整 | 中山 泰徳 | 平成9年9月21日 | ～ | 平成9年10月3日 | 13日間 |

2) 第2次現地調査 (PR/R 説明・協議)

| 担当 | 氏名 | 調査期間 | | | |
|---|---|---|---|---|---|
| 造林 | 溝口 岳男 | 平成10年3月1日 | ～ | 平成10年3月9日 | 9日間 |
| 業務調整 | 勝田 幸秀 | 平成10年3月1日 | ～ | 平成10年3月9日 | 9日間 |

3) 第4次現地調査 (IT/R 説明・協議)

| 担当 | 氏名 | 調査期間 | | | |
|---|---|---|---|---|---|
| 業務調整 | 中山 泰徳 | 平成11年2月21日 | ～ | 平成11年2月28日 | 8日間 |

4) 第6次現地調査 （DF/R 説明・協議）

| 担 当 | 氏 名 | 調査期間 |
|---|---|---|
| リーダー | 小原 基文 | 平成11年10月31日 ～ 平成11年11月7日 8日間 |
| 森林生態/森林保護 | 池田 武文 | 平成11年10月31日 ～ 平成11年11月7日 8日間 |
| 業務調整 | 徳田 小矢子 | 平成11年10月31日 ～ 平成11年11月7日 8日間 |

(3) カウンターパート

| 担 当 | 氏 名 | 所 属 | 調査団員 |
|---|---|---|---|
| 総括/森林保全 | Mr. Ovidiu Badea | ICAS | 竹下 敬司 |
| 財務経済分析 | Mrs. Dragoi Simona | ICAS | 小宮 忠義 |
| 社会経済 | Mrs. Dragoi Simona<br>Mr. Viorel Blujdea | ICAS<br>ICAS | 阿部 由美子 |
| 森林生態/環境 | Mr. Iovu Adrian Biris<br>Mr. Laurentiu Popovici | ICAS<br>ICAS | 伊藤 重右衛門 |
| 森林造成/育苗 | Mr. Laurentiu Popovici<br>Mr. Simion Dan-Robert | ICAS<br>Forest Branch Targoviste | 山垣 興三 |
| 森林病虫害 | Mr. Netoiu Constantin<br>Mr. Dragos Mihai | ICAS Craiova<br>RNP | 遠田 暢男 |
| 土壌 | Dr. Nicolae Geambasu<br>Dr. Constantin Rosu<br>Mr. Florin Donescu | ICAS<br>ICAS<br>ICAS | 高遠 宏 |
| 気象/森林水文 | Dr. Constantin Rosu<br>Mr. Ilie Cojocaru<br><br>Mr. Netoiu Constantin | ICAS<br>Forest Branch Craiova<br>ICAS Craiova | 福田 寿 |
| 森林調査 | Mr. Gheorghe Marin<br>Mr. Vladimir Gancz | ICAS<br>ICAS | 鎌滝 晋 |
| 森林経営 | Mr. Gheorghe Marin | ICAS | 櫻井 彰人 |